Chalmit Lighting

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Protecta III

Acclaim

Curie Elite

Lomond

Evolution II

Nevis

NexLED

Sterling II

800 Series

Micronex/Maxinex

Nexxus II

Eclipse II

CHALMIT LIGHTING

Chalmit Lighting, formerly known as Andrew Chalmers and Mitchell was formed in 1910 as a supplier of marine equipment to shipyards in the west of Scotland.
Today the company is one of the largest and most respected hazardous area and marine lighting companies in the world and supplies product internationally through sales offices and agents located in over 40 countries.

As part of the Hubbell Harsh and Hazardous division, Chalmit can offer a global range of IEC & NEC products suitable for hazardous area lighting and apparatus installations on any continent and complying with all international codes and standards.

In addition to hazardous area luminaires, Chalmit Lighting has in-house facilities for the design and manufacture of fluorescent and HID control gear. This capability provides Chalmit with the ability to create ballasts tailored to meet the specific requirements of individual luminaires. These bespoke design services are also available to our customers upon request.

This technical guide outlines the design and use of equipment protected against the ignition of hazardous atmospheres formed from gases, vapours or dusts. The information given applies specifically to Chalmit Lighting products and can also be used as a general guide.

The guide refers to equipment and methods complying with safety practices being used throughout the world. This material is included both for completeness and because Chalmit operates throughout the world supplying all lighting requirements. Chalmit hazardous area products are designed and manufactured in accordance with the best engineering practices and to well established construction standards for explosion protected equipment.

The equipment must be selected, installed, maintained and disposed of in accordance with any regulation or legislation appropriate to its use. Reference must be made to the data sheets and the certification applying to each individual product.

The guide also refers to construction standards and application codes. The correct application of protected equipment is a specialist subject and these notes must be treated as being only informative. In addition to the Chalmit technical information users must themselves study the relevant codes of practice and construction standards.

Installation operation and maintenance manuals (IOM) are enclosed with each product and are available on request. These contain information essential to the safe use of the equipment and must be read and understood by installers and users before putting equipment into service. Much of the information is also available on the Chalmit website. Usually this will be for the latest version of a particular range. If detailed information on superseded product is needed Chalmit should be contacted directly.

International, Regional and National Standards - Ongoing Changes

This revised technical introduction was prepared in 2009 during a period of transition in the history of Ex standardisation. As such this section aims to highlight some of the current initiatives underway to simplify and rationalise product standards on a global scale.

The process of developing product standards which initially began with the invention of equipment for the safe operation of “gassy mines”, led to the standardisation of the “flameproof” and “intrinsic safety” concepts for product design. The standardisation of equipment on a national basis is now in its final stage of transition with the final move towards global standardisation under the IEC Ex scheme. This may cause some confusion in the short term but leads to international uniformity.

IEC Standards & ATEX

The early IEC standards were largely based on the national standards of European countries.

The first EU Directive [1976] for product standardisation prompted the rapid development of Euro-normes [EN] which were numbered in the EN 50014 etc. series. Gradually the IEC 79 series, later re-numbered 60079- series were updated using the EN's as a basis but with growing international input. These were mostly the gas hazard standards. In the late 1990's it was agreed in CENELEC that all work that could be carried out at IEC level, would be, and the standards voted in parallel as IEC standards and EN's. These standards carry the EN 60079- numbering.

The second ATEX directive [1994], see later section, introduced further factors. The directive covers gas and dust hazards and both electrical and mechanical equipment. It introduced basic requirements for safety, the “Essential Health and Safety Requirements [ESHR's]”. Three levels of safety Categories 1, 2 and 3 were defined effectively as:

Category 1 - “very safe and considering two possible equipment faults”

Category 2 - “safe with one fault”

Category 3 - “safe in normal operation”

Although the performance criteria of the Categories aligned with the expected area of application, the Zones, the designation of equipment protection by zone was removed. The selection of a particular type of explosion protection for a particular zone was by risk assessment.

Rationalisation

In order to eliminate this potentially long term anomaly at international level and to introduce the concept of a declared level of safety, IEC agreed to introduce “Equipment Protection Levels” [EPL's]. These EPL's are Ga, Gb and Gc for gas and Da, Db and Dc for dust. Ma and Mb also exist for mining. These are an alternative and additional specification for equipment made in accordance with the standards.

The key point is that the definitions of product performance are in effect identical to the ATEX Category definitions. In future, rationalisation may see the EPL's incorporated into ATEX.

The basic technical requirements for ATEX and IEC via the IEC Ex scheme (see the section on the IEC Ex scheme) will therefore be identical as EPL's are introduced right across the standards series. The ATEX marking is different from IEC and must be shown in addition to the IEC marking.

Sub-Division

A further effect of the introduction of EPL's is to give a definition to the emergence of sub-divisions in some of the protection concepts. The principle of sub-devision is clear when one considers that Intrinsic Safety was divided into ia and ib and is now complimented by ic. Now encapsulation has sub-devisions of ma, mb and mc and Pressurisation has px, py and pz. Sub-devision of other concepts may be developed in due course and some existing requirements in the Ex n standard may be relocated.

Standards for Combustible Dusts

A further change is the addition to the General Requirements IEC 60079-0 of general requirements common to protection against the ignition of combustible dusts. This enables the dust protection concept standards to be incorporated in the 60079 series.

As many equipment enclosures have certification for both gas and dust, this will be of benefit to both manufacturers and users. The current IEC dust standards are the IEC 61241 series. These cover test methods, construction and use. There are also various equipment standard concepts:

- tD, protection by enclosure
- pD pressurisation
- mD encapsulation.

As stated, where possible these IEC 61241 standards are being incorporated into the IEC 60079 series. In Europe these standards are becoming Euro Norms (EN's) and supersede the EN 50281 series.

Euro Norms

Because of the movement towards IEC, references to EN's are not used in this introduction except where there is no current Euro-norme in the IEC series, in which case the EN numbering in the EN 50014 etc. series will be given in brackets.

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Methods of Explosion Protection for Electrical Equipment in Explosive Gas Atmospheres

This catalogue contains a selection of lighting and ancillary equipment suitable for use in areas where explosive atmospheres may occur.

Explosive atmospheres can be ignited by sparks or hot surfaces arising from the use of electrical power.

The hot surfaces can be those of enclosures, components and light sources. Under fault conditions electrical connections may become over-heated and cause arcs or sparks.

In addition, sparks may be the result of the inadvertent discharge of stored energy or from switching contacts. Other possible sources of ignition are electrostatic discharges and frictional sparking.

A number of methods of protecting against ignition have been established and these have been codified in construction standards. These codes enable manufacturers to design equipment of a uniform type and have it tested by certification authorities for compliance with the standards.

The basic methods of protection are summarised in Table 1.

Method	Type Of Protection
Designed to prevent any means of ignition arising	Ex e Increased Safety Ex nA Non Sparking tD (for dust hazards)
Designed to limit the ignition energy of the circuit	Ex i intrinsic Safety Ex op Optical Radiation Ex nL Energy Limitation
Designed to prevent the explosive mixture reaching a means of ignition	Ex m Encapsulation Ex p Pressurisation Ex o Oil immersion Ex nR Restricted Breathing
Designed to prevent any ignition from spreading outside of the apparatus	Ex d Flameproof Enclosure Ex q Powder Filling Ex nC Non Incendive

Table 1 Methods of Explosion Protection

General Requirements IEC 60079-0

This standard contains general requirements common to the series of standards for the protection sub-groups. Equipment will comply with the general requirements except where they are excluded or varied by the individual protection standard detailed below.

Ex d "Flameproof Enclosure" Protection - IEC 60079-1

The potentially incendive parts are contained within an enclosure into which the explosive atmosphere can enter but which will contain any resultant explosion and prevent its transmission outside of the enclosure.

Ex p "Pressurised Equipment" Protection - IEC 60079-2

One type of pressurisation maintains a positive static pressure inside the equipment to prevent entry of gas and another maintains a continuous flow of air or inert gas to neutralise or carry away any explosive mixture entering or being formed within the enclosure. In the case of Ex p, the source of release can be internal.

Essential to these methods are continuous monitoring systems to ensure their reliability and purging schedules on installation and following opening for maintenance.

Ex q "Powder Filling" Protection - IEC 60079-5

This technique involves the mounting of potentially incendive components in an enclosure filled with quartz or solid glass particles. The powder filling prevents explosive ignition. It was originally developed to protect heavy duty traction batteries. The method is now primarily of use where the incendive action is related to the abnormal release of electrical energy by the rupture of fuses or failure of components used in electronic equipment.

The likelihood of possible incendive failure of the components is assessed and precautions taken to minimise it. Usually Ex q is used for discrete sub-assemblies and components inside Ex e equipment.

Ex o "Oil immersion" Protection - IEC 60079-6

This is a technique primarily used for oil filled equipment. The oil acts as an insulating medium.

Ex e "Increased Safety" Protection - IEC 60079-7

Normally sparking components are excluded from this method of protection. Other components are designed to substantially reduce the likelihood of the occurrence of fault conditions which could cause ignition. This is done by reducing and controlling working temperatures, ensuring the electrical connections are reliable, increasing insulation effectiveness and reducing the probability of contamination by dirt and moisture ingress.

Ex i "Intrinsic Safety" Protection - IEC 60079-11

The circuit parameters are reliably controlled to reduce potential spark energy to below that which will ignite the specific gas mixture. This includes the occurrence of one (coded ib) or two (coded ia) component faults and consequent failures in the circuit. Ex ic has no countable faults.

It should be noted that this method does not entirely protect against the local over-heating of damaged connections or conductors. These should be kept sound and suitably enclosed against damage.

Ex n "Non Sparking" Protection - IEC 60079-15

For this method, precautions are taken with connections and wiring to increase reliability, though not to as high a degree as for Ex e. Where internal surfaces are hotter than the desired T rating, they can be tightly enclosed to prevent the ready ingress of an explosive atmosphere. This is the "restricted breathing enclosure" technique.

The 'Non Sparking' concept also requires that high ingress protection ratings of IP65 and above are built into the design. The coding Ex nR denotes that the protection method employs a restricted breathing enclosure. The restricted enclosure may be confined to the part of the equipment containing the hot components such as lamps. Where the normal non-sparking construction is used the coding is nA.

There are other sub codes, nL - energy limitation and nC - non incendive, which refer to simplified forms of other protection methods listed above. The codes are used individually.

The Ex n methods have been developed specifically for the design of equipment used in the remotely hazardous area, Zone 2. Ex n meets the basic requirements for ATEX category 3.

Ex m "Encapsulation" Protection - IEC 60079-18

Potentially incendive components are encapsulated, usually by organic resins, which exclude the explosive atmosphere and control the surface temperature under normal and fault conditions. The likelihood of overheating and disruptive failure of the components is assessed and precautions taken to minimise any effect on the protection.

Ex op "Optical radiation" - IEC 60079-28

This is primarily concerned with the control of pulsed and continuous wave optical radiation through fibre optic cable with restrictions on the ratio of emitted optical power to the irradiated area.

The protection concepts include Inherently Safe which is analogous to Ex i and provides over-power/energy fault protection. Other methods include mechanical protection of the fibre and optical interlocks.

Ex t "Dust Protection by Enclosure" - IEC 60079-31

This method is applicable to electrical equipment protected by enclosure and surface temperature limitation for use in explosive and dust atmospheres. This standard will supersede replace IEC 61241-1. IEC 60079-31 combines practices A and B into a single practice.

Protection against the Ignition of Atmospheres containing Dusts

Most of the gas protection techniques will in practice protect against dust ignition. The enclosure method, where dust is effectively excluded and the external surface temperature defined, is generally used for lighting.

In the product data this is referred to as "dust protected enclosure". This is currently standardised as tD with sub-division into Practice A and Practice B as defined in 60079-14. With the advent of EPL the coding tD will be superseded by ta, tb and tc, and Practice A and B will be combined.

Sub divisions of Ex m; maD and mbD, Ex i; iaD and ibD also Ex p; pD have been introduced for dusts.

Classification of Hazardous Areas and the use of Protected Equipment

Codes of practice have been established for the classification of the potential hazards, the selection of suitable equipment to protect against the hazard and its installation and maintenance. The codes of practice list the methods of protection which, if used individually or in combination, may be employed to achieve an acceptable margin of safety.

The hazardous areas are classified in Table 2 according to IEC 60079-10-1 and IEC 61241-10-2.

Zone	Description
Zone 0 and Zone 20	An area in which an explosive atmosphere is continuously present or for long periods or frequently
Zone 1 and Zone 21	An area in which an explosive atmosphere is likely to occur occasionally in normal operation
Zone 2 and Zone 22	An area in which an explosive atmosphere is not likely to occur in normal operation but, if it does occur, will persist for a short period only

Table 2 Hazardous Areas Classification

Note: the definitions are for areas containing gas mist or vapour mixtures with air. The dust Zones have been added for ease of understanding and the definitions are effectively the same.

The deployment of protected apparatus in hazardous areas classified to IEC 60079-10-1 and EN 60079-10-2 is summarised according to IEC 60079-14 in table 3.

Zone	Type of Protection Assigned to Equipment	EPL
Zone 0	Ex ia Ex ma and types of protection suitable for Zone 0 as constructed to IEC 60079-26	Ga
Zone 1	Any type of protection suitable for Zone 0 and Ex d, Ex ib, Ex py, Ex e, Ex q and Ex mb (Also see notes on Ex s protection)	Gb
Zone 2	Any type of protection suitable for Zone 0 or 1 and Ex n, Ex mc, Ex ic, Ex pz and Ex o (Also see notes on Ex s protection)	Gc
Zone 20	tD A20, tD B20, iaD and maD	Da
Zone 21	Any type of protection suitable for Zone 20 and tD A21, tD B21, ibD, mbD and pD	Db
Zone 22	Any type of protection suitable for Zone 20 or 21 and tD A22 IP 6X	Dc

Table 3 Selection of Protected Equipment in Hazardous Areas generally according to IEC 60079-14

The suffix A and B for the dust protection methods refer to the two Practices A and B for the assessment of temperature with and without dust layers.

The EU ATEX Directives

The relevant directives of the EU are:

- 94/9/EC Equipment and protective systems intended for use in potentially explosive
- 99/92/EC Minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres.

The directives are adopted into national law by the individual member states. Some candidate entrant states have also aligned their national regulations with ATEX.

ATEX covers hazards arising from the use of both electrical and mechanical equipment in explosive atmospheres. The ATEX equipment directive and the accompanying health and safety directive, specifying the protection of workers, apply to the European Union. The safety directive requires hazardous areas to be subjected to a risk analysis, classified into Zones and suitably equipped.

The manufacturer must make a declaration of compliance with the equipment directive and apply the CE mark before the product can be placed on the market in the EU.

The EU ATEX Directives (continued)

The individual governments of the member states appoint "Notified Bodies" to carry out testing and certification. Equipment is divided into Equipment Groups (Group I for mining and Group II non-mining), the ignitable component of the explosive atmosphere, Gas (G) and Dust (D) and Categories 1, 2 and 3. The Categories provide respectively, very high, high and normal levels of protection against ignition.

The Categories should be considered as achieving the level of protection obtained by applying the existing protection techniques (Ex d, Ex e, Ex i, etc) no numerical basis has yet been devised for the expected safety level of categories or of equipment. Alternatively, the existing techniques can be replaced or supplemented by new concepts and engineering judgements made by the manufacturer in the design and construction of the equipment. Where required, this would be validated by notified bodies performing an EC type examination of the product.

In practice, the Categories are equated to suitability for Zones. The actual category of equipment specified by the user for a Zone will depend on the overall risk assessment. Zoning considers only the probability of the occurrence of an explosive atmosphere, its extent and duration. It does not consider possible consequential effects of an ignition having taken place, or of the environmental conditions at a particular site. Equipment will be marked with the Grouping and Category in addition to the marking required by the individual protection standards.

Protection Codes for Chalmit Products

The range of Chalmit Lighting products fall within Group II for industrial and hazardous area applications and cover designation as Category 2 or 3. This means that products will generally be suitable for use in Zone 1 and 2 areas as defined by the codes of practice for area classification (IEC 60079-10) and selection (IEC 60079-14 etc). These codes of practice provide the user with guidance in selecting equipment needed to obtain the degree of safety that is required for the particular hazardous area application.

The ATEX directive lists "The Essential Health and Safety Requirements" (EHSR's) required to comply with the directive, in addition the product must be "safe". The term "safe" covers any property which is not covered by the directive, but is known to or could have been reasonably foreseen by the manufacturer. Compliance with the Euro-norme gives a presumption of conformity with those aspects of the directive covered by the standard. Lists of these standards are published in the official journal (OJ) of the EU.

The European Commission web site (www.europa.eu) contains a large quantity of material concerning the directives along with the actual directive itself and the guidelines for its application.

Examination Certificates

An EC type examination by a notified body is mandatory for Category 1 and 2 electrical equipment but not for Category 3.

Chalmit Lighting have chosen to obtain a certificate of compliance from a third party for Category 3 equipment in order to ensure customer confidence and continue the long standing practice that Chalmit has used for Ex n equipment.

The designation EC can not be used for certification of Category 3 equipment. In the data the term "type examination" rather than "EC type examination" is used for Category 3 equipment.

IEC & ATEX

The relationship between IEC Equipment Protection Levels, ATEX Categories and applications is shown below in table 4.

IEC EPL	ATEX Category	Degree of Safety	Design Requirement (condensed)	Expected Zone of use
Ga	Category 1	Very high level of protection	Two independent means of protection or safe with two independent faults	Zone 0
Da	Category 1			Zone 20
Gb	Category 2	High level of protection	Safe with frequently occurring disturbances or with a normal operating fault	Zone 1
Db	Category 2			Zone 21
Gc	Category 3	Enhanced level of protection	Safe in normal operation	Zone 2
Dc	Category 3			Zone 22

Table 4 EPL, Atex Category, Design Requirements and Expected Application

Equipment Protection Levels (EPLs) are used as part of a risk assessment approach to the selection of Ex equipment. It is beneficial to identify and mark equipment according to their inherent ignition risk thus making selection easier and provide the basis of a better risk assessment approach, where appropriate.

Marking of an ATEX Product and the CE Mark

A product that carries the ATEX marking will include the CE mark, CE Ex, the Group, the Category and the Category sub-group G or D. The product also carries the normal coding, Ex d etc. and the surface temperature and ambient temperature (Tamb) ratings. The Group also forms part of the marking in the product standards and pre-dates ATEX.

The Category is additional to the the marking in accordance with the standard. This means that all of the familiar marking is still present. All products carry the general product safety and electromagnetic compatibility CE mark on the product, installation manual or packaging, as appropriate.

The marking attests that the product meets the requirements of the Low Voltage and Electro-Magnetic Compatibility (EMC) directives of the EU as transposed into UK law. If the product carries the CE mark for ATEX it is not repeated. The scope of compliance is given in the IOM. Products exported directly outside of the European Community are not required to carry any CE marking but local marking regulations may apply.

Surface Temperature Rating and Gas Grouping

Any explosive mixture can be classified for explosion protection under two main characteristics, temperature of ignition by a hot surface and the spark energy to ignite it.

The spark energy of ignition is also related to the intensity of the explosion. This latter property is crucial to the design of the joints in flameproof enclosures (Ex d) and the energy level limit of intrinsically safe (Ex i) and energy limited circuits.

Other important subsidiary characteristics are the specific gravity and flash point, which are used in the determination of the area classification.

Surface Temperature for Ignition

The surface temperature rating is measured in the most onerous design attitude at the most severe supply voltage condition within the design tolerance. Usually this is +10% of rated voltage for lighting and with any fault or overload condition which could normally occur in service.

A normal overload condition for motors may be the starting or stalled condition and, for luminaires, the end of life of a lamp. In the case of Ex d, Ex m, Ex q, Ex nR and dust proof enclosure methods, the maximum temperature is measured on the external surface. In other methods of protection the maximum internal temperature of the equipment is measured.

The explosive mixtures are allocated into broad bands giving the Temperature Classes shown in Table 5.

Temperature Class	Maximum Surface Temperature °C
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85

Table 5 Classification of Maximum Surface Temperatures for Electrical Equipment IEC 60079-0

For dust protection using the enclosure methods, the surface temperature is limited to a given value in °C, the T grouping prefix is not used.

Gas Grouping

The gases, vapours and dusts are classified as shown in Table 6. The possible number of chemical compounds is extensive and the list shown is only representative.

The changes introduced in IEC 60079-0 Edition 5 affect the marking of Groupings as all Group II and III equipment must be marked with the subdivision A, B, or C

Group	Representative Gasses and Dusts
I	All underground coal mining. Firedamp (methane)
IIA	Industrial methane, propane, petrol and the majority of industrial gasses
IIB	Ethylene, coke oven gas and other industrial gasses
IIC	Hydrogen, acetylene, carbon disulphide
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

Table 6 Gas and Dust Grouping for Electrical Equipment for IEC 60079-0

Protection against the Ignition of Explosive Atmospheres formed from Combustible Dust

In this catalogue are products for use with ignitable dusts. Explosives dusts i.e. those not requiring the presence of air to ignite are outside the scope of ignitable dust protection.

With respect to the formation of an explosive atmosphere, the nature of dust is very different to that of gas or vapour. Dust, unlike gas does not disperse, it remains until cleared away by manual means or ventilation and can form layers. Layers of dust can ignite at much lower temperatures than clouds. This is because layers can insulate and increase the temperature and also because layers of some dust are prone to spontaneous combustion. The ignition of layers results in burning which can subsequently translate into an explosion. Layers have the potential to be disturbed and form clouds. Ignition data for dusts is given for clouds and layers. Typically, dust in a cloud form is harder to ignite than gas either by a hot surface or a spark.

The maximum allowable surface temperature for equipment present in dust clouds is de-rated from the actual surface temperature of ignition of the dust. The allowable surface temperature for layers is subject to further de-rating where layers exceed 5mm thick and extra heavy layers require special laboratory investigation by the specifier or user.

When installing floodlights, care must be taken to ensure that the face of the glass is positioned at such an angle that dust cannot settle. Ignitable atmospheres caused by dust may also be prevented from arising by ventilation, containment and by good housekeeping.

Area Classification

The area classification for dust is similar to that for gas, namely, Zone 20, Zone 21 and Zone 22, depending on the likelihood of a hazardous dust atmosphere being present (refer to table 2). As a generality, the zones are smaller than those for gas. Equipment may be marked as suitable for both gas and dust hazards.

If the equipment carries marking for both dust and gas this does not mean both at the same time.

Where an explosive gas atmosphere and a combustible dust atmosphere are or may be present at the same time, the simultaneous presence of both shall be considered and may require additional protective measures. The potential for ignition must be investigated by a qualified person.

Protection Methods

The enclosure method, where dust is effectively excluded and the external surface temperature defined, is generally used for lighting. In the product data this is referred to as “dust protected enclosure”. This is now standardised as tD with sub-division into Practice A and Practice B. The next edition of IEC 60079-14 shall align with the protection concepts and include ta, tb and tc with Practice A and Practice B combined.

Sub divisions of Ex m; maD and mbD, Ex i; iaD and ibD also Ex p; pD have been introduced.

The dust ignition protection method for products in this catalogue is by surface temperature limitation and enclosure to IP6X or IP5X as appropriate. IP6X is required for ATEX Category 1 and 2 and for conducting dusts in any Category. Ingress of a conducting dust can cause incendive insulation failure. IP5X is a minimum for Category 3. The surface temperature is limited to a given value in °C.

The table below outlines the difference between practices A and B.

Practice A	Practice B
Performance based	Performance based and prescriptive
Maximum surface temperature is determined with 5 mm layer of dust and installation rules require 75K margin between the surface temperature and ignition temperature of a particular dust.	Maximum surface temperature is determined with 12.5 mm layer of dust and installation rules require 25K margin between the surface temperature and ignition temperature of a particular dust.
A method of achieving the required dust ingress protection by the use of resilient seals on joints and rubbing seals on rotating or moving shafts or spindles and determining dust ingress according to IEC 60529 - IP code.	A method of achieving the required dust ingress protection by specified widths and clearances between joint faces and, in the case of shafts and spindles, specified lengths and diametrical clearances and determining dust ingress by a heat cycling test.

Table 7 Comparison of Practice A and B for Dust Protected Enclosures

Reference is also made in this catalogue to products for use in NEC Class II and Class III locations. NEC dust protected products are to UL 844. The construction and testing is different to that specified in the Euro-norme but is very similar to the alternative Practice B given in the IEC standard.

The IEC Ex Scheme

The IEC Ex scheme is an international certification scheme based on the use of IEC standards.

This is now well established and has a large group of participants including all the major manufacturing countries. In each member country, test laboratories and certification bodies have been vetted and joined the scheme. These organisations now accept each other's test reports prepared under the scheme and issue certificates of conformity with IEC standards. The certificates will carry the IEC certification mark.

The ultimate objective is the acceptance of one certificate regardless of origin to show that explosion proof equipment is safe for use. A fundamental requirement of the scheme is that participating countries align their national standards with IEC.

International Standards

Two distinct groups of equipment standards used world-wide are the IEC/EN (Euronorme) series of standards and those used in the USA and areas influenced by US practice. A large proportion of work on hazardous area and equipment standards is now being carried out at IEC level and almost all EN's are identical with IEC.

Many countries which have their own national standards have adopted the IEC standards in their entirety or incorporated material from them. The practice in the US has developed differently. The US engineering practice, legal requirements, regulations and the use of approval organisations such as UL, FM and ISA mean that, whilst the safety principles are much the same as in the rest of the world, the detail is significantly different. The US code of practice is the National Electrical Code (NEC) and the 'standard' exclusively used, until recently, for luminaires is ANSI/UL844.

This standard integrates the designation of the hazardous area in which equipment is designed to be used and the protection method. For lighting purposes the types of protection are a flameproof type and a non-sparking type. These are used in Class 1 Division 1, and Class 1 Division 2 areas which are broadly equivalent to Zone 1 and Zone 2 respectively. Dust and fibre hazards are Classes II and III.

The only basic technical difference between these and the equivalent IEC/EN standards is that the ANSI/UL844 'non-sparking' technique, known as 'enclosed and gasketed', does not use the restricted breathing method. This is one factor which accounts for the generally higher surface temperature ratings of ANSI/UL844 listed equipment and the practical need for a greater number of temperature sub-divisions. Another factor is that the ANSI standard specifies higher test pressures for flameproof equipment. In the case of HID luminaires this results in the lampglass being smaller and the surface temperature inevitably hotter.

The construction and testing of dust protected enclosures is different to EN but is currently partially incorporated as an additional alternative in the IEC standards. In both codes the gases and compounds are classified by surface temperature of ignition and grouped into ignition groups for the dimensioning of flameproof joints and for intrinsic safety. The classification and grouping are broadly similar to IEC but differ in detail. The classification and protection cannot be mixed and must be used as complementary pairs.

A general comparison between IEC and NEC practice for gas hazard protection is shown in Tables 8 and 9. The US standards are also influenced by the use of conduit wiring systems which, in contrast to cable, form a flameproof distribution method for Class 1 Division 1 and a damage and ingress protected distribution method for Division 2.

NEC - Zone Classification

The NEC has now introduced the Zone classification concept for gas hazards as an alternative to the Division method.

To support this UL and ISA have now introduced their own IEC based protection standards for use in the alternative Zones. These standards are intended to become single ANSI documents. The objective is that the two systems will run in parallel until the older US system becomes obsolete. This will take many years. The new US standards, although based on IEC, may differ from IEC although great effort is being made to ensure that differences do not occur except where there are major difficulties such as the continuation of the long standing US practice of using ordinary motors in Class 1 division 2.

Certification to IEC based US standards can not be considered as being identical to IEC. The wiring methods currently remain unchanged from those traditional in the USA.

Products may be marked for both Divisions and Zones. Where product complies with the US standard based on IEC the designation AEx is applied on the marking.

Canadian Approvals

The Canadian practice has been a hybrid of US and European. The mining industry in Canada was much influenced by Europe which led to the use of European methods elsewhere. Through the joint accreditation system with the US (NRTL) there is a degree of overlap but the detail of this can not be addressed properly in this introduction. Canada has now adopted the zone system for new construction.

Chalmit Lighting is part of the Harsh and Hazardous division of Hubbell Inc, as such Chamlit can supply the products of sister company Killark providing a complete product portfolio to meet US and Canadian standards and codes. The combined range is comprehensive encompassing the vast majority of lighting products needed to satisfy applications in hazardous areas throughout the world.

Maximum Temperature ˚C	Surface Temperature Classification	
	EN 50014	ANSI/UL844
450	T1	T1
300	T2	T2
280	280°C (T2)	T2A
260	260°C (T2)	T2B
230	230°C (T2)	T2C
210	215°C (T2)	T2D
200	T3	T3
180	180°C (T3)	T3A
160	165°C (T3)	T3B
160	160°C (T3)	T3C
135	T4	T4
120	120°C (T4)	T4A
100	T5	T5
85	T6	T6

Table 8 Comparison of Surface Temperature Classification IEC and NEC

Representative Gas	Explosion Group IEC 60079-0	Explosion Group National Electrical Code
Acetylene	IIC	A
Carbon disulphide	IIC	B
Hydrogen	IIC	B
Ethylene oxide	IIB	B
Hydrogen sulphide	IIB	C
Ethylene	IIB	C
Acrylo-nitrile	IIA	D
Industrial methane	IIA	D
Propane	IIA	D
Ethyl acetate	IIA	D

Table 9 Comparison of Representative Gases in IEC and NEC Gas Groups

Ingress Protection

The surface temperature classification and gas grouping are the primary safety considerations. A major secondary parameter is protection against the ingress of solid bodies and liquids. In some cases the degree of ingress protection (IP) forms part of the standard requirement of the explosion protection method.

Where equipment is used in dirty or wet conditions, high resistance to ingress contributes to the reliability of explosion protection in that electrical faults within the equipment are often the result of water ingress.

For Chalmit products, the appropriate standard is IEC 60529. The definitions of the IP code are summarised in Table 9. It will be noted that many Chalmit luminaires have both IP66 and IP67 ratings. This is because the IP66 test can be more severe than IP67 for some constructions. The US has a system using the ANSI/NEMA 250 code which is similar but also contains tests for corrosion resistance.

First Digit Numeral	Degree of Protection (Foreign Bodies)	Second Digit Numeral	Degree of Protection (Liquids)
0	No protection	0	No protection
1	Protection against ingress of large solid foreign bodies	1	Protection against drops of water
2	Protection against ingress of medium sized solid foreign bodies	2	Protection against drops of liquid falling at any angle up to 15° from vertical
3	Protection against ingress of small solid foreign bodies greater in diameter than 2.5mm	3	Protection against rain falling at any angle up to 60° from the vertical
4	Protection against ingress of small solid foreign bodies greater in diameter than 1mm	4	Protection against splashing. Liquid splashed from any direction shall have no harmful effect
5	Protection against the ingress of dust in an amount sufficient to interfere with satisfactory operation of the enclosed equipment	5	Protection against water projected by nozzle from any direction
6	Complete protection against ingress of dust	6	Protection against powerful water jets
		7	Protection against temporary immersion in water
		8	Protection against indefinite immersion in water. Tests to be agreed between supplier and customer.

Table 10 Definition of Ingress Protection

Resistance to Mechanical Damage

The standards usually contain two levels of impact resistance these being appropriate to high and low risk of impact.

The selection will depend on the mounting position. If the equipment is only suitable for low impact the certificate is suffixed X or the information is included in the installation information.

The tests are conducted at both below the lowest permitted ambient temperature and above the highest. 10 Joules is equivalent to 1 Kilogram dropped from a height of 1 metre. A 25 mm diameter hemispherical steel impact piece is used. Chalmit equipment usually exceeds the minimum level by a substantial margin.

Part of apparatus tested	Impact energy in Joules IEC 60079-0	
	High risk of mechanical danger	Low risk of mechanical danger
Enclosures and Guards	7	4
Light transmitting parts without guard	4	2
Light transmitting parts with guard when tested without guard	2	1

Table 11 Impact Energy Requirements for IEC 60079-0 Group II Equipment

IK Code

In addition to the index of protection against the ingress of foreign bodies and liquids, a third figure is sometimes quoted. This relates to the minimum levels of resistance to mechanical damage as measured by test methods producing an impact energy measured in Joules or Newton metres.

It is often referred to as the IK code, the levels of protection for this index are detailed in Table 12 below.

The test method is not the same as in the IEC standards.

IK Code	IK00	IK01	IK02	IK03	IK04	IK05	IK06	IK07	IK08	IK09	IK10
Impact energy (Joule)	a	0.14	0.2	0.35	0.5	0.7	1	2	5	10	20
[a] Not protected to this standard											

Table 12 Impact Energy Requirements IK Code

Compliance with General Product Standards

Luminaires are designed to comply with normal product construction standards, such as IEC 60598, where the requirements do not conflict with those in the Ex protection standard. This also applies to internal components such as lampholders, terminals and control gear.

Equipment complying with the individual product standard will have its internal components operating within their own rated parameters when operated at the maximum rated ambient temperature of the finished product. This contributes to the reliability and, ultimately, the safety of the installation. Compliance with product standards is the normal method of claiming compliance with the Low Voltage Directive of the EU.

Operational Temperatures - Tamb

The operational temperature limits, Tamb, are based on both product function and the Ex protection standards. As a general guide the normal upper limit is 40°C but some equipment is rated at other temperatures which may be linked to the surface temperature rating or the temperature limit of operation. The normal lower limit for Ex products is -20°C unless otherwise noted on the certificate or data. 40°C to -20°C is the standard level given in IEC 60079-0 and if these are the limits, the product does not need to be marked with the Tamb.

Where the range is other than 40°C to -20°C the upper and lower limits are both marked. The lowest certified Tamb is not always the actual lowest temperature for functional operation, especially for luminaires where the lamp may not be suitable because of temperature limitation.

In some cases the lowest temperature for Ex use is lower than a temperature at which the lamp will start or the product will function properly. The lower limits of operation and starting for lamps and for batteries can be obtained from Chalmit. A guide is -40°C for HPS, -30°C for Metal halide, -25°C for Mercury vapour, -45°C for LED and as low as -30°C for fluorescent depending on the control gear used and -10°C for battery operated equipment.

'X' suffix on Certificate

Some products carry a suffix 'X' after the certificate number. This denotes “special certification conditions”. These are given on the certificate and in the installation manual. The conditions usually relate to cable entry, operation, lamps, orientation, installation position and location, impact level or maintenance. They must be observed by the user.

Delayed Opening

In those cases where internal temperatures are greater than the T rating or where energy is stored in electrical components, a delay before opening is marked on the equipment. This will give a minimum time limit to be observed following the interruption of electrical power. This allows for cooling and discharge of energy. It applies most practically to Ex d equipment.

For Category 3 equipment, opening times are not usually given as it is inferred that an explosive atmosphere is unlikely to occur during maintenance operations.

Cabling and Cable Glands

Ex d floodlights and well-glass luminaires in this catalogue feature indirect entry via Ex e terminal enclosures. This means that the terminal chamber is separated from the main chamber by a flameproof barrier. Cable glands must satisfy the requirements for Ex e entry with reference to IP rating and impact. The cables must satisfy any requirement laid down in an installation code of practice.

Where the entry is via an indirect Ex d terminal chamber or directly into an Ex d enclosure, Ex d cable glands must be used. The method for selecting cable gland types for Ex d is set out in the code of practice IEC 60079-14.

Where glands are fitted as part of the equipment, the diameter of the supply cables used must be suitable for accommodation within the cable glands supplied. If not correct the glands must be replaced by the user. The terminal size and looping facility available is shown in the product data sheets and IOM. Where there is an option, the requirement must be stated on the order. Equipment is usually despatched with one or more permanent entry plug(s) and one travel plug which will keep out moisture during transport, storage and initial installation.

Ex nR with a restricted breathing enclosure is provided with a means of achieving the gas-tight seal needed to attain the protection method. It is the responsibility of the user to ensure that the cable entry system is satisfactory.

In relation to cable temperature, some products require to be supplied by cables with temperature ratings above 70°C (ordinary PVC), particularly where the product is rated for higher ambient temperatures. The cable temperature is shown on the rating plate and in the installation manual. The rating is based on the maximum rated ambient. Where cable temperatures exceed 70°C at the maximum rated ambient, Chalmit now gives the actual temperature rise at the cable entry. The user can relate this to the actual operating condition and select appropriate cables. At their own discretion users may choose to adjust the cable temperature ratings of those products with specific cable temperatures on this basis.

For Ex nR luminaires in this catalogue, the cable glands which may be used are listed in the certificate pertaining to that piece of equipment. This is to ensure that the restricted breathing properties are maintained. A list of suitable cable glands is given in the installation leaflet supplied with the product and available on request from Chalmit.

Where cables do not enter directly into the restricted breathing enclosure the designation is Ex nA nR and special glands are not required, however the ingress protection and impact requirements must be met. Information on this can be found in the individual product installation leaflet.

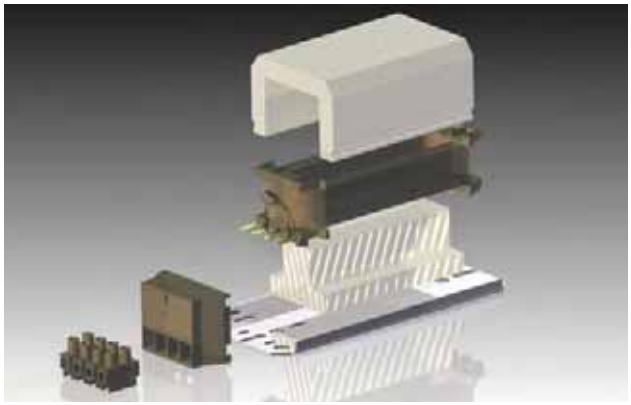
Lamps and Control Gear

Lamps fall into two broad categories, incandescent lamps where the light is generated by a hot wire element and discharge lamps where the light is generated by an electrical discharge enclosed in a containment vessel usually referred to as the arc tube. Discharge lamps either produce light directly from the hot gas discharge, as is the case with high pressure sodium and metal halide, or by conversion from UV to visible light using a phosphor which absorbs one wavelength and emits another. Phosphors are used in fluorescent and mercury vapour lamps.

Apart from some specialist “induction” lamps where the plasma is generated by an external magnetic field, the electrical arc in discharge lamps is formed between electrodes within a vessel or arc tube. Discharge lamps are divided into two types. Low pressure lamps with an evacuated glass vessel filled with inert gas at low pressure and a small amount of metal, usually mercury, and high pressure types where the quartz or ceramic arc tube is filled with sodium, mercury and sometimes a combination of rare earth metals which vaporise at high temperature.

The high pressure lamp types have an outer evacuated enclosure to reduce heat loss and protect against the severe corrosion which would occur if the hot arc tube were to be exposed to the atmosphere.

The electric arc generated to strike the lamp is unstable so control gear is needed to stabilise it, hence the common term “ballast”. Some discharge lamps are designed so that they can be initiated at normal mains supply voltage but the optimisation of output and efficiency usually means that an enhanced voltage is needed to initiate the arc. Depending on the requirement, this is produced by resonant circuits which boost the voltage during starting or by a separate ignitor producing a high voltage pulse. Fluorescent lamps have cathodes which are usually pre-heated providing ionisation to aid initiation of the arc. Ex e fluorescent lamps use cold start technology to initiate the electrical arc.



Light emitting diodes (LED) produce light directly by using solid state technology. These are being developed rapidly and have now reached output levels and efficiency where they can be used for illumination rather than decoration and indication also providing extended, maintenance free installation.

Lamps and Control Gear (continued)

The different types of lamps have various characteristics: instant light/slow run up; instant re-strike/long delay: good/poor colour rendering (colour rendering is a method of comparing colours as they appear under a given lamp with their appearance in natural daylight); long/medium life; high/low efficiency; cost; size; fragility; ability to run at low or high temperature; vibration resistance; maximum power; etc. Some lamps are so hot or so bulky that their use must be confined to certain types of Ex protection.

No single lamp type is ideal for all lighting applications but a combination of fluorescent and powerful high intensity discharge lamps will accomplish most tasks. The user must select the combination of light source and protection which suits the application. Table 13 gives a summary of lamp characteristics and their application as applied to general Ex usage. It must be stressed that this is a broad summary and that considerations of lamp economics are both complex and subjective. This applies especially to views on economical life.

Details of the specific lamp types required for individual Chalmit luminaires can be found in ordering information section at the end of this catalogue.

The lamp output shown is given in lumens. The lumen is a unit of light which quantifies the amount of luminous power in the visible range. Large diffuse light sources such as fluorescent and coated HID types can not readily be focussed. The ability of the lamp and luminaire to deliver the light to a working surface varies considerably with the lamp type, reflector and luminaire design.

As a general rule, the smaller power lamps of each type have lower efficiency and shorter lives, often significantly so. The lamp manufacturers provide large amounts of data but the tables of lamp mortality combined with the reduction of output over the lamp life (lumen depreciation) need to be studied carefully to make a refined judgement. The amount of switching is also an important factor.

Lamp Type	Tubular Fluorescent and 2 Leg Compact	Compact Fluorescent	High Pressure Sodium	Metal Halide	Mercury Vapour	Incandescent. GLS and Tungsten Halogen	Light Emitting Diodes (High Power LED) ****
Lamp Power range W	18 to 58W	9 to 55W	70 to 1 kW	70 to 2kW	80 to 400W	40 to 2000W	Up to 8W
Output range Lumens	up to 6000	up to 4800	6000/13000**	5000/20000	3400/22000	375/3100	Varies
Physical size	Long	Small	Small to medium	Small to medium	Medium	Medium	Very small
Temperature of lamp	Cool	Cool	Hot	Very hot	Medium	Medium to very high	Cool
Efficiency lumens per circuit watt	up to 90	Up to 85	Up to 125	Up to 90	Up to 70	Up to 21	Up to 90
Instant light	Yes	Yes	No ***	No	No	Yes	Yes
Lumen depreciation	Slow	Slow	Negligible	Quick	Slow	Negligible	Slow
Colour rendering Ra	Good up to 90	Good up to 90	Poor up to 40	Good up to 90	Fair up to 65	V Good 95/100	Good up to 90
Economical life max (hrs)	40000*	12000	30000	12000	10000	1000	Up to 80000
Ability to be focussed for floodlighting	No	Limited	Good (tubular)	Good (tubular)	Limited	Some (tubular linear)	Yes
Emergency operation	Easy	Easy	No	No	No	Very easy (but inefficient)	Yes
Vibration resistance	Medium	Medium	Good	Good	Good	Poor	Very Good
Most common equipment Ex protection methods	Ex nA Ex e	Ex n Ex d	Ex d Ex nR	Ex d Ex nR	Ex d Ex nR	Ex e Ex d Ex nR	Ex e Ex nA Ex d
T amb range ˚C	-20 to 55	-20 to 55	-50 to 60	-30 to 55	-20 to 55	-50 to 60	-55 to 55
Common T ratings	T6 to T4	T6 to T4	T4 to T2	T4 to T2	T4 to T2	T6 to T2	T6 to T4

Table 13 Summary of Lamp Characteristics and their Application

* Most fluorescent lamps have an economical life of 15,000 hrs but some higher specification lamps are available which can run economically for up to 80,000 hours.

** Equal to or less than 48,000 hours when “twin arc” lamps are used. (See note below)

*** HPS lamps are available which have two arc tubes in parallel inside the same envelope and are commonly known as “twin arc” lamps. They give 15% light output immediately after a brief supply interruption which extinguishes the lamp. They also give a longer service life.

**** LED figures represent single chip devices; multichip devices can consume considerably more power. Economic lifetime and efficiency are directly affected by temperature.

Lamp Standardisation

Most IEC type lamps are now standardised in form and cap dimensions even when, as newly developed lamps, they are not included in a standard.

The US type lamps are generally somewhat different and are designed for use with US control gear. Some US fluorescent lamps are superficially identical to IEC lamps but may not run reliably on IEC control gear and vice versa. In addition, some US HPS lamps are identical in operating characteristics with IEC lamps but others have different operating characteristics. US and IEC lamp-cap sizes are often different.

US metal halide lamps usually have quite different operating characteristics to European lamps and there are many varieties. Most must be operated on US control gear and sometimes a specific make of control gear if warranties are to be valid. Great care must be taken with the use of all metal halide lamps and details of their application will be found in the instruction manuals.

Most products for IEC applications in this catalogue are designed to use metal halide lamps compatible with HPS (SON) ballasts. Lamps will also run satisfactorily provided they are compatible with both HPS and MBFU ballast impedances. In all cases check control gear for compatibility. If in doubt with metal halide lamps please contact your local Chalmit representative.

Care must also be taken with the specification of compact fluorescent lamps, particularly whether they need to have a starting switch in the lamp. Most of the luminaires in the catalogue use 4-pin compact fluorescent lamps without internal starter switches. HPS/SON lamps with internal ignitors must not be used in Ex n or Ex N equipment. All Chalmit HID luminaires are suitable for use with twin arc HPS/SON lamps.

Please consult Chalmit or your local representative if there are any uncertainties concerning lamps.

Control Gear and Electrical Supplies

Incandescent, tungsten-halogen and MBTF(self ballasted discharge) lamps are matched to the supply available and must be ordered accordingly. Discharge lamps are matched to the supply by the use of control gear. The control gear may be suitable for a single rated voltage or, by having taps or by a 'universal' or regulating design, may be suitable for a range of rated voltages. Usually discharge lamps will be standardised, refer to the section above on lamps for possible miss-match. Supplies will have a tolerance on the rated or nominal voltage and, in general, the lamps will have a shorter life and produce more light when the actual voltage is higher than rated.

This effect is reduced or eliminated with full regulation, usually by electronic control. Electronic control is now common for fluorescent lamps and this gives additional benefits in efficiency and lamp life. There are however technical and operational problems with the use of electronic control for HID lamps. In particular these concern the temperature limitations of economical electronic power supplies. Also the efficiency benefits are proportionately much lower than for fluorescent lamps. For these reasons electronic control for high power HID lamps is some way in the future. Operation above rated voltage will also reduce the life of control gear and enclosures, especially where operation is continuous and at the maximum allowable Tamb. The product standards are currently based on having a normal maximum variation of +/-6% and an extreme variation of +/-10% of rated voltage.

There is a problem in the UK caused by the rationalisation of nominal supply to 230V throughout the EU. The nominal supply in the UK is now 230V whereas the actual measured supply usually remains at or near 240V. Most Chalmit products will have a number of taps which can be selected to match the actual average supply voltage. Continuous operation at more than 6% above of the nominal control gear setting is not advised. To avoid this occurring the ordering of equipment for the actual site voltage or with taps or the use of control gear having regulated operation is required. Many Chalmit products with wound control gear are power factor corrected to values greater than 0.85 depending on the lamp and supply voltage and frequency. PFC can be omitted where supplies have large harmonic components which could damage capacitors.

Products with electronic control gear have a power factor near unity. Further information is contained in the product installation manuals available to download from the website (www.chalmit.com). Most Chalmit control gear for high pressure discharge lamps now has thermal protection against the possible effects of rare faults occurring when lamps reach the end of their life.

Emergency Lighting

Some luminaires for emergency lighting are contained in the catalogue. Where remote battery supplies are available these can supply GLS or tungsten-halogen lamps of appropriate rating from dc supplies.

Luminaires such as Protecta III, Acclaim, Curie Elite, NexLED and Stirling II with electronic ballasts, can power fluorescent lamps from dc supplies. Most of the remaining range can be run at mains ac voltage from a UPS but the characteristics of the UPS must be compatible with those of the luminaire. For details of operation where full information is not included in the catalogue refer to Chalmit technical sales (techsupport@chalmit.com).
The Protecta III, Acclaim, Curie Elite and Stirling II luminaires are also available with integral, self contained nickel-cadmium batteries to provide illumination on ac mains failure. The output is a given percentage of the full luminaire output depending on the lamp size chosen and the duration required.

Applications

Chalmit luminaires use a wide range of lamps, each of which is suited to its particular application. The use of high intensity discharge lamps in floodlighting and high bay applications reduces the number of luminaires required with a consequential reduction in the amount of installation and maintenance time as well as cost.

The Chalmit range also includes a number of luminaires for single point or local illumination and those using fluorescent lamps provide instant illumination of good light quality using low cost sources. The HID sources allow a compact luminaire construction that will reliably attain a high degree of ingress protection. Many fluorescent sources and the smaller HID sources can be housed in luminaires having plastic enclosures and these have additional applications in certain corrosive environments. The wide range of products and lamps ensures that Chalmit can supply the correct luminaire for the application.

To assist you in developing a lighting design that will provide the optimum performance from Chalmit products for your specific applications, Chalmit have developed a user friendly lighting design package called CHALMLITE™. This software programme is available free of charge and includes unique internal & external quantity estimators to provide a quick indication of the luminaire quantities required. Chalmit also offer a lighting design service to assist in the development of complex lighting designs tailored to meet exact project requirements.

Glossary

ANSI	American National Standards Institute
ATEX	Abr. Directive 94/9/EC Equipment and protective systems intended for use in potentially explosive atmospheres
BASEEFA	British Approvals Service for Electrical Equipment in Explosive Atmospheres. This was a government organisation that is now closed
BASEEFA 2001	A private organisation which has taken on much of the work of BASEEFA
BSI	British Standards Institution
CAA	Civil Aviation Authority (UK)
CEN	Committee European de Normalisation
CENELEC	Committee European de Normalisation Electrique
CIE	Commision Internationale de Leclairage
CSA	Canadian Standards Association
EC	European Communities
EECS	Electrical Equipment Certification Service (UK). Parent organisation of BASEEFA, now closed
ERA	The Electrical Research Association (hazardous area testing section became part of ITS)
EU	The European Union
FM	Factory Mutual (US)
IEC	International Electro-technical Commission
IP	Ingress Protection

ISA	Instrument Society of America
ITS	Intertek Testing Services (formerly part of ERA)
KEMA	Netherlands Testing Laboratory
NEMA	National Electrical Manufacturers Association (US)
NRTL	Nationally Recognised Testing Laboratories (US)
SCS	SIRA Certification Service (UK)
SOLAS	Safety of Life at Sea (convention)
T	Surface Temperature (Max)
Ta/Tamb	Ambient Temperature
UL	Underwriters Laboratory Inc.
	LAMP TYPES
HID	High intensity discharge
CFL	Compact fluorescent
MBFU	Mercury vapour
MBI/HQI	Metal Halide
MBTF	Blended mercury vapour
SON/HPS	High pressure sodium
TH	Tungsten-halogen
QL	Induction Lamp
LED	Light Emitting Diode

PROTECTA III

Bolted through suspension points & fully compressed gasket

Construction

- Tough glass reinforced polyester body
- Polycarbonate diffuser with high resistance to UV and stress cracking
- Robust hinges and multipoint compressive clamping of diffuser closure
- EPDM gasket with sealing lip
- Bolted through suspension points for great strength
- IP66/IP67 and deluge tested to DTS-01

Easy access to lamps & control gear

Protecta with diffuser opened

Quick release mains terminals to ballast & battery for ease of maintenance

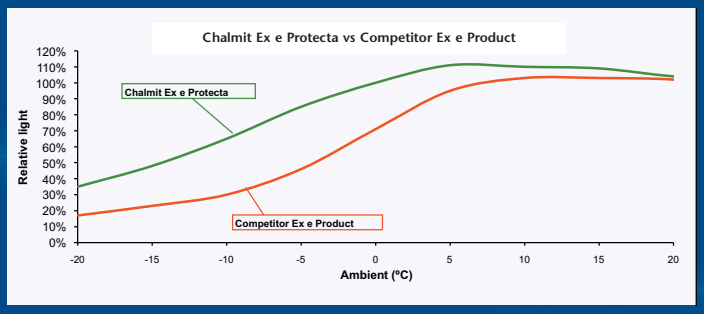
Reverse side of gear tray

Reliability

- Robust electronics with End of Life (EOL) protection to IEC 60079-7 with EOL I and EOL II functionality
- Outstanding electrical immunity to mains disturbances including over-voltage, harmonics and spikes
- Vibration tested to DNV/Lloyds requirements
- Functional 9 minute self test every 13 days with full discharge and recharge self test every 3 months
- Comprehensive charge and discharge control management for maximum battery life
- Continuous monitoring of charge and function with fault indication and diagnosis
- Temperature resistant Ni-Cd battery technology

Performance

- Automatic commissioning of emergency versions
- Regulated output, light is constant over full supply voltage range
- Very high electrical efficiency > 92%
- Excellent light output in emergency operation: 18W = 50% of one lamp, 36W = 45% of one lamp (/HEO option)
- Optional 3 hour emergency duration to EN 60598-2-22
- Rapid recharge to 80% capacity
- Universal Remote Emergency Inhibition can be used with other pre-existing systems



20% greater light output at -20˚C compared to other manufacturers

Bi-colour LED indication

Patented automatic lamp de-energisation on opening

Quick release mains terminals

Screwed connection (optional)

Installation and Maintenance

- Standard fixing centres
- All parts mounted on gear tray, can be quickly removed leaving an Ex safe configuration
- Screwless mains terminals for rapid connection, no need for periodic checks
- Plug and socket battery connection for quick connection guaranteeing correct polarity
- Can be voltage tested with suitable current limited instruments
- Emergency lamp fault detection before the lamp becomes un-serviceable
- Self testing of battery capacity with low capacity LED indication
- Patented automatic lamp de-energisation on opening
- Common spare parts across Ex e fluorescent range (Protecta, Acclaim, Curie Elite)

PROTECTA III

Ex e FLUORESCENT

EOL Protected

The Protecta III is a proven and reliable T8 fluorescent luminaire. The Protecta's rugged, corrosion resistant construction (IP66/IP67) combined with an advanced high frequency ballast ensure minimum product maintenance is required.

When access is required the Protecta III features an easy access clamp bar and automatic lamp de-energisation to allow quick and easy re-lamping.

Standard Specification

Type of Protection	Ex e mb q (Increased safety Encapsulation Powder filling)
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa04ATEX0220
Coding	Ex II 2 GD Ex e mb q IIC T4 Tamb 55°C
Enclosure	GRP body with polycarbonate cover and brass suspension points
Reflector/Geartray	White polyester painted zinc coated steel
Entry	4 x M20 cable entries, 2 at each end
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and 16A rating through wiring. (6mm² terminations available - /SC option)
Installation	Two M8 tapped brass inserts located on rear of body
Control Gear	High Frequency
Relamping	Quick release diffuser clamp and hinged cover
Lampholder	G13 (Bi-pin)
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220V - 254V 50/60Hz, 220 - 300V dc

Features

- Simple rugged construction
- Full length easy access diffuser clamp
- Advanced control gear gives 50/60Hz operation, high power correction factor and regulated lamp output that is 20% greater at -20°C than competitors
- Resistant to voltage fluctuations
- dc operation
- Automatic lamp de-energisation on opening
- Quick release mains terminals
- DTS-01 deluge tested
- Vibration tested to comply with Lloyds/DNV
- End of life (EOL) protection to IEC 60079-7 (with EOL I and EOL II functionality)

International Approvals

ATEX, GB (China), GOST, CSA and CEPEL

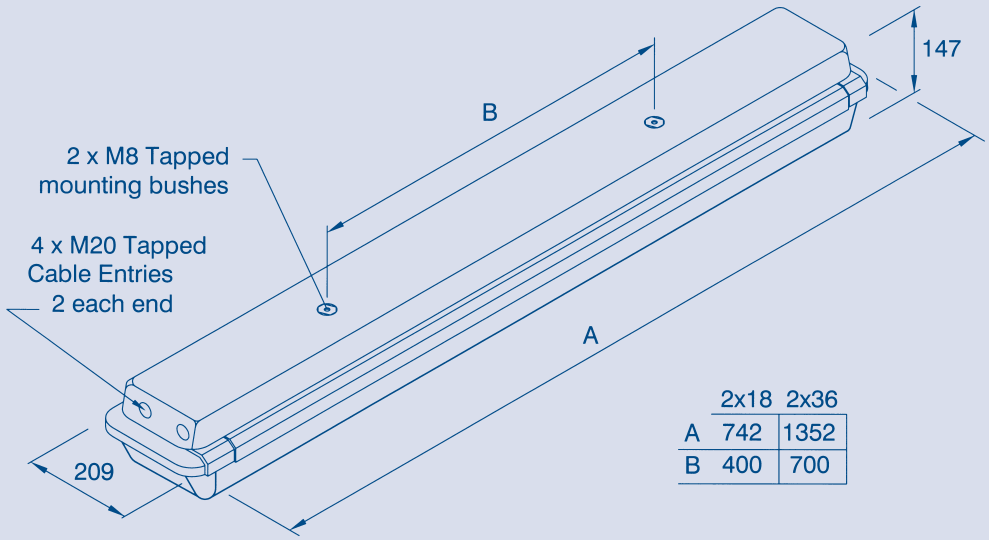
IECEx Compliant

Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
PRGE/218/BI	2x18W	T8	T4	85	-20 to +55	4.2kg
PRGE/236/BI	2x36W	T8	T4	85	-20 to +55	9.8kg
PRGE/218/MO	2x18W	T8	T4	85	-20 to +55	4.2kg
PRGE/236/MO	2x36W	T8	T4	85	-20 to +55	9.8kg

MO - Mono-pin (Fa6 Cap) Lamps. Mono-pin Coding: Ex d e q.

Options – Suffix to Catalogue No.

/120	Specific voltage (110/130)	**/3P**	3 phase termination facility (Not available if looping required)
/M25	M25 cable entries	**/LBE**	Looping both ends
/SC	Screwed connection terminal block (up to 6mm² conductors)	**/EL**	Extra live termination facility (to match emergency circuit)
/SB	Stainless steel mounting bush	**/SE**	Spigot entry



	2x18	2x36
A	742	1352
B	400	700

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100001**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100002**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100003**
Hook type ceiling bracket assembly	**SPRO4-0005**
Ceiling mounting bracket assembly	**SPRO4-0002**
Eyebolt mounting assembly	**SPRO5-0005**
Flush mounting wall bracket assembly	**SPRO4-0006**
Looping kit (allows looping from both ends of luminaire)	**SPROT-0021**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

PROTECTA III E

Ex e EMERGENCY FLUORESCENT

EOL Protected

Utilising the same reliable design of the standard Protecta III, the emergency version also features intelligent battery and lamp management technology. The luminaire is capable of self commissioning and routine self-testing to ensure safe and dependable emergency operation.

A high emergency output version is also available that increases the lumen output in emergency mode.

Standard Specification

Type of Protection	Ex e mb q (Increased safety Encapsulation Powder filling)
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa04ATEX0220
Coding	Ⓔx II 2 GD Ex e mb q IIC T4 Tamb 55°C
Enclosure	GRP body with polycarbonate cover and brass suspension points
Reflector/Geartray	White polyester painted zinc coated steel
Entry	4 x M20 cable entries, 2 at each end
Termination	Quick release mains terminals - 4 core 4mm² max. conductor with looping and 16A rating through wiring. (6mm² terminations available - /SC option)
Installation	Two M8 tapped brass inserts located on rear of body
Control Gear	High Frequency
Relamping	Quick release diffuser clamp and hinged cover
Lampholder	G13 (Bi-pin)
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220V - 254V 50/60Hz
Battery	Internal Ni-Cd (6V)
Duration	90 minutes to EN 60598-2-22
Emergency Output	50% of one lamp (18W) 25% of one lamp (36W)

Features

- Ability to detect and indicate impending end of emergency lamp life before actual failure
- Battery management, monitoring and automatic self test
- Emergency inhibition and mains power off re-start
- Automatic lamp de-energisation on opening
- DTS-01 deluge tested
- Vibration tested to comply with Lloyds/DNV
- End of life (EOL) protection to IEC 60079-7 (with EOL I and EOL II functionality)

International Approvals

ATEX, GB (China), GOST, CSA and CEPEL

IECEx Compliant

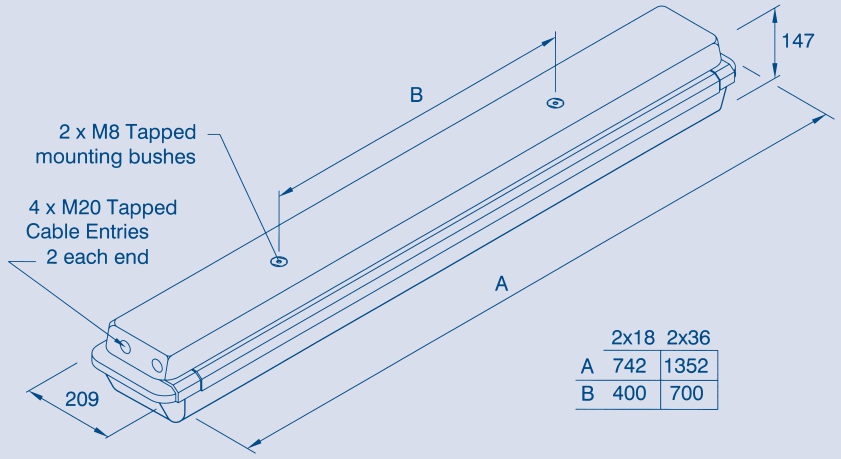
Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
PRGE/218/BI/EM	2x18W	T8	T4	85	-20 to +55	8.3kg
PRGE/236/BI/EM	2x36W	T8	T4	85	-20 to +55	12.4kg
PRGE/218/MO/EM	2x18W	T8	T4	85	-20 to +55	8.3kg
PRGE/236/MO/EM	2x36W	T8	T4	85	-20 to +55	12.4kg

MO - Mono-pin (Fa6 Cap) Lamps. Mono-pin Coding: Ex d e mb q IIC.

Options – Suffix to Catalogue No.

/120	Specific voltage (110/130)	**/LBE**	Looping both ends
/M25	M25 cable entries	**/HEO**	High emergency output - 45% (36W only)
/SC	Screwed connection terminal block (up to 6mm² conductors)	**/3H**	3 hour battery duration*
/SB	Stainless steel mounting bush	**/RI**	Remote emergency inhibition facility (External switch ordered separately)
/3P	3 phase termination facility (Not available if looping required)	**/SE**	Spigot entry

* 18W = 30% of one lamp, 36W = 25% of one lamp



	2x18	2x36
A	742	1352
B	400	700

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100001**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100002**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100003**
Hook type ceiling bracket assembly	**SPRO4-0005**
Ceiling mounting bracket assembly	**SPRO4-0002**
Eyebolt mounting assembly	**SPRO5-0005**
Flush mounting wall bracket assembly	**SPRO4-0006**
Looping kit (allows looping from both ends of luminaire)	**SPROT-0021**
Remote Ex switch for emergency inhibition (1 switch controls up to 10 luminaires)	**SPROT-0033**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

PROTECTA III S/S STAINLESS STEEL Ex e FLUORESCENT

EOL Protected

The Protecta III is also available in a stainless steel body version. This incorporates the same design and monitoring features found in the GRP body Protecta. The increased durability of its stainless steel construction makes this luminaire ideal for applications where there is a high risk of mechanical damage or exposure to chemical agents.

Standard Specification

Type of Protection	Ex e mb q (Increased safety Encapsulation Powder filling)
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa04ATEX0220
Coding	Ex II 2 GD Ex e mb q IIC T4 Tamb 55°C (45°C for emergency version)
Enclosure	Marine grade 316S31 stainless steel body with polycarbonate cover
Reflector/Geartray	White polyester painted zinc coated steel
Entry	4 x M20 cable entries, 2 at each end
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and through wiring facility. 4 core 4mm² connectors on emergency). (6mm² terminations available - /SC option)
Installation	Two M8 tapped stainless steel inserts located on rear of body
Lampholder	G13 (Bi-pin)
Control Gear	High Frequency
Relamping	Quick release diffuser clamps and hinged cover
Burning Position	Universal
Ingress Protection	IP66 to EN 60529
Electrical Supply	220V - 254V 50/60Hz 220V - 300V dc (non-emergency only)
Battery	Internal Ni-Cd (6V)
Duration	90 minutes to EN60598-2-22
Emergency Output	50% of one lamp (18W) 25% of one lamp (36W)

Features

- 316 Stainless steel body and clamp bar
- Advanced control gear gives 50/60Hz operation, high power correction factor and regulated lamp output that is 20% greater at -20°C
- Automatic lamp de-energisation on opening
- Resistance to voltage fluctuations
- Battery management, monitoring and automatic self test
- dc operation (non-emergency only)
- Ability to detect and indicate impending end of emergency lamp life before actual failure
- End of life (EOL) protection to IEC 60079-7 (with EOL I and EOL II functionality)

International Approvals

ATEX, GB (China), GOST, CSA and CEPEL

IECEx Compliant

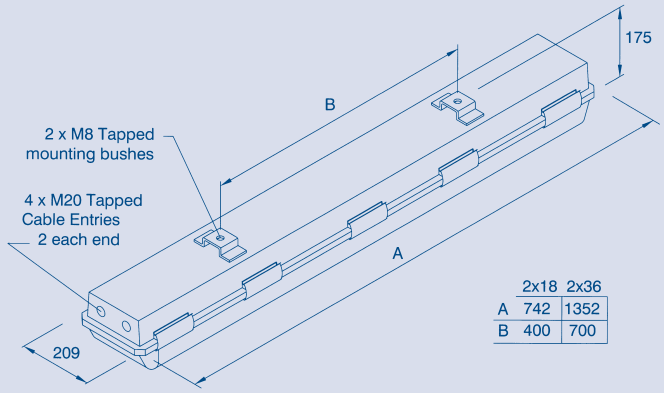
Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
PRSE/218/BI	2x18W	T8	T4	85	-20 to +55	6.0kg
PRSE/236/BI	2x36W	T8	T4	85	-20 to +55	9.6kg
PRSE/218/BI/EM	2x18W	T8	T4	85	-20 to +45	9.1kg
PRSE/236/BI/EM	2x36W	T8	T4	85	-20 to +45	12.5kg
PRSE/218/MO	2x18W	T8	T4	85	-20 to +55	6.0kg
PRSE/236/MO	2x36W	T8	T4	85	-20 to +55	9.6kg
PRSE/218/MO/EM	2x18W	T8	T4	85	-20 to +45	9.1kg
PRSE/236/MO/EM	2x36W	T8	T4	85	-20 to +45	12.5kg

MO - Mono-pin (Fa6 Cap) Lamps. Mono-pin Coding: Ex d e q. Mono-pin emergency coding: Ex d e mb q IIC.

Options – Suffix to Catalogue No.

/120	Specific voltage (110/130V)
/M25	M25 cable entries
/SC	Screwed connection terminal block (up to 6mm² conductors)
/3P	3 phase termination facility (Not available if looping required)
/LBE	Looping both ends
/EL	Extra live termination facility (compatible with 4 core switched emergency circuits)
/HEO	High emergency output - 45% (36W only)
/3H	3 hour battery duration*

* 18W = 30% of one lamp, 36W = 25% of one lamp



	2x18	2x36
A	742	1352
B	400	700

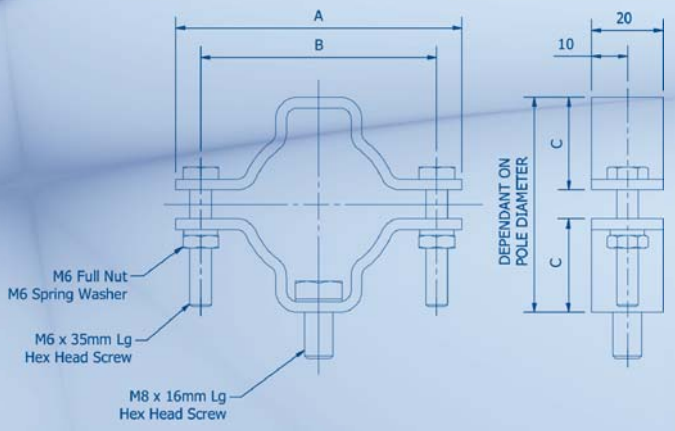
Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100001**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100002**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100003**
Hook type ceiling bracket assembly	**SPRO4-0005**
Ceiling mounting bracket assembly	**SPRO4-0002**
Eyebolt mounting assembly	**SPRO5-0005**
Flush mounting wall bracket assembly	**SPRO4-0006**
Looping kit (allows looping from both ends of luminaire)	**SPROT-0021**
Remote Ex switch for emergency inhibition (1 switch controls up to 10 luminaires)	**SPROT-0033**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

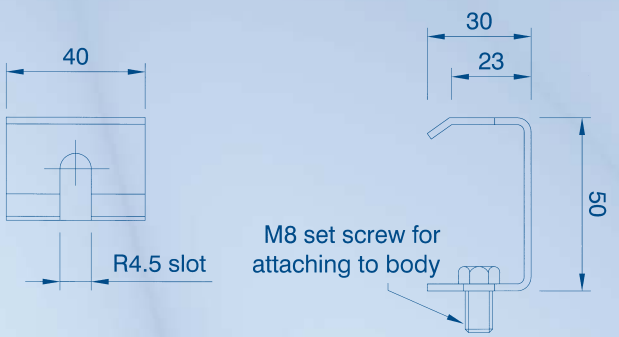
Pole Mounting Bracket Assembly — Cat No. SPOL4-100001/100002/100003

Pole mounting bracket to suit pole diameter
(38-42mm) SPOL4-100001
(48-52mm) SPOL4-100002
(58-62mm) SPOL4-100003

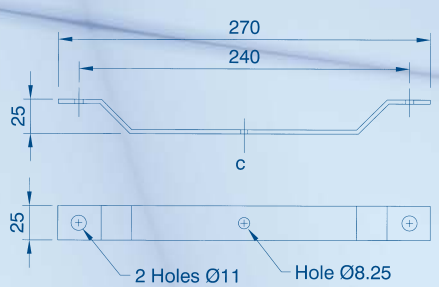


PART DETAILS				
Part Code	Part Description	A	B	C
SPOL4-100001	PROTECTA 38-42 P/M ASSY	80mm	66mm	26mm
SPOL4-100002	PROTECTA 48-52 P/M ASSY	90mm	76mm	32mm
SPOL4-100003	PROTECTA 58-62 P/M ASSY	96mm	80mm	38mm

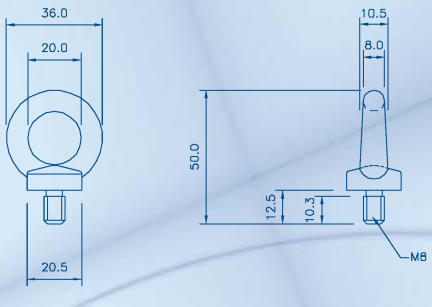
Hook Type Ceiling Bracket Assembly — Cat No. SPR04-0005



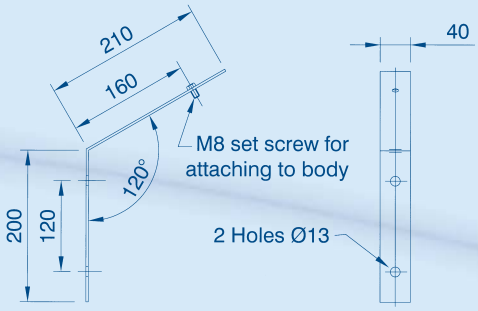
Ceiling Mounting Bracket Assembly — Cat No. SPR04-0002



Eyelet Mounting Assembly — Cat No. SPR05-0005

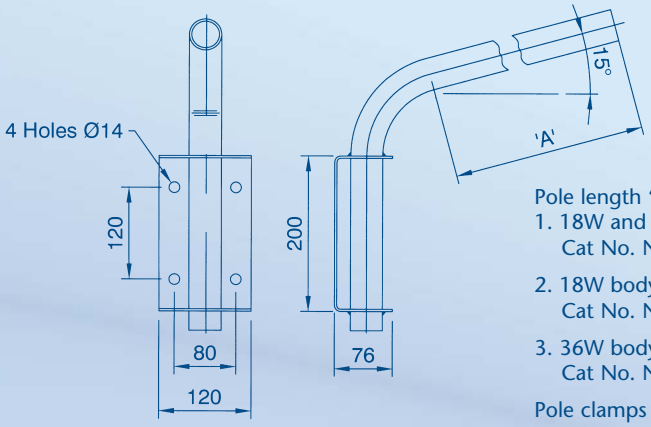


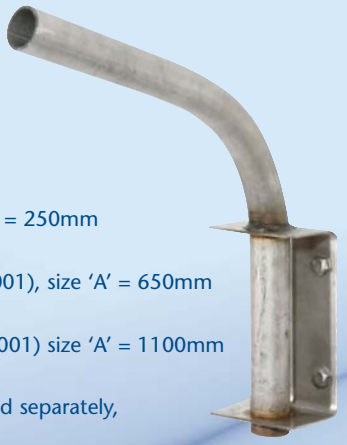
Flush Mounting Wall Bracket Assembly — Cat No. SPRO4-0006



Note: All brackets are made from 316 Stainless Steel

Wall Mounting Outreach Bracket — Cat No. NPRO4-0007/0008/0012



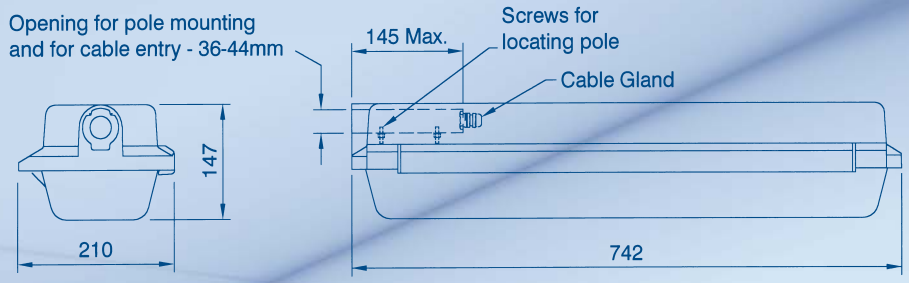


Pole length 'A' for use with the following:

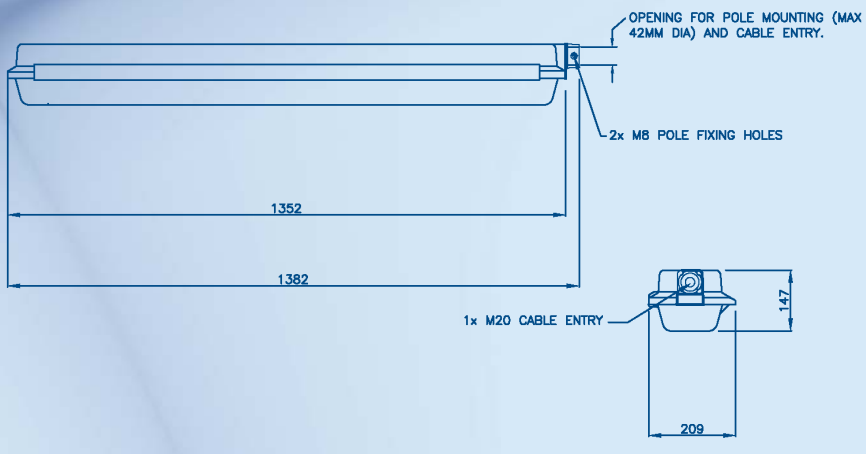
1. 18W and 36W spigot entry body, size 'A' = 250mm
   Cat No. NPRO4-0007
2. 18W body c/w pole clamps (SPOL4-100001), size 'A' = 650mm
   Cat No. NPRO4-0008
3. 36W body c/w pole clamps, (SPOL4-100001) size 'A' = 1100mm
   Cat No. NPRO4-0012

Pole clamps for items 2 & 3 must be ordered separately, see SPOL4-100001

18W Spigot Entry — Cat No. PRGE/218/BI/SE



36W Spigot Entry — Cat No. PRGE/236/BI/SE



ACCLAIM

Ex e RECESSIBLE

EOL Protected

The Acclaim III is a recessed fluorescent specifically designed for use in solid or plank ceiling types. The luminaire is SOLAS B15 approved and suitable for use in offshore accommodation modules for both task and emergency lighting.

To allow safe and easy maintenance Acclaim III features automatic lamp de-energisation upon opening. Emergency versions provide battery management, monitoring and self-test functions, this ensures safe and dependable battery back-up operation.

Standard Specification

Type of Protection	Ex e mb q (Increased safety Encapsulation Powder filling)
Area Classification ATEX Classification	Group II Category 2 GD Zone 1 and Zone 21 areas to EN60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa04ATEX0286
Coding	Ⓔx II 2 GD Ex e mb q IIC T4 Tamb 45°C
Enclosure	White polyester painted zinc coated steel body and frame. Silicone rubber gasket. Clear polycarbonate diffuser
Reflector/Geartray	White polyester painted zinc coated steel
Entry	4 x 20mm holes, two at one end and two at the other end
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and through wiring facility. 4 core 4mm² connectors on emergency). (6mm² terminations available - /SC option)
Installation	Fixed side brackets with swing out arms, with provision for drop rod mounting
Lampholder	G13 (Bi pin)
Control Gear	High Frequency
Relamping	Via front cover, secured by pan head slotted screws
Burning Position	Horizontal
Ingress Protection	IP65 to EN 60529
Electrical Supply	220V - 254V 50/60Hz 220V - 300V dc (non-emergency only)
Battery	Internal Ni-Cd (6V)
Duration	90 minutes to EN60598-2-22
Emergency Output	50% of one lamp (18W) 25% of one lamp (36W)

Features

- Automatic lamp de-energisation on opening
- Battery management, monitoring and automatic self test
- Resistant to voltage fluctuations
- Local switching arrangement as standard
- Ingress protection to IP65
- dc operation (non emergency)
- B15 SOLAS fire rating - appropriate insulation is required over the luminaire
- Emergency inhibition and power off re-start
- End of life (EOL) protection to IEC 60079-7 (with EOL I and EOL II functionality)

International Approvals

ATEX and CSA

IECEx Compliant

Std. Cat No.	Wattage	Lamp	TClass	T° C(Dust)	Ambient °C	Weight
ACLE/218/BI	2x18W	T8	T4	95	-20 to +45	16kg
ACLE/236/BI	2x36W	T8	T4	95	-20 to +45	23kg
ACLE/218/BI/EM	2x18W	T8	T4	95	-20 to +45	19kg
ACLE/236/BI/EM	2x36W	T8	T4	95	-20 to +45	26kg

Options – Suffix to Catalogue No.

/120	Specific voltage (110/130)	**/PD**	Prismatic diffuser
/25	25mm cable entries	**/PC**	Solid plank ceiling
/RI	Remote emergency inhibition facility (external switch ordered separately)	**/SC**	Screwed connection terminal block (up to 6mm² conductors)
/3P	3 phase termination facility (not available if through wiring required)	**/NST**	High frequency - non self test ballast
/EL	Extra live termination facility (compatible with 4 core switched emergency circuits)	**/HEO**	High emergency output, 45% of one lamp (36W version only)
/LG	Low glare louvre	**/3H**	3 hour battery duration*
		/IEC	Supplied with IECEx certification label

* 18W = 30% of one lamp, 36W = 25% of one lamp

Note: Ceiling type must be stated at time of enquiry/order

Single screw height adjustment

Adjust to ensure ceiling integrity

Standard Clear Diffuser

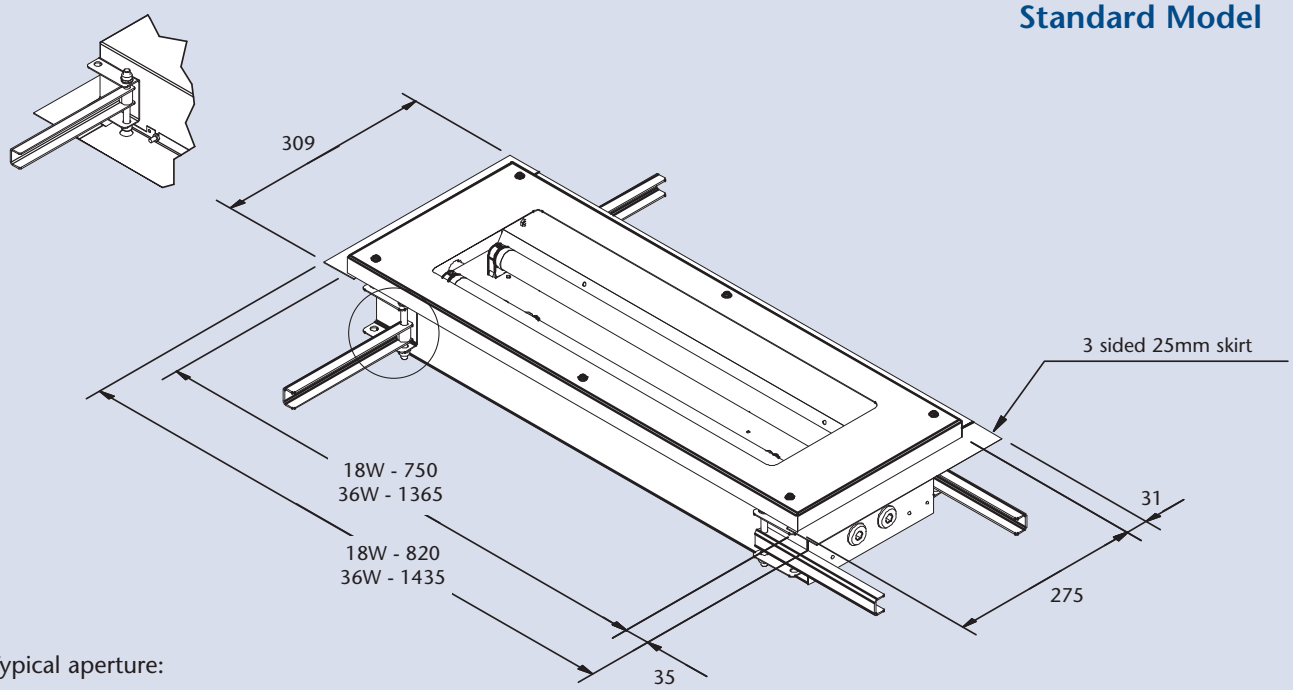
Prismatic Diffuser (/PD)

Low Glare Louvre (/LG)

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

M300 Plank Ceiling Types

Standard Model



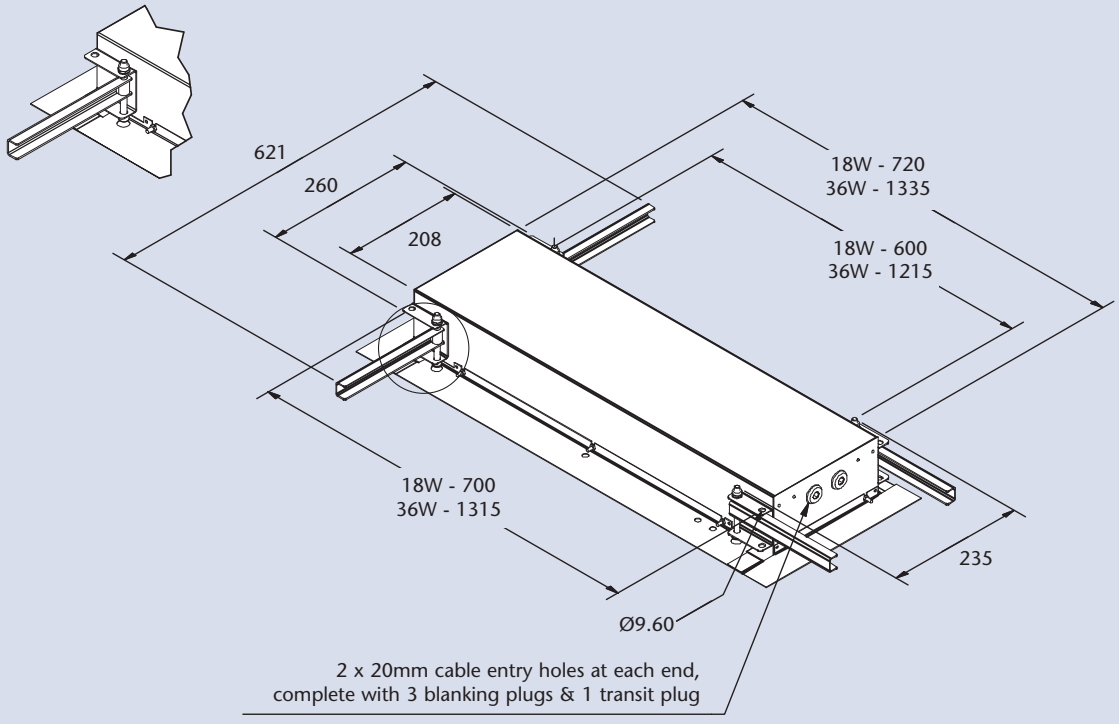
Typical aperture:

Tile length x 800mm (18W)

Tile length x 1315mm (36W)

Front cover depth 25mm

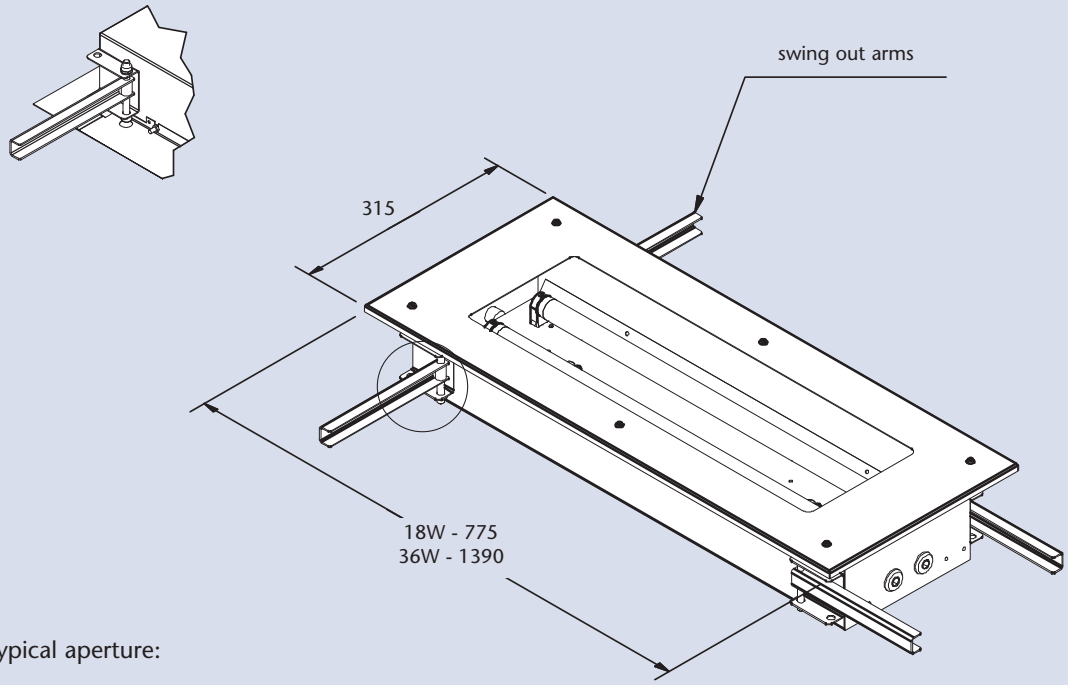
Front view of recessed luminaire



Front cover depth 25mm

Rear view of recessed luminaire

/PC Model



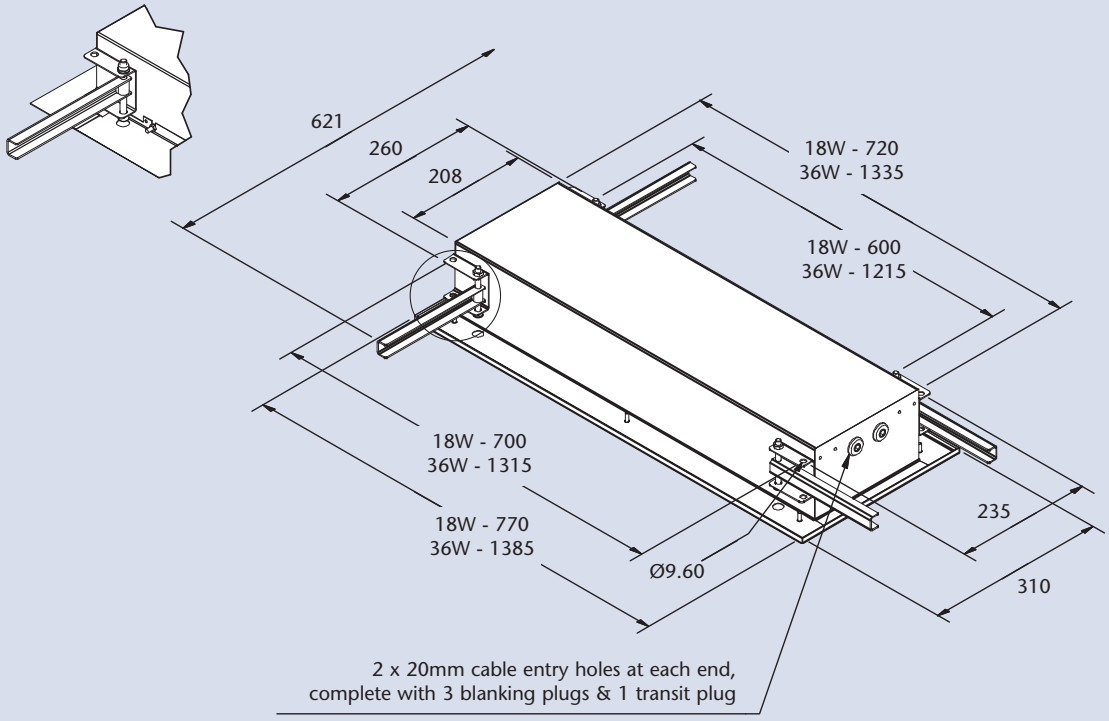
Typical aperture:

300mm x 740/750mm (18W)

300mm x 1355/1356mm (36W)

Front cover depth 10mm

Front view of recessed luminaire



Front cover depth 10mm

Rear view of recessed luminaire

CURIE ELITE

Ex e RECESSIBLE

EOL Protected

The Curie Elite is a recessed fluorescent specifically designed for use in solid or modular ceiling types. The luminaire is SOLAS B15 approved and suitable for use in offshore accommodation modules for both task and emergency lighting.

To allow safe and easy maintenance Curie features automatic lamp de-energisation upon opening. Emergency versions provide battery management, monitoring and self-test functions, this ensures safe and dependable battery back-up operation.

Standard Specification

Type of Protection	Ex e mb q (Increased safety Encapsulation Powder filling) Dust protected enclosure
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa02ATEX0117X
Coding	Ⓔx II 2 GD Ex e mb q IIC T4 Tamb 40°C
Enclosure	White polyester painted zinc coated steel body and aluminium frame. EPDM rubber gasket. Prismatic polycarbonate diffuser.
Reflector/Geartray	White polyester painted zinc coated steel
Entry	3 x 20mm diameter holes for cable entries, mounted on the top two at one end and one at the other end
Termination	3 core 4mm² max. conductor with looping and through wiring 16A rating. 4 core 4mm² connectors on emergency). (6mm² terminations available - /SC option)
Installation	Side brackets with adjustable arms (solid ceilings) Rotating cams (Exposed 'T' and Spring 'T' ceilings). There is also a provision for drop rod mounting
Lampholder	G13 (Bi-pin)
Control Gear	High Frequency
Relamping	Access via front cover secured by screws
Burning Position	Horizontal
Ingress Protection	IP65 to EN 60598-1:2000
Electrical Supply	220V - 254V 50/60Hz, and 220V - 300V dc (non-emergency only)
Battery	Internal Ni-Cd (6V)
Battery Duration	90 minutes to EN60598-2-22
Emergency Output	50% of one lamp (18W) 25% of one lamp (36W)

Features

- B15 SOLAS fire rating - appropriate insulation is required over the luminaire
- Battery management monitoring & automatic self test
- Simple and easy access via front cover for lamp replacement and maintenance
- Suspended gear tray for ease of maintenance
- Automatic lamp de-energisation on opening
- Electronic control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- dc operation (non emergency)
- Local switching arrangement as standard
- End of life (EOL) protection to IEC 60079-7 (with EOL I and EOL II functionality)

International Approvals

ATEX and CSA

IECEx Compliant

Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
CUEE/218/BI*	2x18W	T8	T4	70	-20 to +40	12.5kg
CUEE/418/BI	4x18W	T8	T4	70	-20 to +40	16.0kg
CUEE/236/BI*	2x36W	T8	T4	70	-20 to +40	16.0kg
CUEE/436/BI	4x36W	T8	T4	70	-20 to +40	20.0kg
CUEE/218/BI/EM*	2x18W	T8	T4	70	-20 to +40	14.5kg
CUEE/418/BI/EM	4x18W	T8	T4	70	-20 to +40	18.0kg
CUEE/236/BI/EM*	2x36W	T8	T4	70	-20 to +40	22.0kg
CUEE/436/BI/EM	4x36W	T8	T4	70	-20 to +40	22.0kg

* Only available in 600 x 600mm and 600 x 1200mm body styles.

The standard Curie Elite is supplied with a 3mm clear outer panel & prismatic diffuser.

Note: Modular ceiling types require the /MET or /MST suffix.
Ceiling type must be stated at time of enquiry/order

Options – Suffix to Catalogue No.

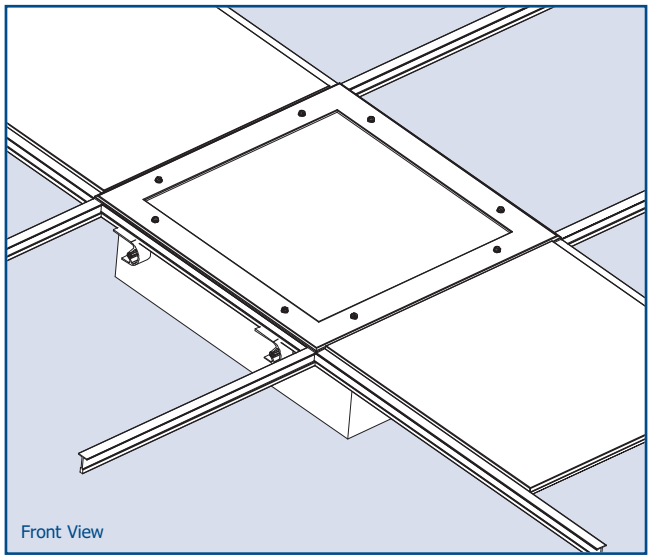
/MET	Modular – Exposed 'T' ceiling	/LG	Low glare louvre
/MST	Modular – Spring 'T' ceiling	/NST	High frequency non-self testing ballast (recommended for sleeping quarters)
/120	Specific voltage (110/120)	/2L	2 lamp emergency mode
/25	25mm cable entries	/HEO	High emergency output 90 minute duration (36W only)
/SC	Screwed connection terminal block (up to 6mm² conductors)	/3H	3 hour battery duration*
/EL	Extra live termination facility (to match emergency circuit)		

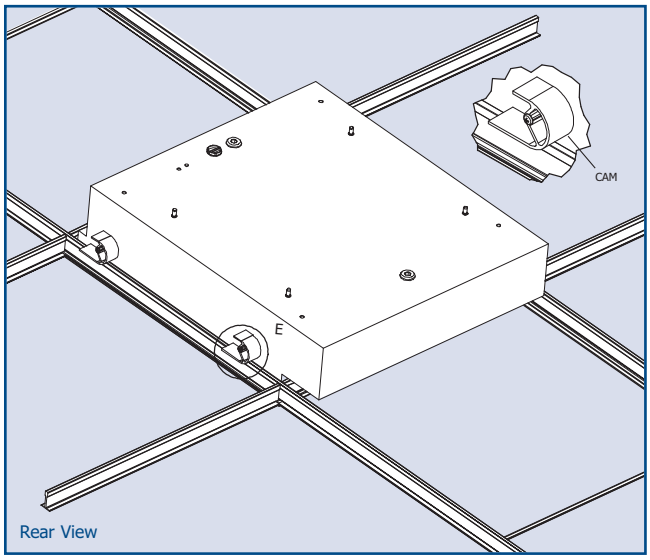
* 18W = 30% of one lamp, 36W = 25% of one lamp

/LG - Low glare louvre

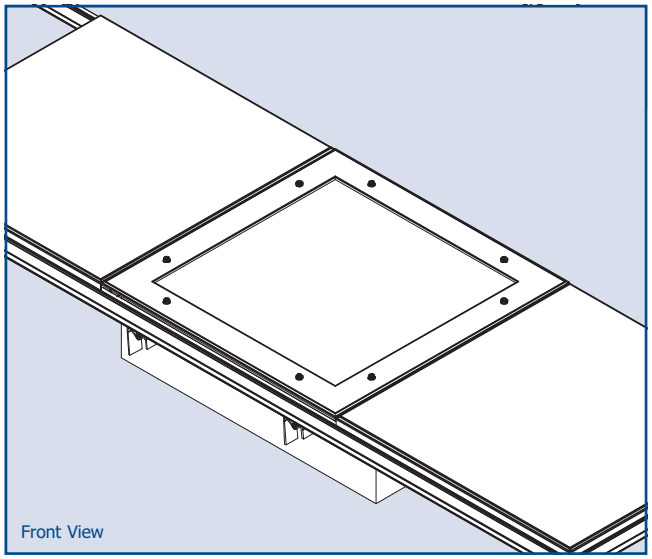
Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

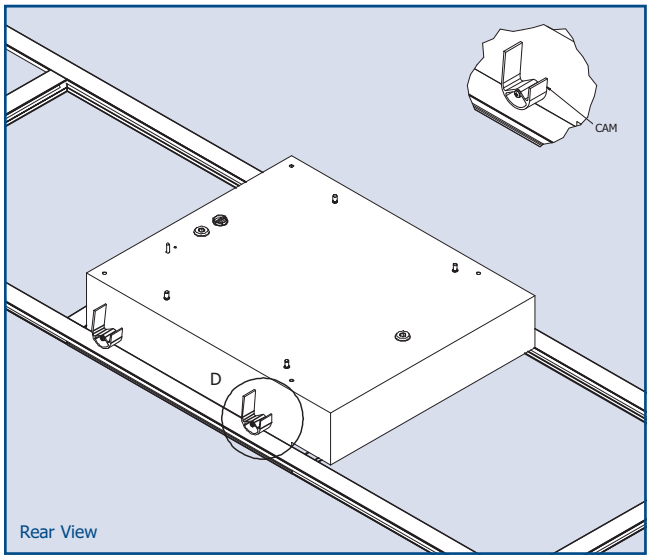
CEILING TYPE OPTIONS



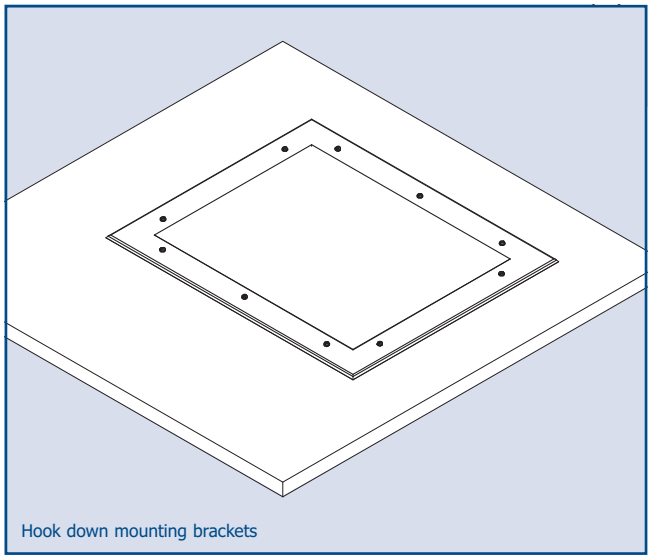


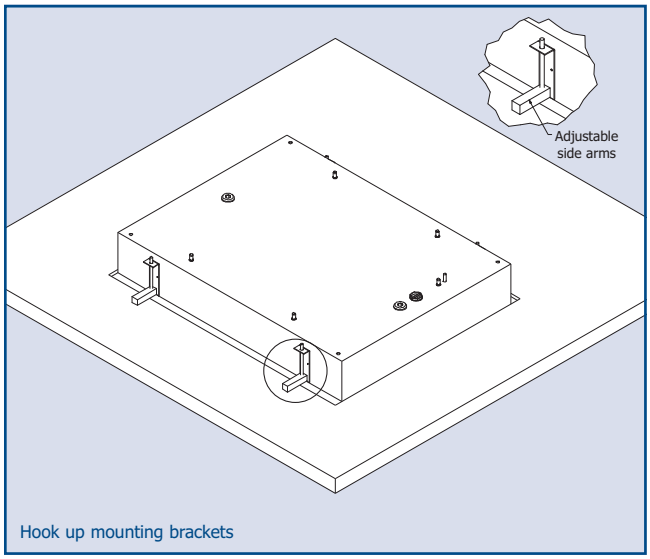
View of Exposed "T" Ceiling with recessed luminaire, typical 600mm x 600mm tile grid mounting system (/MET).



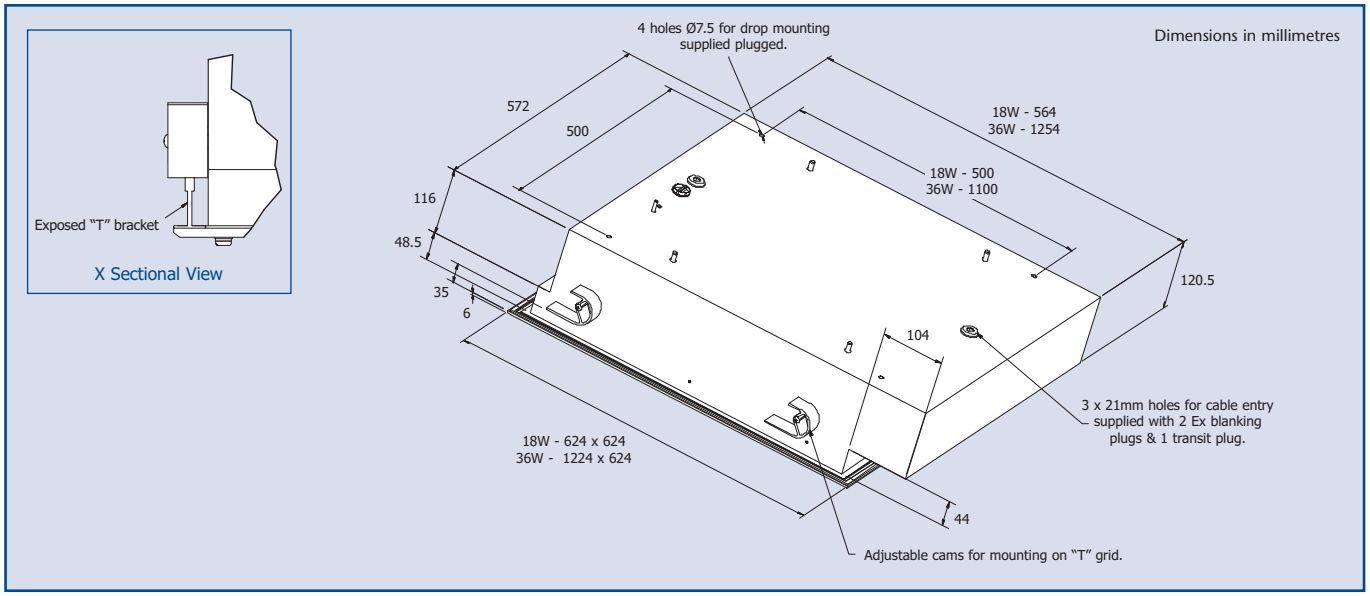


View of Spring "T" Ceiling with recessed luminaire, typical 600mm x 600mm tile grid mounting system (/MST).

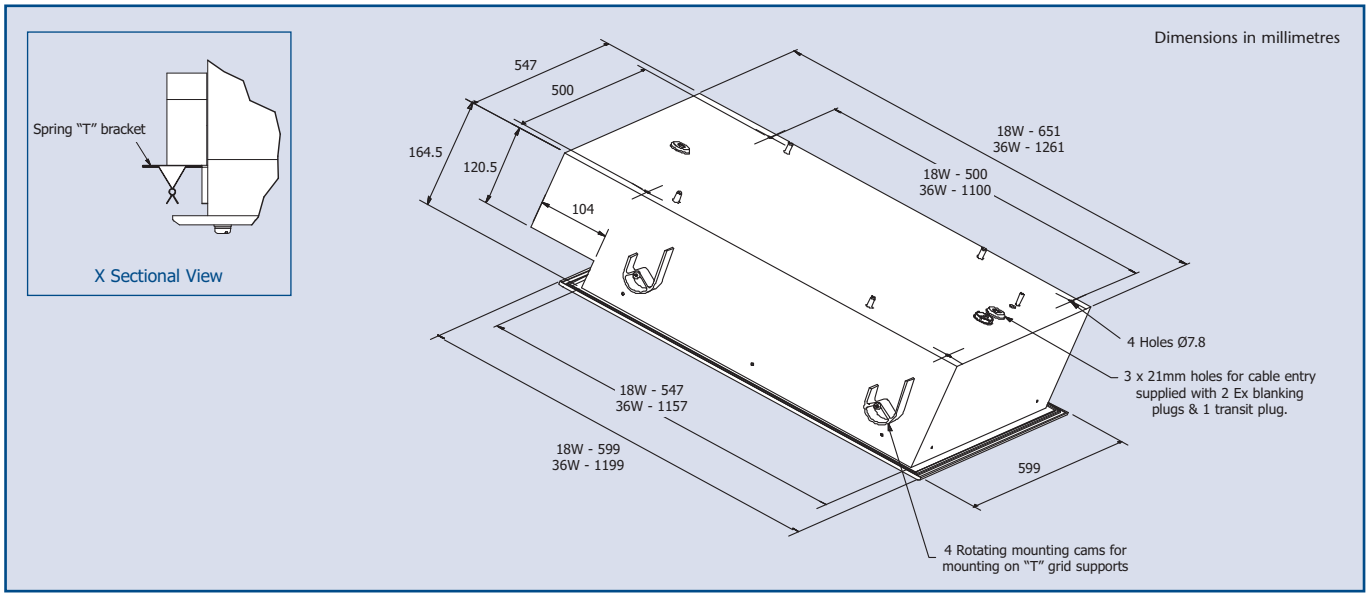




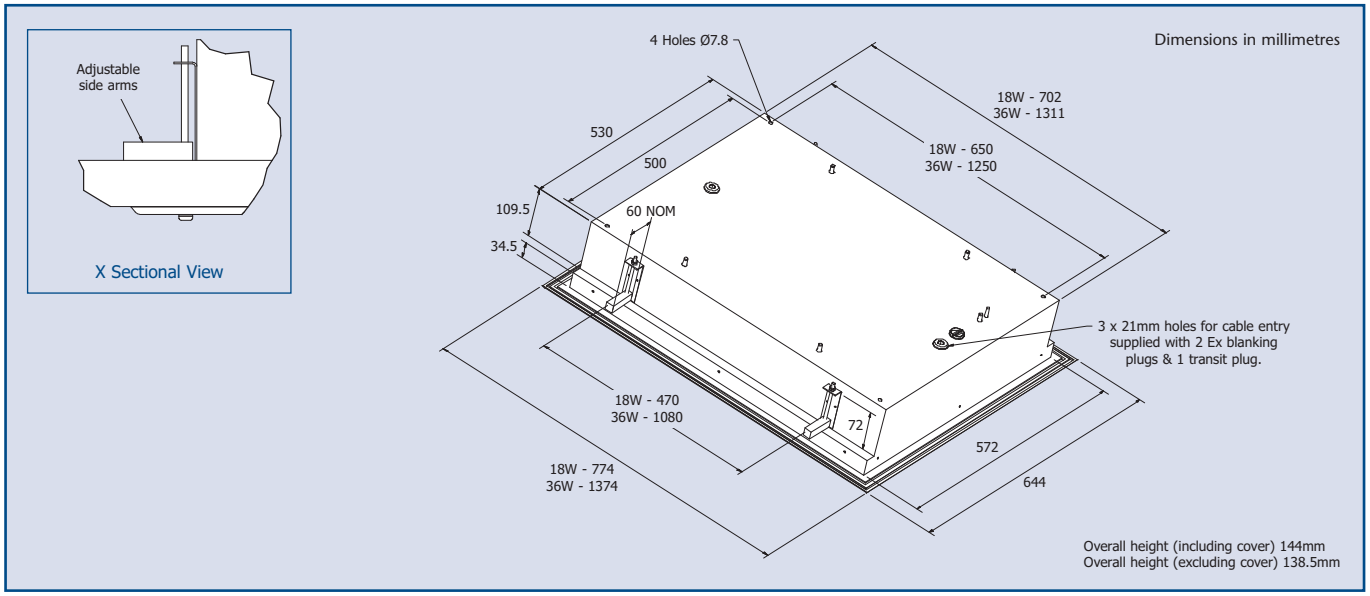
View of Solid Ceiling with recessed luminaire.



Exposed "T" Ceiling (/MET) dimensions.



Spring "T" Ceiling (/MST) dimensions.



Solid Ceiling dimensions.

EOL Protected

The Lomond is a rugged, flameproof T8 fluorescent luminaire. It features an integrated mounting channel for universal installation. The aluminium and glass construction make the Lomond highly resistant to aggressive chemical agents.

The luminaire is available in single and twin lamp versions including an eight watt version for over door emergency exit marking.

Standard Specification

Type of Protection	Ex d (flameproof), Ex dm (flameproof encapsulation) emergency version
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate SIRA05ATEX1299X
Coding	Ⓔx II 2 GD Ex d IIC (8W & 18W) Ⓔx II 2 GD Ex d IIB (36W)
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100)
Reflector/Geartray	Borosilicate glass overtube, painted steel reflector
Entry	2 x M20 cable entries
Termination	3 core 4mm² max. conductor with looping 4 core 4mm² max connectors on emergency
Installation	Via steel support rail
Control Gear	High Frequency
Relamping	Two socket head screws and tapered spigotted flamepath
Burning Position	Universal
Ingress Protection	Ingress protection to IP66, IP67 and IP68
Electrical Supply	Non Emergency: 220V - 240V 50/60Hz (8W) 120V - 254V 50/60Hz (18W) 110V - 130V 50/60Hz (36W - /120) 220V - 254V 50/60Hz (36W, 58W) Emergency: 220V - 254V 50/60Hz (18W, 36W, 58W)
Emergency Duration	110V - 130V 50/60Hz (18W, 36W - /120) 3 hours

Features

- Quick lamp start, flicker free
- High frequency electronic control gear
- Cool running improves T-rating
- Standard support channel allows for multiple fixing centres and options
- Suitable for high ambient areas

Optional Exit Sign Kit for Emergency Escape Route Lighting

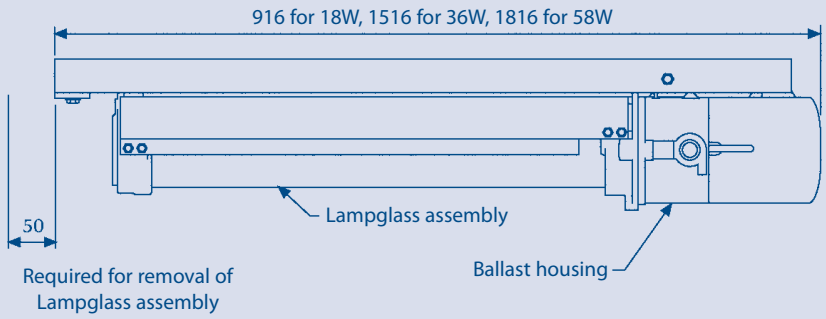
International Approvals

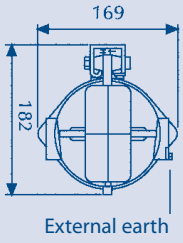
ATEX and GOST

Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
LOMD/108/BI	1x8W	T5	T6	85	-20 to +55	5.0kg
LOMD/208/BI	2x8W	T5	T6	85	-20 to +55	5.5kg
LOMD/218/BI	2x18W	T8	T6	85	-20 to +55	9.0kg
LOMD/136/BI	1x36W	T8	T6	85	-20 to +53	13.0kg
		T8	T5	100	-20 to +55	
LOMD/236/BI	2x36W	T8	T6	85	-20 to +53	13.0kg
		T8	T5	100	-20 to +55	
LOMD/158/BI	1x58W	T8	T6	85	-22 to +49	15.0kg
		T8	T5	100	-22 to +55	
LOMD/258/BI	2x58W	T8	T6	85	-20 to +49	15.0kg
		T8	T5	100	-20 to +55	
LOMD/108/BI/EM	1x8W	T5	T6	85	-20 to +55	10.5kg
LOMD/218/BI/EM	2x18W	T8	T6	85	-20 to +55	13.5kg
LOMD/236/BI/EM	2x36W	T8	T5	100	-20 to +52	20.0kg
		T8	T6	85	-20 to +55	
LOMD/258/BI/EM	2x58W	T8	T5	100	-20 to +48	22.3kg

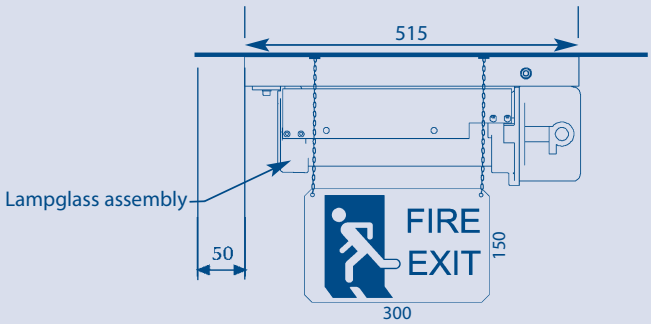
Options – Suffix to Catalogue No.

/M25	M25 cable entries	**/IIC**	Suitable for IIC gas areas (8W and 18W only)
/SR	Stainless steel support rail		
/NM	Non maintained (1x8W only)	**/120**	110 - 130V supply





8W with hanging exit sign

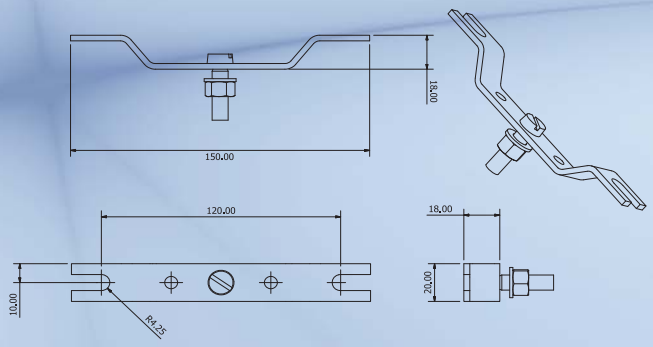


Accessories Should be ordered separately — Catalogue Order Code

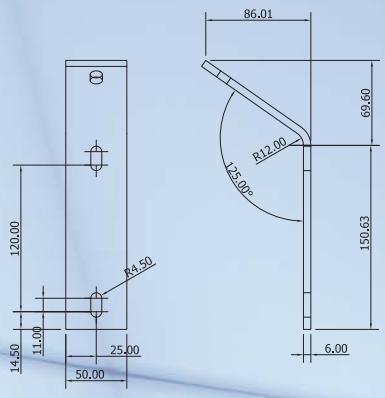
For details of accessories please see overleaf

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

Ceiling Mounting Bracket Assembly — Cat No. SLOMD-000001

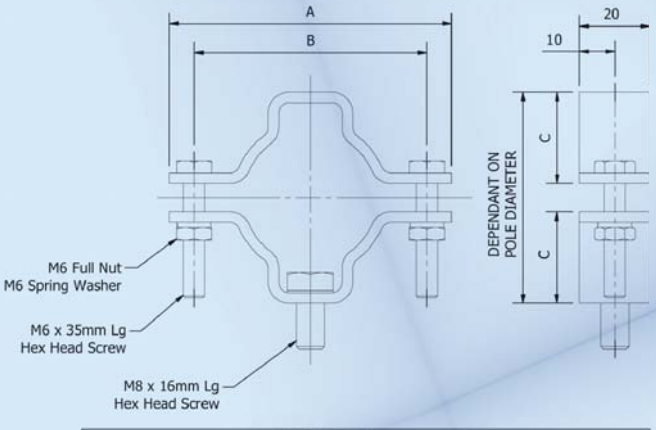


Wall Mounting Bracket Assembly — Cat No. SLOMD-000003



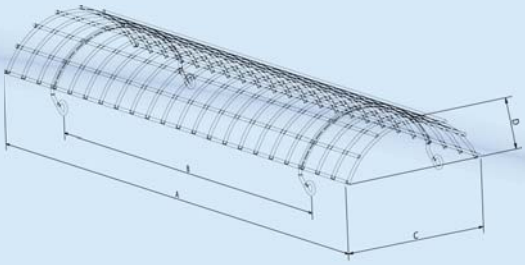
Pole Mounting Bracket Assembly — Cat No. SPOL4-100004/100005/100006

Pole mounting bracket to suit pole diameter
(38-42mm) SPOL4-100004
(48-52mm) SPOL4-100005
(58-62mm) SPOL4-100006



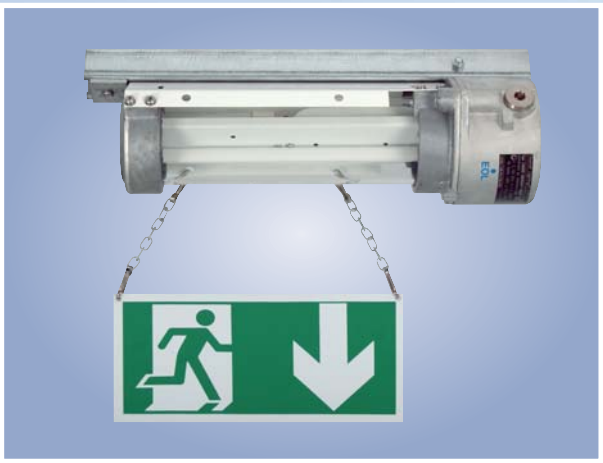
PART DETAILS				
Part Code	Part Description	A	B	C
SPOL4-100001	POLE MTG 38-42 P/M ASSY	80mm	66mm	26mm
SPOL4-100002	POLE MTG 48-52 P/M ASSY	90mm	76mm	32mm
SPOL4-100003	POLE MTG 58-62 P/M ASSY	96mm	80mm	38mm

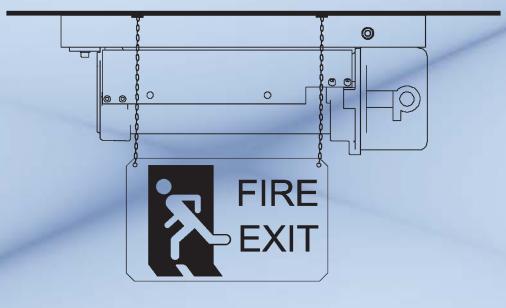
Wire Guard — Cat No. SLOMD-000008/000009/000010



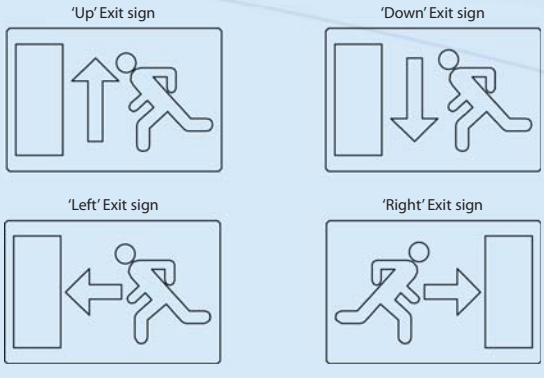
Dimension Table				
Fitting Length	Dim A	Dim B	Dim C	Dim D
8W (1ft)	282	152	146	68
18W (2ft)	562	406	146	68
36W (4ft)	1171	991	146	68
58W (5ft)	1476	1295	146	68

Hanging Exit Sign — Cat No. SPATE-00005/00006/00007/00008/00009





Self Adhesive Exit Sign Kit — Cat No. SPATE-00005



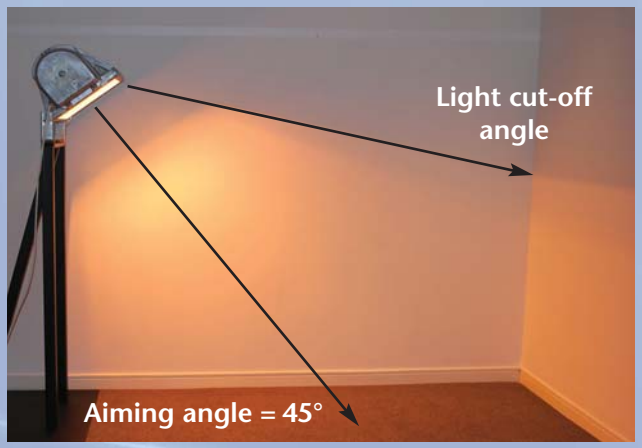
Benefits of Asymmetric Design

Asymmetric reflector design uses an aiming angle from 0° to a maximum of 20° compared to a typical 45° angle for Symmetric floodlights. This has several benefits:

- Increased Photometric Efficiency - **Higher lighting levels due to better utilisation of light**
- Increased Energy Efficiency - **Fewer floodlights to meet required lighting levels = reduced energy consumption**
- Reduced glare & Light Pollution - **Lower cut off angle**
- Light where you need it
- Better Uniformity of light

Asymmetric Reflector

Symmetric Reflector



An asymmetric reflector allows the light beam to be both thrown forward a long distance and also light the area below the pole or mounting location is effectively lit.

This efficient lighting profile gives lower glare and light pollution making it ideal for hazardous area applications including:

- Environmentally sensitive areas
- Energy efficient lighting schemes
- Tank Farms
- Security and Perimeter Lighting
- General task area lighting

Easy Installation and Low Maintenance

Chalmit Lighting luminaires are designed to ensure that they are simple to install and easy to maintain:

- **Reduction in maintenance time**
- **Significantly reduce the overall site maintenance costs**

The Evolution range embodies this design philosophy. With its single bolt opening, the Evolution ensures easy access to lamp and control gear. Inspection and maintenance of the flamepaths is not required as they not are exposed. Instead, the unique design locates these within the IP67 sealed area of the control gear. In this respect, the Evolution can effectively be classed as maintenance free.

Simple Re-lamping Complete in Under Three Minutes

1

Access to control gear and re-lamping by use of a single retained socket head cap screw

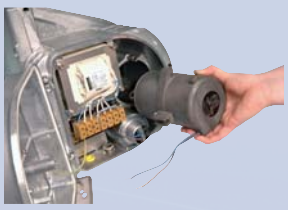
2

Complete access is afforded by opening the gear cover. The mains terminal block and voltage tappings can be clearly seen and are readily accessible

3

The lamp enclosure is easily removed by disconnecting the lamp supply cables and rotating the housing to disengaging from the locating spigots

4



The lamp housing can then be withdrawn to allow removal and/or inspection of the flamepath. With this done the lamp housing can be inserted back into the enclosure and located on the spigots and the cables connected.

No Exposed Flamepath = No Flamepath Maintenance Routine

EVOLUTION II

Ex d e ASYMMETRIC FLOODLIGHT

Recommended maximum aiming angle 20˚ from horizontal plane

Optional PTFE Coating

The Evolution II is a photometrically advanced floodlight that combines Ex de protection with optimised utilisation of light through its asymmetric design. The Evolution concept has no exposed flamepaths making the luminaire effectively maintenance free. Access to the lamp and terminal chamber is achieved by the unscrewing of a single captive bolt

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased Safety) Dust protected enclosure
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14 Gas Groups IIA and IIB
Certificate	EC Type Examination Certificate Baseefa04ATEX0155
Coding	Ex II 2 GD Ex d e IIB Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass window
Reflector	Asymmetric beam, high purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting bracket with aiming quadrant
Windage	0.112m²
Control Gear	Internal copper/iron with PFC correction capacitor and timed ignitor
Relamping	Access via hinged end cover on release of single screw
Burning Position	Universal for HID, +/-45° on horizontal plain for Tungsten-Halogen lamps
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz HPS & Metal Halide 24V - 254V Linear Tungsten-Halogen, 110V - 254V Single ended Tungsten-Halogen

Features

- Installation in gas groups IIA and IIB
- Easy and quick access for maintenance
- Simple, rapid lamp replacement and flamepath inspection
- Reduced maintenance due to no exposed flamepath
- Exceptional photometric efficiency with reduced glare
- Timed ignitor supplied as standard

International Approvals

ATEX, GB (China) and GOST

IECEx Compliant

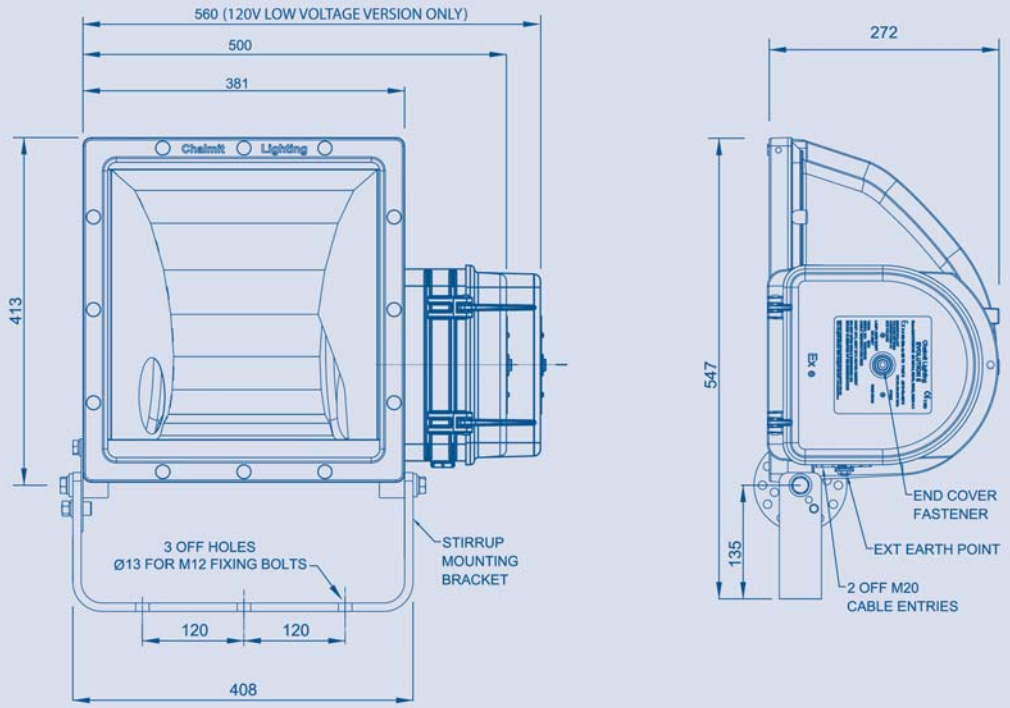
Std. Cat No.	Wattage	Lamp	Lampholder	T Class (Gas)	T °C (Dust)	Ambient °C	Weight
EV2D/150/MS	150W	HPS and Metal Halide	E40	T4 T3	130 175	-20 to +40 -20 to +55	28.0kg
EV2D/250/MS	250W	HPS and Metal Halide	E40	T4 T3	130 175	-20 to +40 -20 to +55	28.5kg
EV2D/400/MS	400W	HPS and Metal Halide	E40	T3	175	-20 to +55	28.5kg
EV2D/600/HS*	600W	HPS	E40	T3	195	-20 to +35	25.0kg
EV2D/500/TH	500W	Single Ended T/Halogen	E40	T3	195	-20 to +40	25.0kg
EV2D/500/TL	500W	Linear T/Halogen	R7s	T3	195	-20 to +55	25.0kg

*Ignitor only fitted. Remote gear box required (see Universal Box).

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/120	110V - 130V (Weight increase of +10kg)	**/P**	PTFE coating
/60	60Hz	**/PE**	Pendant mounted
/208-60	208V 60Hz	**/N**	Narrow beam option
/M25	M25 cable entries	**/IEC**	Supplied with IECEx certification label



NOTE: 120V version utilises deeper end cover (as shown above)

Accessories Should be ordered separately — Catalogue Order Code

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

EVOLUTION

Ex d e FLOODLIGHT

The Evolution is a highly efficient floodlight that combines Ex de protection with optimised utilisation of light through advanced reflector design. The Evolution concept has no exposed flamepaths making the luminaire effectively maintenance free. Access to the lamp and terminal chamber is achieved by the unscrewing of a single captive bolt.

The Evolution is suitable for use in IIC gas environments.

Ex d e PENDANT HIGH BAY

The Pendant version has simple mounting points and is designed for use in high bay applications.

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased Safety) Dust protected enclosure
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14 Gas Groups IIA, IIB and IIC
Certificate	EC Type Examination Certificate BAS98ATEX2373
Coding	Ⓔx II 2 GD Ex d e IIC Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass window
Reflector	Wide beam, high purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting bracket with aiming quadrant
Windage	0.159m² / 0.173m² (120V version)
Control Gear	Internal copper/iron with PFC correction capacitor and timed ignitor
Relamping	Access via hinged end cover on release of single screw
Burning Position	Universal for HID, +/-45° on horizontal plain for Tungsten-Halogen lamps
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz HPS & Metal Halide 24V - 254V ac/dc linear Tungsten-Halogen, 110V - 254V single ended Tungsten-Halogen

Features

- Installation in gas groups IIA, IIB and IIC
- Easy and quick access for maintenance
- Simple, rapid lamp replacement and flamepath inspection
- Reduced maintenance due to no exposed flamepath
- Exceptional photometric efficiency
- Effective light distribution for many applications
- Timed ignitor supplied as standard

International Approvals

ATEX, GOST, CSA, CEPEL and TIS

IECEx Compliant

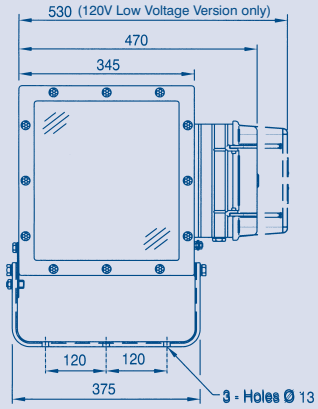
Std. Cat No.	Wattage	Lamp	Lampholder	T Class (Gas)	T °C (Dust)	Ambient °C	Weight
EVOD/150/MS	150W	HPS and Metal Halide	E40	T4	130	40	28.0kg
				T3	175	55	
EVOD/250/MS	250W	HPS and Metal Halide	E40	T4	130	40	28.5kg
				T3	175	55	
EVOD/400/MS	400W	HPS and Metal Halide	E40	T3	175	55	28.5kg
EVOD/600/HS*	600W	HPS	E40	T3	195	35	25.0kg
EVOD/500/TH	500W	Single Ended T/Halogen	E40	T3	195	40	25.0kg
EVOD/500/TL	500W	Linear T/Halogen	R7s	T3	195	55	25.0kg

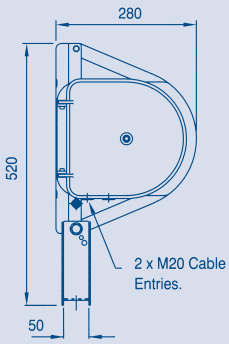
*Ignitor only fitted. Remote gear box required (see Universal Box).
For Pendant substitute EVPD for EVOD.

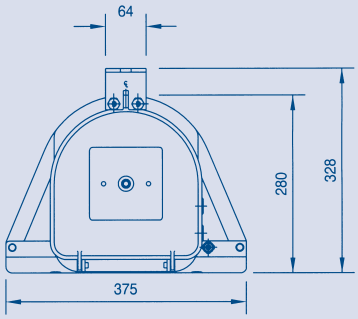
Note: Please specify voltage at time of enquiry/order

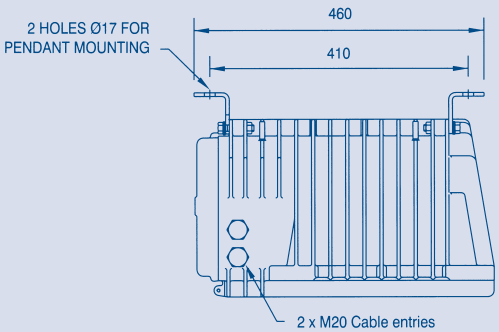
Options – Suffix to Catalogue No.

/120	110-130V (Weight increase of +12kg) (Extended end cover)	**/M**	Medium beam reflector
/60	60Hz	**/P**	PTFE coating
/M25	M25 cable entries	**/LT**	Low temperature version -50°C (Gas groups IIA and IIB only)
/N	Narrow beam reflector	**/IEC**	Supplied with IECEx certification label









NOTE: 120V version utilises deeper end cover (as shown above)

Accessories Should be ordered separately — Catalogue Order Code

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

EVOLUTION JUNIOR Ex d e FLOODLIGHT

The Evolution Junior is a lightweight and portable version of the advanced Evolution floodlight. It features the same single bolt access and has a range of floor and tripod stands for a variety of temporary applications.

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased Safety)
ATEX Classification	Group II Category 2 G
Area Classification	Zone 1 and Zone 2 areas to EN 60079-10-1 with installation to EN 60079-14. Gas Groups IIA, IIB and IIC
Certificate	EC Type Examination Certificate BAS99ATEX2228
Coding	Ex II 2 G Ex d e IIC Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass window
Reflector	Wide beam, high purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting bracket
Windage	0.094m²
Control Gear	Internal copper/iron with PFC correction capacitor
Relamping	Access via hinged end cover on release of single screw
Burning Position	Universal for HID, +/-45° on horizontal axis for Tungsten-Halogen Lamps
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz (HID) 24V(ac/dc)-250V (dependant on voltage)

Features

- Installation in gas groups IIA, IIB and IIC
- Easy and quick access for maintenance
- Simple, rapid lamp replacement and flamepath inspection
- Exceptional photometric efficiency
- Available with secondary protective glass for shot blasting applications

International Approvals

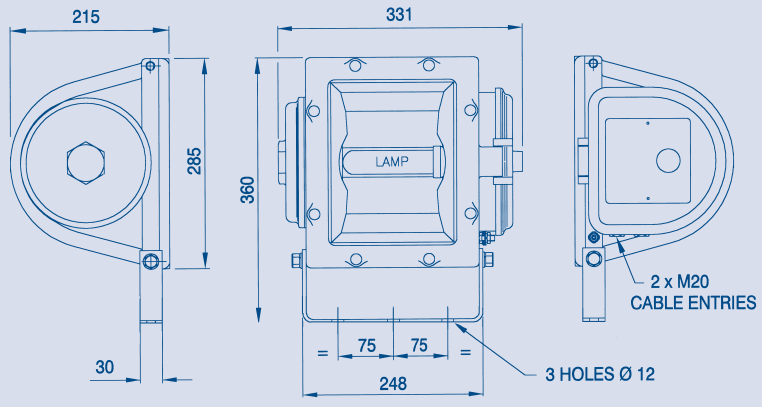
ATEX, GOST CEPEL and TIS

Std. Cat No.	Wattage	Lamp	Lampholder	T Class	Ambient °C	Weight
EVJD/070/MS	70W	HPS and Metal Halide	E27	T4	40	12kg
				T3	55	12kg
	150W	Tungsten-Halogen	R7s	T3	55	10kg
	200W	Tungsten-Halogen	R7s	T3	40	10kg
EVJD/300/TL	250W	Tungsten-Halogen	R7s	T3	20	10kg
				T2	50	10kg
	300W	Tungsten-Halogen	R7s	T2	40	10kg
EVJD/150/TL/24	150W 24V	Tungsten-Halogen	R7s	T3	55	10kg
Secondary Glass Shield Cat Nos.						
	150W	Tungsten-Halogen	R7s	T3	55	10kg
	200W	Tungsten-Halogen	R7s	T3	25	10kg
EVJD/300/TL/GS	200W	Tungsten-Halogen	R7s	T2	50	10kg
	250W	Tungsten-Halogen	R7s	T2	40	10kg
EVJD/300/TL/24/GS	150W 24V	Tungsten-Halogen	R7s	T3	55	10kg

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/60	60Hz
/M25	M25 cable entries
/P	PTFE coating
/Y	Yellow painted version (110V only)
/LT	Low temperature version -50°C (IIA & IIB only)
/FS	Suitable for use with floor stand (floor stand should be ordered separately)
/CG	Cable and Ex gland fitted (order cable separately - see accessories)
/CGP	Cable, Ex gland and 110V plug (cable should be ordered seperately)
/GS	Secondary glass (factory fitted)

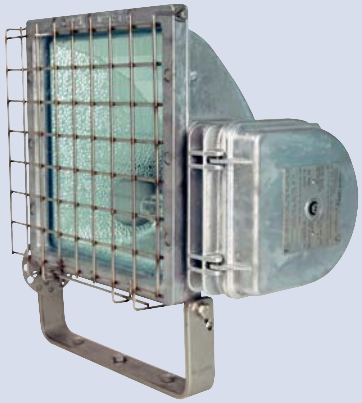


Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (48-70mm diameter poles)	**SEVJ4-0003**
Anti-glare shield	**SEVJ4-0001**
Wire guard	**SEVJ4-0002**
Floor stand assembly (to be ordered with floor stand version of floodlight)	**SEVJR-0001**
Tripod stand assembly	**SEVJR-0002**
Ratchet handles (2 off) for adjustable aiming	**SEVJR-0005**
Cable (ordered per metre)	**E0414-0009**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

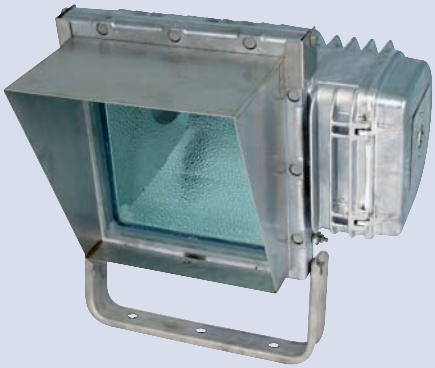
Evolution II & Evolution Guards and Shields

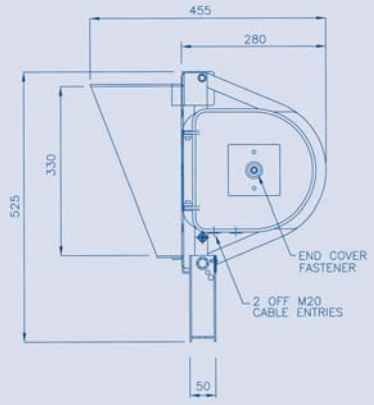


Evolution II	
Wire Guard	SEV04-0020
Evolution	
Anti-Glare Shield	SEV04-0002
Wire Guard	SEV04-0003
Combined Anti-Glare Shield and Wire Guard	SEV04-0008

Evolution Anti-Glare Shield

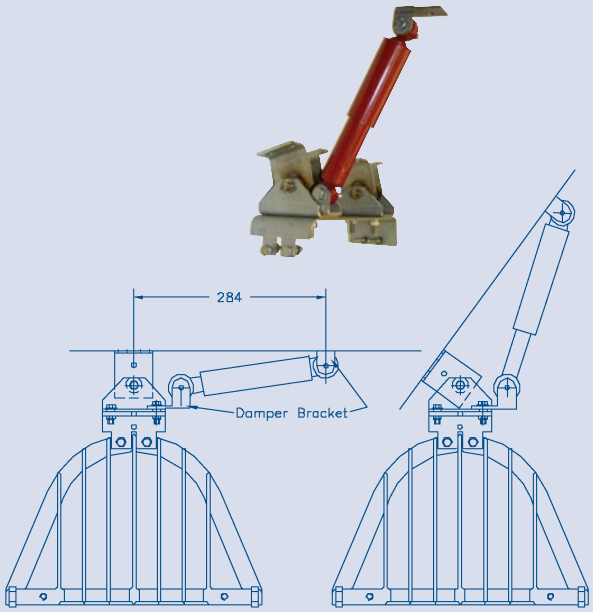
Combined Anti-Glare Shield and Wire Guard



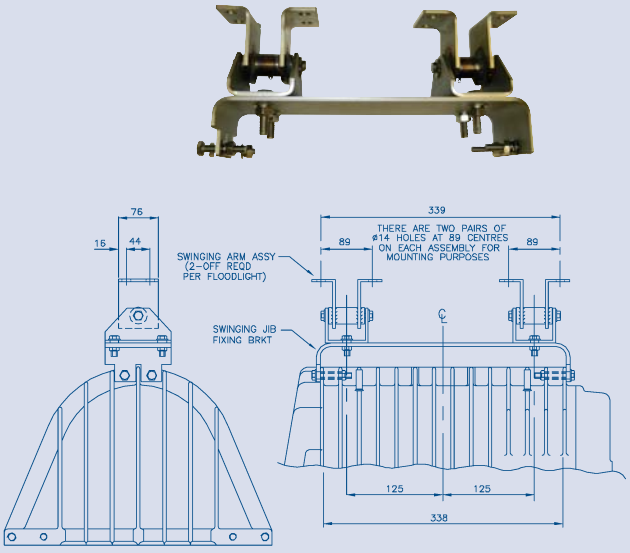


Swing Jib Damper & Bracket Assembly

Evolution only

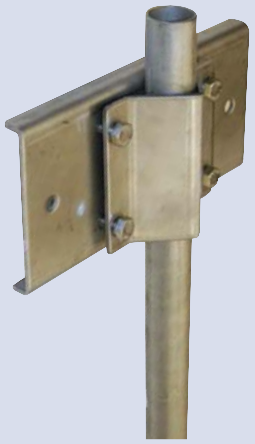


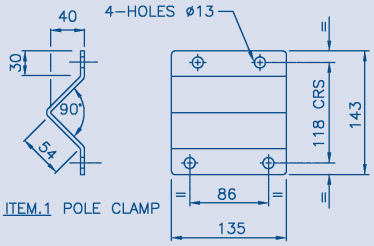
Damper assembly - SEV01-0015

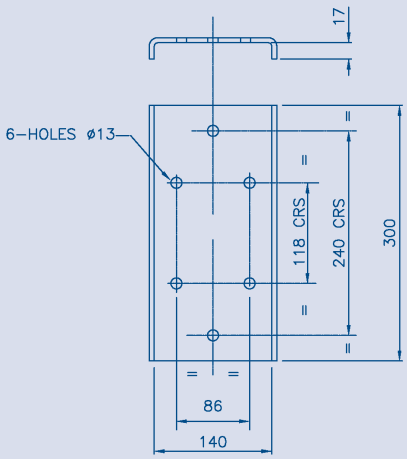


Bracket assembly - SEV04-0009

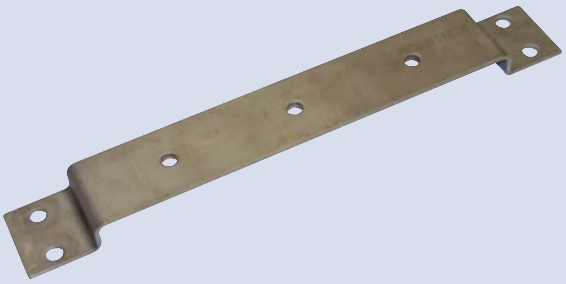
Pole Mounting Bracket Assembly — Cat No. SEV04-0001

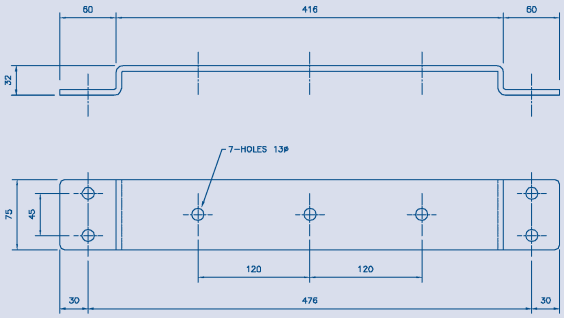






284 Retrofit Bracket — Cat No. SEV01-0001





Evolution Junior Mounting Accessories — Cat No. SEVJR-0001/SEVJR-0002

Floor assembly SEVJR-0001

Tripod assembly SEVJR-0002

The Nevis bulkhead is designed for low profile applications. It can be mounted on walls, handrails and ceilings making it ideal for walkways or restricted height areas. The wide ambient temperature range makes the Nevis suitable for extreme environmental conditions.

The Nevis has a side mounted increased safety terminal chamber. This eliminates the need for flameproof glands and allows for flush mounting with easy cable access.

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased Safety)
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14 Gas Groups IIA and IIB
Certificate	EC Type Examination Certificate Baseefa08ATEX0178
Coding	Ⓔx II Ex d e IIB Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass dome cover
Internal Reflector	High purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Flush mounting bracket
Control Gear	Internal copper/iron with PFC correction capacitor
Relamping	Access via hinged front glass cover assembly
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz - 70 HPS/Metal Halide 220, 230, 240V 50Hz - 80 and 125W MBF/U 250V Max GLS/MBTF 240V - CF 220-240V QL

Features

- Installation to gas groups IIA and IIB
- Ex e cable entries and looping as standard
- Hinged front cover
- Captive cover screws
- High ingress protection
- Internal reflector options
- Low temperature applications to -55˚C
- Compact construction

International Approvals

ATEX and GOST

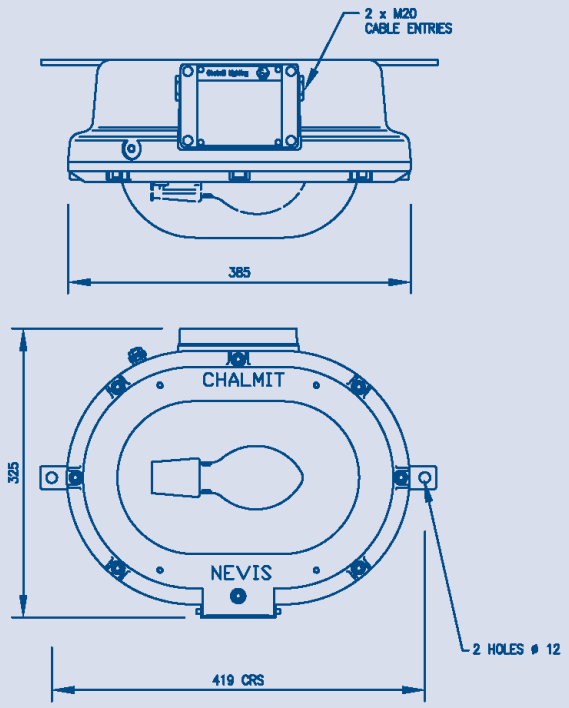
IECEx Compliant

Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
NEVD/050/HS	50W	HPS	T4	125	-55 to +55	12.5kg
NEVD/070/MS	70W	HPS and Metal Halide	T4	125	-55 to +55	12.5kg
NEVD/080/MV	80W	Mercury Vapour	T4	130	-20 to +55	12.0kg
NEVD/125/MV	125W	Mercury Vapour	T3	140	-20 to +40	12.0kg
NEVD/200/GL	200W	GLS	T3	165	-55 to +55	11.5kg
NEVD/118/CF	18W	Compact Fluorescent	T5	80	-55 to +55	11.9kg
NEVD/126/CF	26W	Compact Fluorescent	T5	80	-55 to +55	11.9kg
NEVD/160/MB	160W	MBTF	T3	155	-55 to +40	11.5kg
NEVD/055/QL	55W	QL	T5	98	-55 to +55	13.5kg

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/120	120V, 50/70W HPS, 70W Metal Halide Compact fluorescent and QL lamp	**/P**	PTFE coating
/60	60Hz	**/TI**	Timed ignitor
/M25	M25 cable entries	**/NC**	No power factor correction capacitors fitted



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-50mm diameter poles)	**SNEV1-0001**
Wire guard	**SNEV1-0002**
Hand rail mounting bracket assembly	**SNEV4-0003**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The 216 with an external reflector

The 216 with wire guard

The 216 is compact wellglass ideal for areas where efficient localised lighting is required. The luminaire has a side mounted increased safety terminal chamber eliminating the need for flameproof glands.

The wide ambient temperature range makes the 216 suitable for extreme environmental conditions.

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased safety)
ATEX Classification	Group II Category 2 G
Area Classification	Zone 1 and Zone 2 areas to EN 60079-10-1 with installation to EN 60079-14 Gas Groups IIA and IIB
Certificate	EC Type Examination Certificate BAS01ATEX2307
Coding	Ex II 2 G Ex d e IIB Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass dome globe
Reflector	High purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Flush mounting bracket
Windage	0.084m²
Control Gear	Internal copper/iron with PFC correction capacitor
Relamping	Access via front glass cover assembly
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220,230,240,254V 50Hz (H.I.D) 250V max (GLS) 240V (CF)

Features

- Installation to gas groups IIA and IIB
- Highly resistant to mechanical damage and corrosion
- Stainless steel fasteners
- Compact and efficient
- Ex e terminal chamber
- Compact fluorescents have 6 times the life of tungsten lamps and consume 80% less power.
- Anchor chain on glass cover assembly
- Suitable for use down to -50˚C ambient

International Approvals

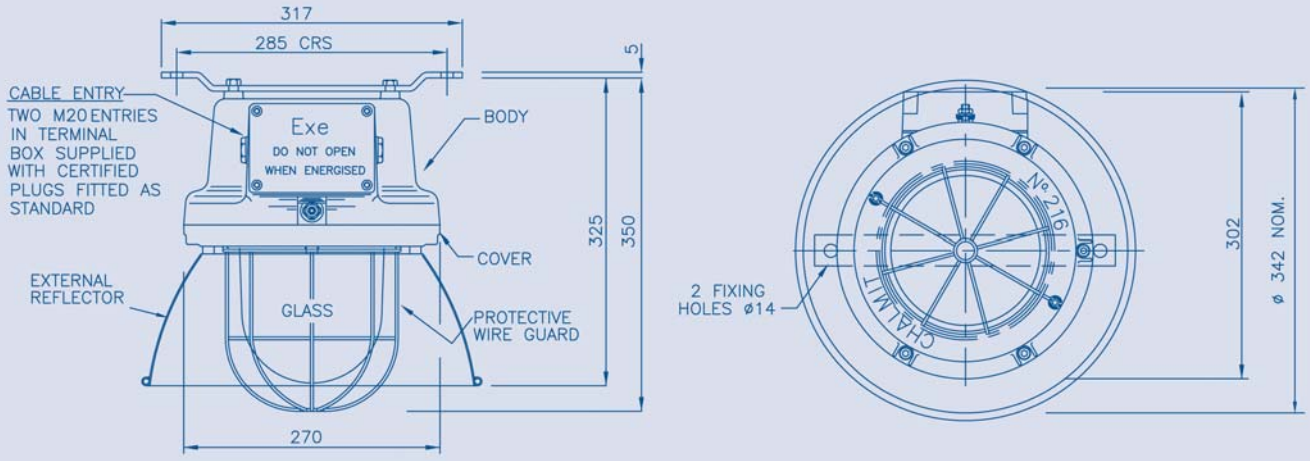
ATEX and GOST

Std. Cat No.	Wattage	Lamp	Lampholder	T Class	Ambient °C	Weight
216D/050/HS	50W	HPS	E27	T4	-50 to +50	9.5kg
216D/070/HS	70W	HPS	E27	T4	-50 to +45	10.0kg
216D/080/MV	80W	Mercury Vapour	E27	T4	-20 to +40	10.0kg
216D/100/GL	100W	GLS	E27	T4	-50 to +55	9.5kg
216D/200/GL	200W	GLS	E27	T3	-50 to +55	9.5kg
216D/113/CF	1x10/13W	4-pin Compact Fluor	G24q	T6	-50 to +55	9.5kg
216D/118/CF	1x18W	4-pin Compact Fluor	G24q	T5	-50 to +55	9.5kg
216D/126/CF	1x26W	4-pin Compact Fluor	G24q	T5	-50 to +55	9.5kg
216D/213/CF	2x10/13W	4-pin Compact Fluor	G24q	T5	-50 to +40	10.0kg
216D/218/CF	2x18W	4-pin Compact Fluor	G24q	T5	-50 to +40	10.0kg

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/___	Specific voltage (110,120, 130 compact flourescent)	**/P**	PTFE coating
/60	60Hz	**/S**	Stirrup mounting bracket
/M25	M25 cable entries	**/2P**	2 pin compact fluorescent version c/w switch start control gear (single lamp version only)



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly - stirrup mounting version only (48-60mm diameter poles)	**S2160-0002**
Pole mounting bracket assembly c/w stirrup - retro fit for flush mounting bracket (48-60mm diameter poles)	**S2160-0004**
Wire guard	**S2160-0007**
External reflector	**S2160-0010**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

238

Ex d e WELL-GLASS

The 238 is a powerful and efficient wellglass that is designed for general purpose low and medium bay illumination. The luminaire has a side mounted increased safety terminal chamber eliminating the need for flameproof glands.

The wide ambient temperature range makes the 238 suitable for extreme environmental conditions.

The 238 with external reflector

The 238 with wire guard

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased Safety), Ex tD (Dust)
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10 -1 and EN 60079-10-2 with installation to EN 60079-14 and Gas Groups IIA and IIB
Certificate	EC Type Examination Certificate BAS08ATEX0177 IEC Ex BAS08.0056
Coding	Ⓔx II 2 GD Ex d e IIB Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass dome globe
Internal Reflector	High purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Flush mounting bracket
Windage	0.138m²
Control Gear	Internal copper/iron with PFC correction capacitor
Relamping	Access via front glass cover assembly
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz - 70, 150 & 250W HPS/Metal Halide 220, 230, 240V 50Hz - 80, 125, 250W MBF/U & 100W HPS

Features

- Installation to gas groups IIA and IIB
- Ex e cable entries and looping as standard
- Anchor chain on glass cover assembly
- High ingress protection
- External reflector (option)
- Low temperature applications to -50°C
- Compact construction

International Approvals

ATEX, GOST and CSA

IECEx Compliant

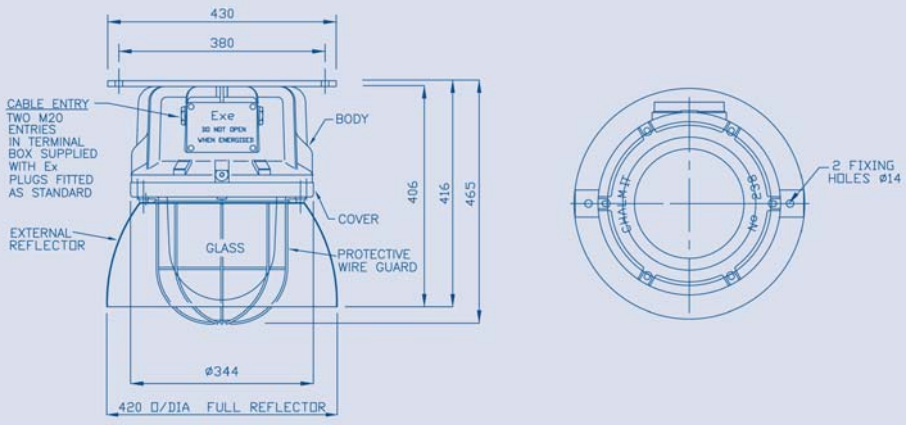
Std. Cat No.	Wattage	Lamp	Lampholder	TClass	T°C (Dust)	Ambient °C	Weight
238D/070/HS	70W	HPS	E27	T4	125	-50 to +60*	17.0kg
238D/100/HS	100W	HPS	E40	T4	125	-50 to +60*	17.0kg
238D/150/MS	150W	HPS and Metal Halide	E40	T4	125	-50 to +40	18.0kg
238D/250/MS	250W	HPS and Metal Halide	E40	T3	150	-50 to +45*	20.0kg
238D/080/MV	80W	Mercury Vapour	E27	T4	125	-20 to +60*	17.0kg
238D/125/MV	125W	Mercury Vapour	E27	T4	125	-20 to +40	17.0kg
238D/250/MV	250W	Mercury Vapour	E40	T3	175	-20 to +45*	19.5kg
238D/150/GL	150W	GLS	E27	T4	130	-50 to +60*	15.5kg
238D/200/GL	200W	GLS	E27	T4	125	-50 to +50	15.5kg
238D/300/GL	300W	GLS	E27	T4	130	-50 to +40	15.5kg
238D/160/MB	160W	MBTF	E27	T3	145	-50 to +50*	15.5kg
238D/085/QL	85W	QL	QL	T5	75	-50 to +55	16.0kg
238D/070/HS/T5	70W	HPS	E27	T5	95	-50 to +40	17.0kg
238D/150/MS/T3	150W	HPS and Metal Halide	E40	T3	140	-50 to +55*	18.0kg
238D/125/MV/T3	125W	Mercury Vapour	E27	T3	135	-20 to +50*	17.0kg

Note: Refer to installation leaflet for cable rating on models marked *
The 250W luminaires have a 70°C cable rating at ambients of 30°C.

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/120	120V QL only	**/P**	PTFE coating
/60	60Hz	**/S**	Stirrup mounting bracket
/M25	M25 cable entries	**/NC**	No power factor correction capacitors fitted
/TI	Timed ignitor		



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly - stirrup mounting version only (42-64mm diameter poles)	**S2610-0001**
Wire guard	**S2381-0012**
External reflector	**S2380-0001**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The 261 with external reflector

The 261 with wire guard

The 261 is an efficient high wattage wellglass for general task area and highbay lighting. The luminaire has a side mounted increased safety terminal chamber eliminating the need for flameproof glands.

The 261 is suitable for low temperature operation (-40°C) with high pressure sodium lamps.

Standard Specification

Type of Protection	Ex d e (Flameproof, Increased Safety)
ATEX Classification	Group II Category 2 G
Area Classification	Zone 1 and Zone 2 areas to EN 60079-10-1 with installation to EN 60079-14 Gas Groups IIA and IIB
Certificate	EC Type Examination Certificate BAS01ATEX2309
Coding	Ⓔx II 2 G Ex d e IIB Refer to table forT rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass dome globe
Reflector	High purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting bracket
Windage	0.197m²
Control Gear	Internal copper/iron with PFC correction capacitor
Relamping	Access via front glass cover assembly
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz (HID) 110V - 240V ac/dc (GLS)

Features

- Installation to gas groups IIA and IIB
- Ex e terminal chamber
- Stainless steel fasteners
- Anchor chain on glass cover assembly
- Low temperature applications to -40˚C

International Approvals

ATEX and GOST

IECEx Compliant

Std. Cat No.	Wattage	Lamp	TClass	Ambient °C	Weight
261D/150/HS	150W	HPS	T4	-40 to +50	31kg
261D/250/HS	250W	HPS	T4	-40 to +50	32kg
261D/400/HS	400W	HPS	T4	-40 to +50	33kg
261D/125/MV	125W	Mercury Vapour	T4	-20 to +50	31kg
261D/250/MV	250W	Mercury Vapour	T4	-20 to +50	32kg
261D/400/MV	400W	Mercury Vapour	T4	-20 to +50	33kg
261D/250/MH	250W	Metal Halide	T4	-40 to +50	32kg
261D/400/MH	400W	Metal Halide	T4	-40 to +50	33kg
261D/500/GL	Up to 500W	GLS	T4	-40 to +45	29kg
			T3	-40 to +50	29kg
261D/125/MV/F*	125W	Mercury Vapour	T4	-40 to +70	31kg

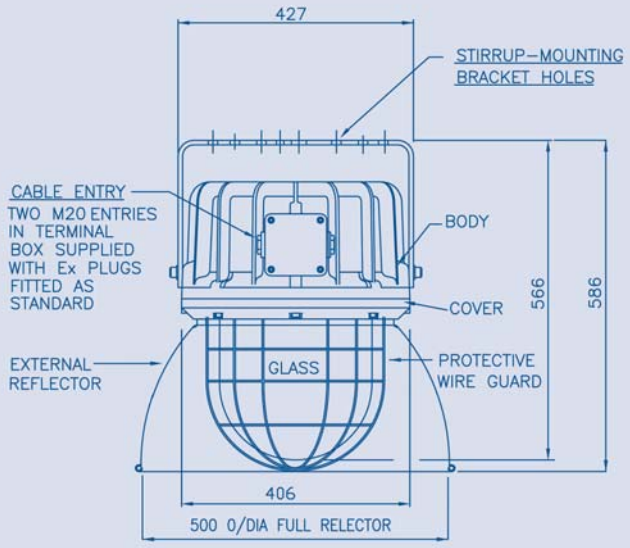
*F - Flush / Pendant Mounted Version.

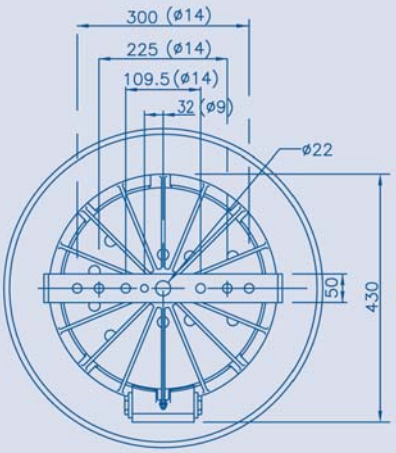
Note: When the external reflector is fitted with the flush/pendant version, the 'T' class and ambients stated above apply. When fitted to the stirrup mounted version the 'T' class changes to T3 with the ambient remaining the same.

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/P	PTFE coating	**/60**	60Hz
/M25	M25 cable entries	**/TI**	Timed ignitor



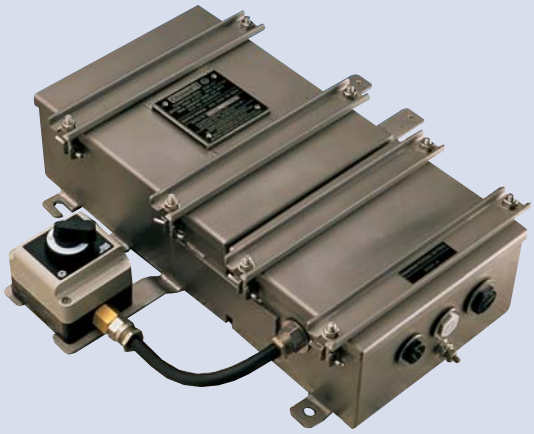


Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (42-64mm diameter poles)	**S2610-0001**
Wire guard	**S2610-0003**
External reflector	**S2610-0007**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

261E and 723 EMERGENCY PROJECTOR Ex d Ex e PROTECTION



The 261E provides focused safety critical lighting in emergency evacuation situations. It is designed to provide illumination during the launching of lifeboats to ensure the way is clear of hazards.

Standard Specification

Type of Protection	Luminaire: Ex d e (Flameproof Increased Safety) Battery Box: Ex e m (Increased Safety Encapsulation)
ATEX Classification	Group II Category 2 G
Area Classification	Zone 1 and Zone 2 areas to EN 60079-10 with installation to EN 60079-14
Certificate	EC Type Examination Certificate BAS01ATEX2310 Battery Box: Baseefa03ATEX0003
Coding	261E: Ex d e IIB T4 723: Ex e m II T4
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) All fastenings A4 stainless steel Toughened glass window Battery Box: Marine grade 316S31 stainless steel with silicone rubber gasket
Reflector	High purity anodised aluminium (narrow beam - single ended lamp) (wide beam - double ended lamp)
Entry	2 x M20 cable entries for mains supply and 1 x M25 cable entry for interconnection
Termination	3 core 6mm² max. conductor with looping for mains supply and 12 core 1.5mm² luminaire to battery box
Installation	Luminaire: Stirrup mounting bracket Battery Box: Flat straps
Windage	0.096m²
Control Gear	Electronic
Relamping	Access via front glass cover assembly
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 250V 50Hz and 60Hz
Emergency Light Duration	90 minutes

Features

- Installation to gas groups IIA and IIB
- Ex e terminal chamber
- Stainless steel fasteners, marine grade
- Anchor chain on glass cover assembly
- Increased safety battery
- Both wide and narrow beam versions available

International Approvals

ATEX

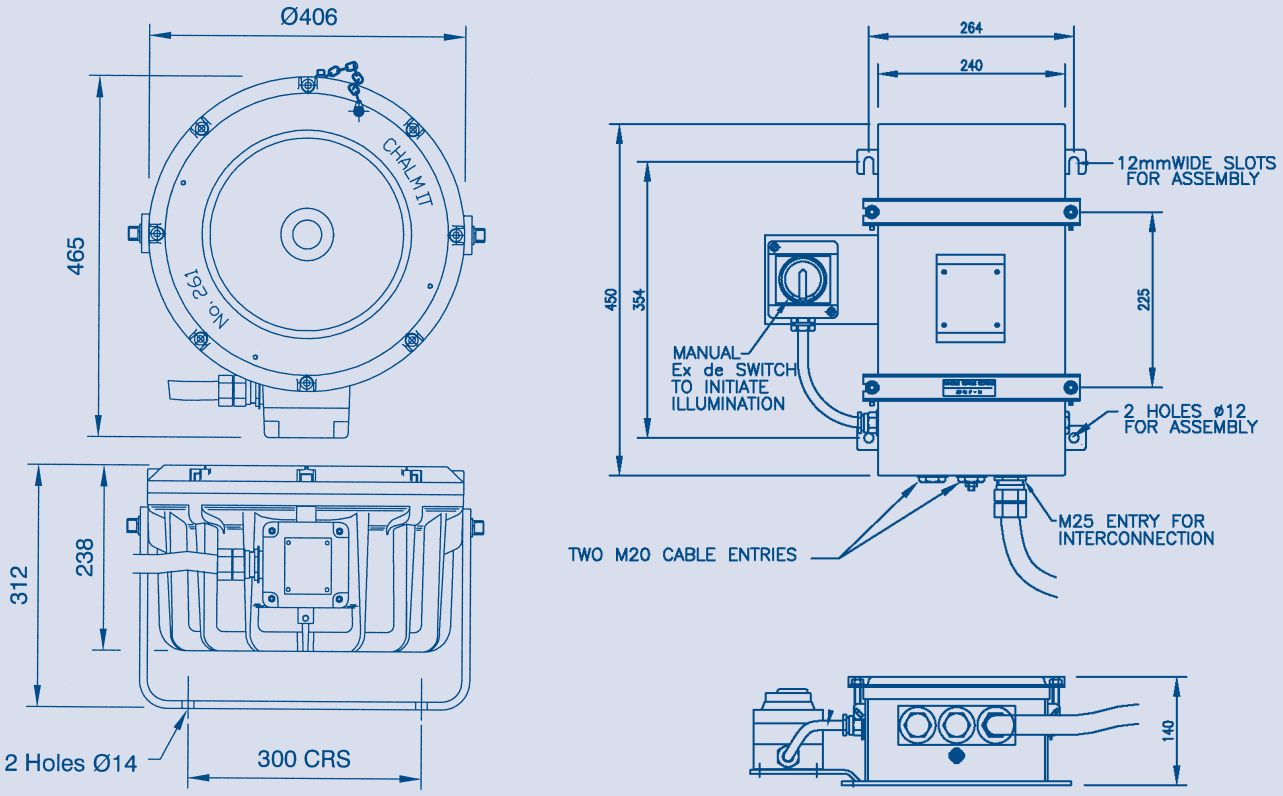
Std. Cat No.	Wattage	Lamp	Lampholder	TClass	Ambient °C	Weight	
						Flood	Batery Box
261E/070/HS/EM*	70W	HPS	E27	T4	-20 to +40	28.0kg	22.0kg
261E/070/MS/EM**	70W	HPS or Metal Halide Double Ended	Rx7s	T4	-20 to +40	28.0kg	22.0kg

*Narrow beam
**Wide beam
Standard catalogue number incorporates both floodlight and box.

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/M25	M25 cable entries (on 723 box)	**/NS**	Battery box without manual switching arrangement (automatic operation)
/P	PTFE coating		



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (42-64mm diameter poles)	**S2610-0001**
Wire guard	**S2610-0005**
Slave unit for operation on UPS 24dc 110/254ac	**Details on request**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

NexLED

Ex e LED BULKHEAD

NexLED with Exit Sign kit

NexLED with green LED's

The NexLED bulkhead utilises the latest LED technology to provide instant illumination. The NexLED requires no re-lamping making it virtually maintenance free and unaffected by low temperatures. This combination makes the NexLED ideal for extreme environmental applications.

Coloured LED options are also available.

Standard Specification

Type of Protection	Ex e mb (Increased Safety and Encapsulation)
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 area to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa04ATEX0245 IEC Ex BAS09.0062
Coding	Ex II 2 GD Ex e mb IIC Refer to table for T rating and Ambient
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) with toughened glass and silicone gasket
Reflector	Brushed aluminium
Entry	2 x M20 cable entries
Termination	3 core 4mm² max conductor with looping
Installation	Surface mounted, 4 mounting holes located outside of seal
Light Source	1W light emitting diodes. Colour: white
Control Gear	Electronic
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	110-254V AC (50/60Hz)/DC

Features

- Installation to gas groups IIA, IIB and IIC
- Highly visible, instant light
- Easy to install and maintain
- Ultra long life, no relamping required
- Very low power consumption

International Approvals

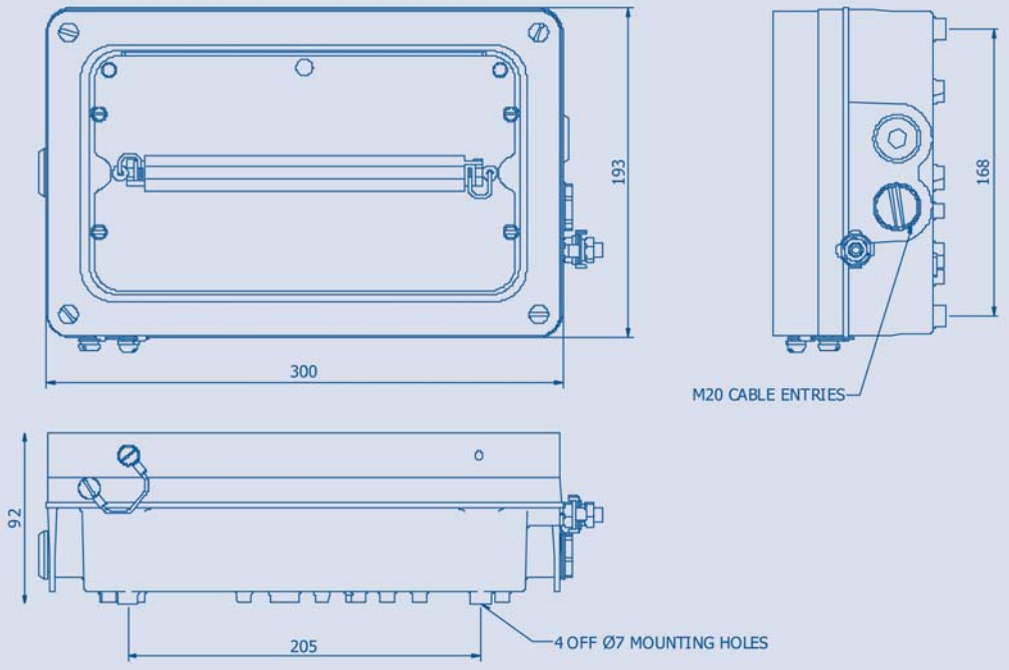
ATEX and GOST

IECEx Compliant

Std. Cat No.	Wattage	Light Source	TClass	T°C (Dust)	Ambient °C	Weight
NELE/201/LE	2W	Light Emitting Diode	T4	100	-45 to +55	4.0kg
NELE/801/LE	8W	Light Emitting Diode	T4	100	-45 to +55	4.1kg

Options – Suffix to Catalogue No.

/RDE	Red LED's	**/ADE**	Amber LED's
/GDE	Green LED's	**/IEC**	Supplied with IECEx certification label
/BDE	Blue LED's		



Accessories Should be ordered separately — Catalogue Order Code

Exit sign kit (supplied with - up, down, left and right labels*) **SNEL1-0008**

* Other signage options available upon request, please contact technical sales (techsupport@chalmit.com)

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

NexLED E

Ex e ib mb EMERGENCY

NexLED with Exit Sign kit

NexLED with green LED's

The NexLED emergency provides emergency battery backup to ensure continued operation in the event of a power outage. The emergency version benefits from the same features as the standard NexLED and is available as a special low temperature version for operation down to -45°C.

Coloured LED options are also available.

Standard Specification

Type of Protection	Ex e ib mb (Increased Safety, Intrisically Safe Encapsulated) Dust protected enclosure
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Baseefa04ATEX0245 IEC Ex BAS09.0062
Coding	Ⓔx II 2 GD Ex e ib mb IIC T4
Enclosure	Aluminium alloy LM6 to BS 1490 (AC44100) with toughened glass and silicone gasket
Reflector	Brushed aluminium
Entry	2 x M20 cable entries
Termination	4 core 4mm² max conductor with looping
Installation	Surface mounted, 4 mounting holes located outside of seal
Light Source	1W light emitting diodes. Colour: white
Control Gear	Electronic
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Battery	Ni-Cd (6V)
Emergency Duration	8W version - 90 minutes 2W version - 3 hours
Electrical Supply	110-254V AC/DC

Features

- Installation to gas groups IIA, IIB and IIC
- Highly visible, instant light
- Easy to install and maintain
- Ultra long life, no relamping required
- Very low power consumption
- 100% output in emergency mode (Up to 3 hours)
- Rechargable Ni-Cd batteries with charging indication
- Compatible with UPS systems

International Approvals

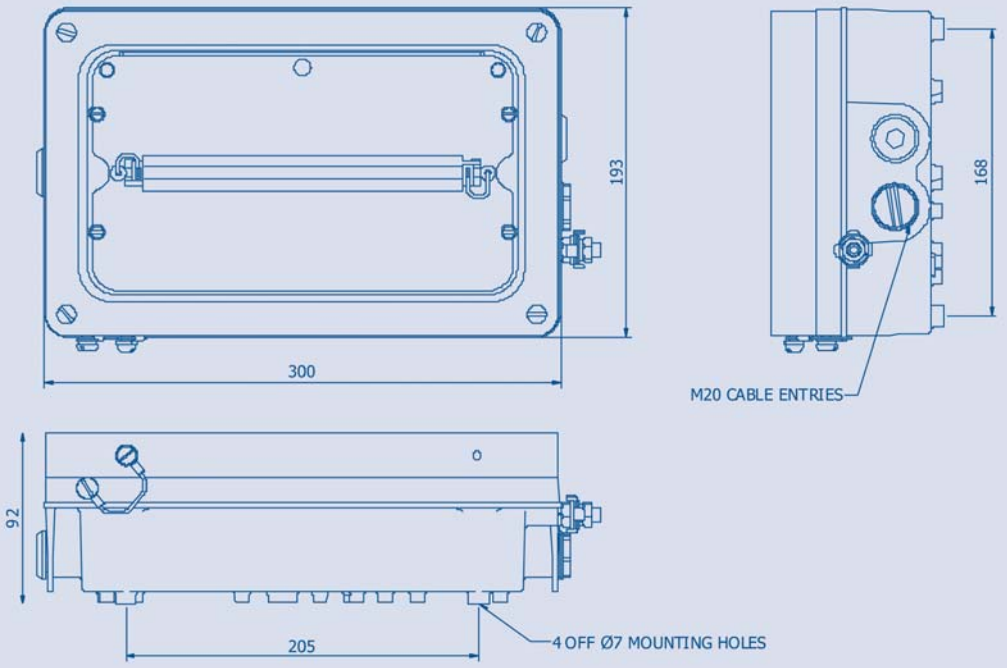
ATEX and GOST

IECEx Compliant

Std. Cat No.	Wattage	Light Source	TClass	T°C (Dust)	Ambient °C	Weight
NELE/201/LE/EM	2W	Light Emitting Diode	T4	100	-20 to +55	4.0kg
NELE/801/LE/EM	8W	Light Emitting Diode	T4	100	-20 to +55	4.1kg

Options – Suffix to Catalogue No.

/RDE	Red LED's	**/ADE**	Amber LED's
/GDE	Green LED's	**/LT**	Low temperature -45°C to +55°C
/BDE	Blue LED's	**/IEC**	Supplied with IECEx certification label



Accessories Should be ordered separately — Catalogue Order Code

Exit sign kit (supplied with - up, down, left and right labels*) **SNEL1-0008**

* Other signage options available upon request, please contact technical sales (techsupport@chalmit.com)

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

UNIVERSAL BOX

Ex e CONTROL BOX

The Universal is a lamp control and transformer box for use in Zone 1 and Zone 2 hazardous areas. It can be used as a control box for up to 600W HID lamp sources.

The Universal box can also be specified as a 120V transformer box up to 1000VA.

Standard Specification

Type of Protection	Ex d e m (Increased Safety, Flameproof, Encapsulated) Dust protected enclosure
ATEX Classification	Group II Category 2 GD
Area Classification	Zone 1 and Zone 21 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14 Gas Groups IIA, IIB and IIC
Certificate	EC Type Examination Certificate BAS01ATEX2270
Coding	Ex II 2 GD Ex d e m IIC Rrefer to table for T rating and ambient
Enclosure	Marine grade 316S31 stainless steel with silicone rubber gasket
Entry	3 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Base mounting straps
Control Gear	Internal copper/iron and PFC correction capacitor as required
Operating Position	Cable entries on lower end, if mounted vertically
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220-254V 50Hz - Control box version 120V 50-60Hz - Transformer box version

Features

- Installation to gas groups IIA, IIB and IIC
- Marine grade stainless steel construction
- Easy to install and maintain
- Hinged lid with three captive fixing screws
- Control gear easily accessed and can be replaced
- Thermal cut-outs fitted on ballast and transformer

International Approvals

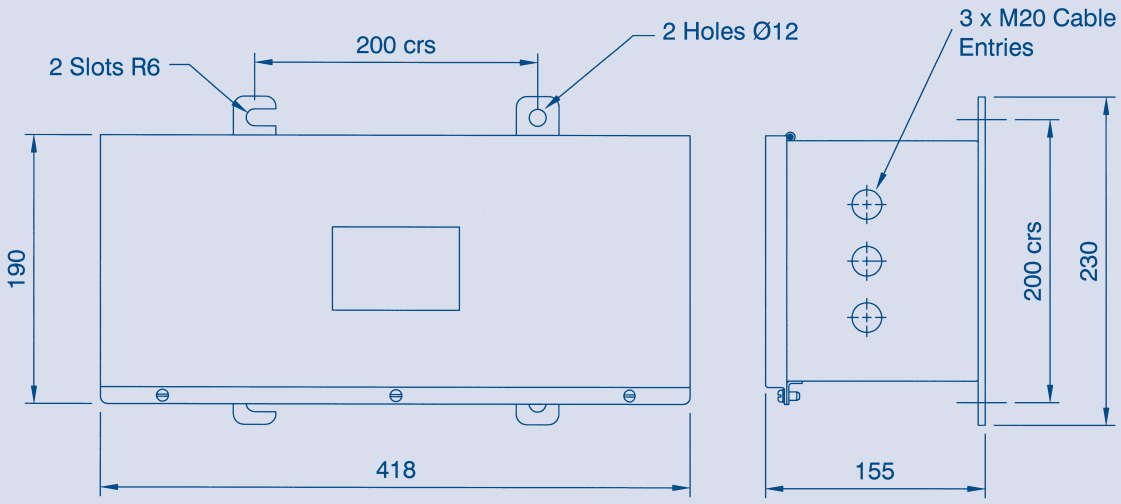
ATEX

Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
UNIE/150/MS	150W	HPS/Metal Halide	T4 T3	110 120	-40 to +45 -40 to +55	10.5kg
UNIE/250/MS	250W	HPS/Metal Halide	T4 T3	110 120	-40 to +45 -40 to +55	11.0kg
UNIE/400/MS	400W	HPS/Metal Halide	T4	120	-40 to +55	12.0kg
UNIE/600/HS	600W	HPS	T4 T3	115 125	-40 to +45 -40 to +55	14.0kg
UNIE/500/TF*	500VA	Transformer	T4 T3	105 115	-40 to +35 -40 to +55	11.0kg
UNIE/1000/TF*	1000VA	Transformer	T4 T3	105 115	-40 to +35 -40 to +55	12.0kg

*120 to 240V step up transformer boxes for fixed applications only. (Not portable).

Options – Suffix to Catalogue No.

/60	60Hz	**/MF**	Mains fuse (-20°C to +40°C only)
/M25	M25 cable entries	**/3P**	3 Phase termination



Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

PROTECTA n

NORMAL and EMERGENCY LIGHTING Ex n FLUORESCENT

EOL Protected

The Protecta n utilises the proven strength and integrity as the Protecta III but is certified for use in Zone 2, Zone 21 and Zone 22 hazardous areas. The luminaire is recommended for use in areas where high levels of ingress protection is required

Standard Specification

Type of Protection	Ex nA (Non-sparking)
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate Baseefa08ATEX0227 IEC Certificate IECExBAS 08.0075
Coding	Ⓔx II 3 GD Ex nA Refer to table for T rating and Ambient
Enclosure	GRP body with polycarbonate cover and brass suspension points
Reflector	White polyester painted zinc coated steel
Entry	4 x M20 cable entries, 2 at each end
Termination	3 core 4mm² max. conductor with looping and through wiring 16A rating. 4 core 4mm² connectors on emergency). (6mm² terminations available - /SC option)
Installation	Two M8 tapped brass inserts located on rear of body.
Control Gear	High Frequency electronic ballast Emergency - electronic/inverter
Relamping	Quick release diffuser clamp and hinged cover
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220-254V 50/60Hz
Battery	Ni-Cd 6V (Emergency version only)
Duration	3 hours (Emergency version only)
Emergency Output	18W 32% of one lamp 36W 14% of one lamp

Features

- Easy access to suspended control gear tray
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- dc operation (non-emergency only)
- Vibration tested to comply with Lloyds/ DNV
- DTS-01 deluge tested
- End of life (EOL) protection to IEC 60079-7 (with EOL I and EOL II functionality)
- Suitable for Zone 21 (Dust) areas Type Examination Certificate Baseefa08ATEX0228 Coding Ⓔx II 2D Ex tD A21 T85˚C

International Approvals

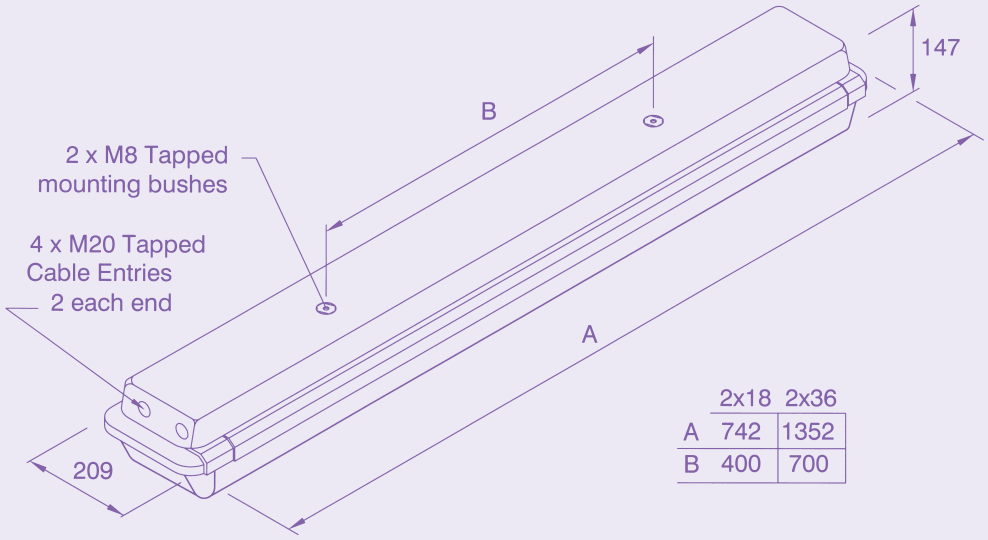
ATEX

IECEx Compliant

Std. Cat No.	Wattage	TClass(Gas)	T°C (Dust)	Ambient °C	Weight
PR2N/218/BI	2x18W	T4	85	-20 to +50	6.2kg
PR2N/136/BI	1x36W	T4	85	-20 to +50	9.6kg
PR2N/236/BI	2x36W	T4	85	-20 to +50	10.0kg
PR2N/218/BI/EM	2x18W	T4	85	-20 to +45	9.1kg
PR2N/136/BI/EM	1x36W	T4	85	-20 to +45	12.2kg
PR2N/236/BI/EM	2x36W	T4	85	-20 to +45	12.6kg

Options – Suffix to Catalogue No.

/120	Specific voltage (110V-130V)	/3P	Three phase termination
/SC	Screwed connection terminal block (up to 6mm² conductors)	/MF	Mains fuse
/M25	M25 cable entries	/IS	Isolation switch
		/SE	Spigot entry



	2x18	2x36
A	742	1352
B	400	700

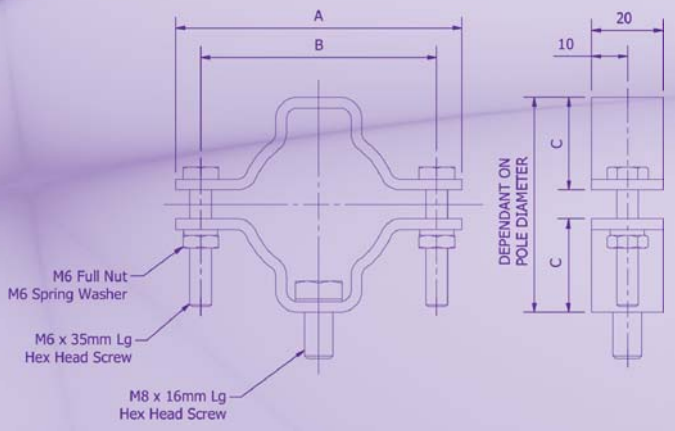
Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100001
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100002
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100003
Hook type ceiling bracket assembly	SPRO4-0005
Ceiling bracket assembly	SPRO4-0002
Flush mounting wall bracket assembly	SPRO4-0006
Eyebolt mounting assembly	SPRO5-0005
Looping Kit (allows looping from both ends of luminaire)	SPROT-0021
18W wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0012

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

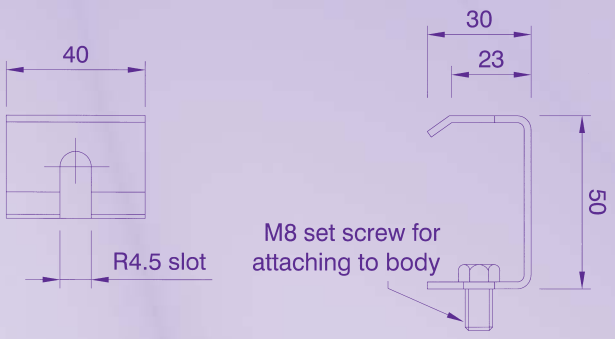
Pole Mounting Bracket Assembly — Cat No. SPOL4-100001/100002/100003

Pole mounting bracket to suit pole diameter
(38-42mm) SPOL4-100001
(48-52mm) SPOL4-100002
(58-62mm) SPOL4-100003

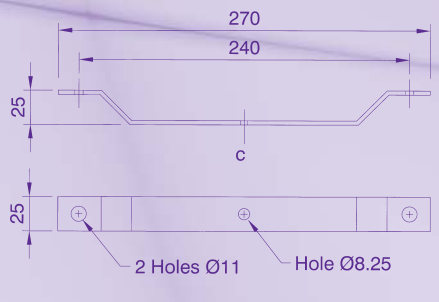


PART DETAILS				
Part Code	Part Description	A	B	C
SPOL4-100001	PROTECTA 38-42 P/M ASSY	80mm	66mm	26mm
SPOL4-100002	PROTECTA 48-52 P/M ASSY	90mm	76mm	32mm
SPOL4-100003	PROTECTA 58-62 P/M ASSY	96mm	80mm	38mm

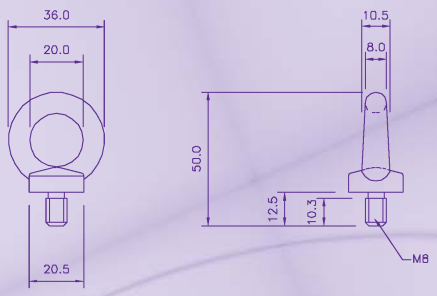
Hook Type Ceiling Bracket Assembly — Cat No. SPR04-0005



Ceiling Mounting Bracket Assembly — Cat No. SPR04-0002

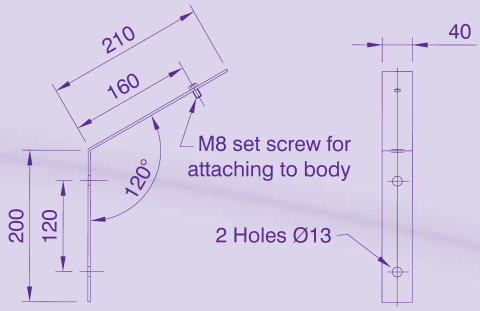


Eyelet Mounting Assembly — Cat No. SPR05-0005

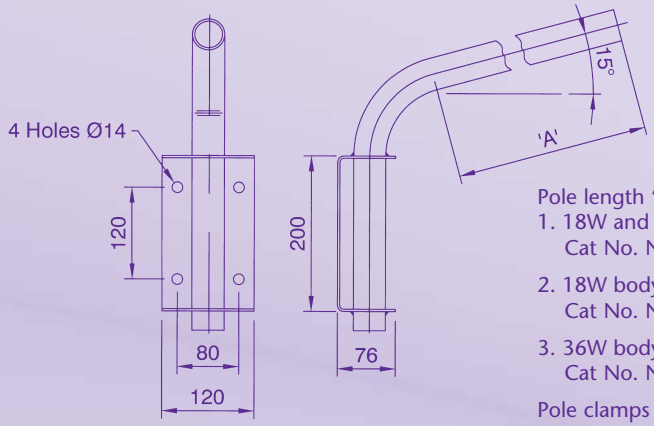


Flush Mounting Wall Bracket Assembly — Cat No. SPRO4-0006

Note: All brackets are made from 316 Stainless Steel



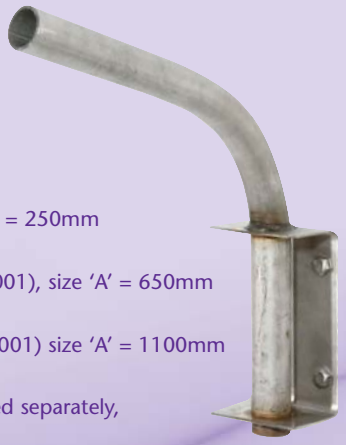
Wall Mounting Outreach Bracket — Cat No. NPRO4-0007/0008/0012



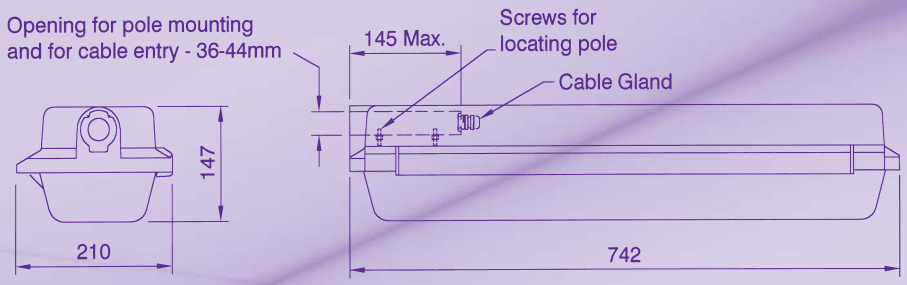
Pole length 'A' for use with the following:

1. 18W and 36W spigot entry body, size 'A' = 250mm
   Cat No. NPRO4-0007
2. 18W body c/w pole clamps (SPOL4-100001), size 'A' = 650mm
   Cat No. NPRO4-0008
3. 36W body c/w pole clamps, (SPOL4-100001) size 'A' = 1100mm
   Cat No. NPRO4-0012

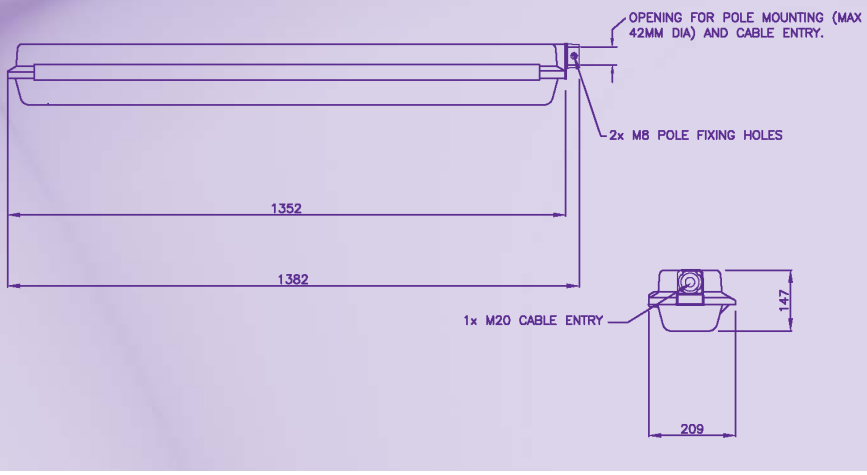
Pole clamps for items 2 & 3 must be ordered separately, see SPOL4-100001



18W Spigot Entry — Cat No. PRGE/218/BI/SE



36W Spigot Entry — Cat No. PRGE/236/BI/SE



STERLING II

Ex n FLUORESCENT

EOL Protected

The Sterling II is a high quality but cost effective T8 fluorescent. Its lightweight and slimline construction make it simple to install and maintain. The luminaire features high frequency control gear with' End of Life' (EOL) protection.

The Sterling II is available with single and twin lamp versions.

Standard Specification

Type of Protection	Ex nA (Non-sparking) Group II Category 3 GD
ATEX Classification Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate Sira 06ATEX4348X IEC Ex SIR 06.0108X
Coding	Ⓔx II 3 GD Ex nA II T4 (refer to table for T rating and Ambient)
Enclosure	GRP with polycarbonate diffuser and stainless steel retaining clips
Reflector	White polyester painted zinc coated steel
Entry	2 x 20mm diameter holes
Termination	4 core 4mm² max. conductor with through wiring 16A rating
Installation	Two clearance holes for M8 fasteners located on rear of body, sealing washers provided
Control Gear	High Frequency ballast
Relamping	Access via diffuser secured by quick release stainless steel clips
Burning Position	Universal
Ingress Protection	IP65 to EN60529
Electrical Supply	220-254V 50/60Hz (AC/DC)

Features

- Robust polycarbonate diffuser with stainless steel clips as standard
- Through wiring as standard
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output.
- Simple to install and maintain
- Lightweight and slim line construction
- End of life (EOL) protected

International Approvals

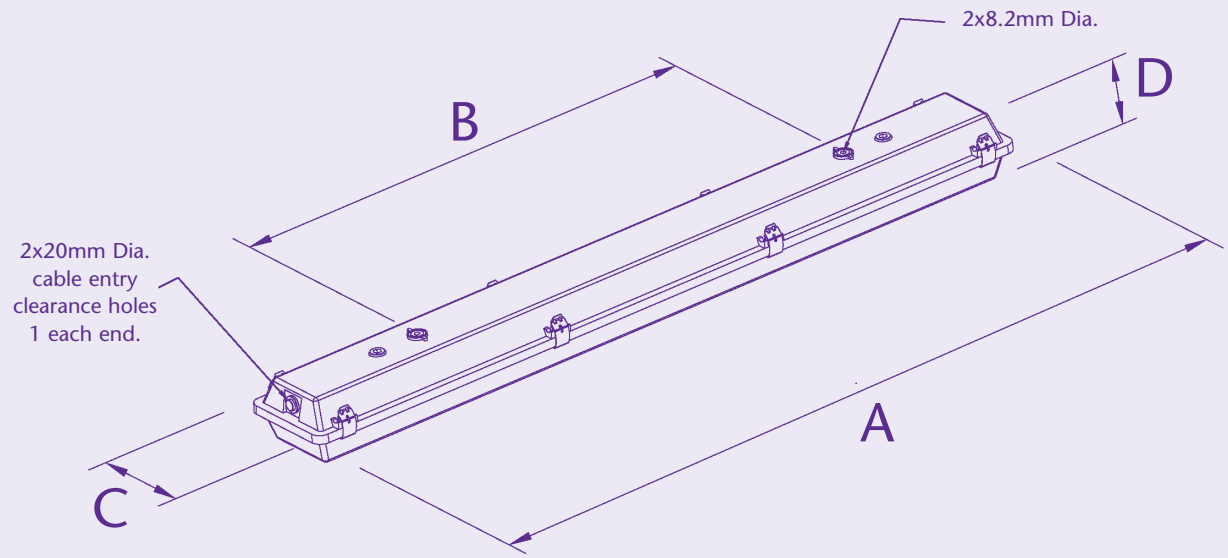
ATEX

IECEx Compliant

Std. Cat No.	Wattage	Voltage	TClass	T°(Dust)	Ambient °C	Weight
ST2N/218/BI	2x18W	220V-254V	T4	85	-20 to +45	2.6kg
ST2N/136/BI	1x36W	220V-254V	T4	85	-20 to +45	3.3kg
ST2N/236/BI	2x36W	220V-254V	T4	85	-20 to +45	3.6kg
ST2N/158/BI	1x58W	220V-254V	T4	85	-20 to +45	3.7kg
ST2N/258/BI	2x58W	220V-254V	T4	85	-20 to +45	4.1kg

Options – Suffix to Catalogue No.

/120	110-130V 50/60Hz AC (Note: Upper ambient, limit of +30°C)	/MF	Mains fuse



	2x18W	1x36W / 2x36W	1x58W / 2x58W
A	702	1312	1612
B	500	800	1100
C	172	102 / 172	102 / 172
D	106	106	106

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100004**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100005**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100006**
Hook type ceiling bracket assembly	**S3004-100003**
Ceiling bracket assembly	**S3004-100001**
Flush mounting wall bracket assembly	**S3004-100004**
18W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0008**
36W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0012**
58W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0022**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II E

EMERGENCY LIGHTING
Ex n FLUORESCENT

EOL Protected

The Sterling II Emergency features the same construction and EOL protected ballast as the standard product. In addition it also provides three hours of battery backup for emergency operation in the case of a power outage.

Standard Specification

Type of Protection	Ex nA (Non-sparking)
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	EC Type Examination Certificate Sira 06ATEX4348X IEC Ex SIR 06.0108X
Coding	Ex II 3 GD Ex nA II T4 (refer to table for T rating and Ambient)
Enclosure	GRP with polycarbonate diffuser and stainless steel retaining clips
Reflector	White polyester painted zinc coated steel
Entry	2 x 20mm diameter holes, 1 at each end
Termination	4 core 4mm² max. conductor with through wiring 16A rating
Installation	Two clearance holes for M8 fasteners located on rear of body, sealing washers provided
Control Gear	High Frequency ballast, electronic/inverter
Relamping	Access via front diffuser secured by quick release stainless steel clips
Burning Position	Universal
Ingress Protection	IP65 to EN 60529
Electrical Supply	220-254V 50/60Hz
Battery	Ni-Cd (6V)
Duration	3 hours
Emergency Output	18W 32% of one lamp 36W 14% of one lamp 58W 9% of one lamp

Features

- Polycarbonate diffuser
- Through wiring as standard
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output.
- Long life nickel cadmium batteries
- Switchable mains supply for local operation
- LED charge indicator
- End of life (EOL) protected

International Approvals

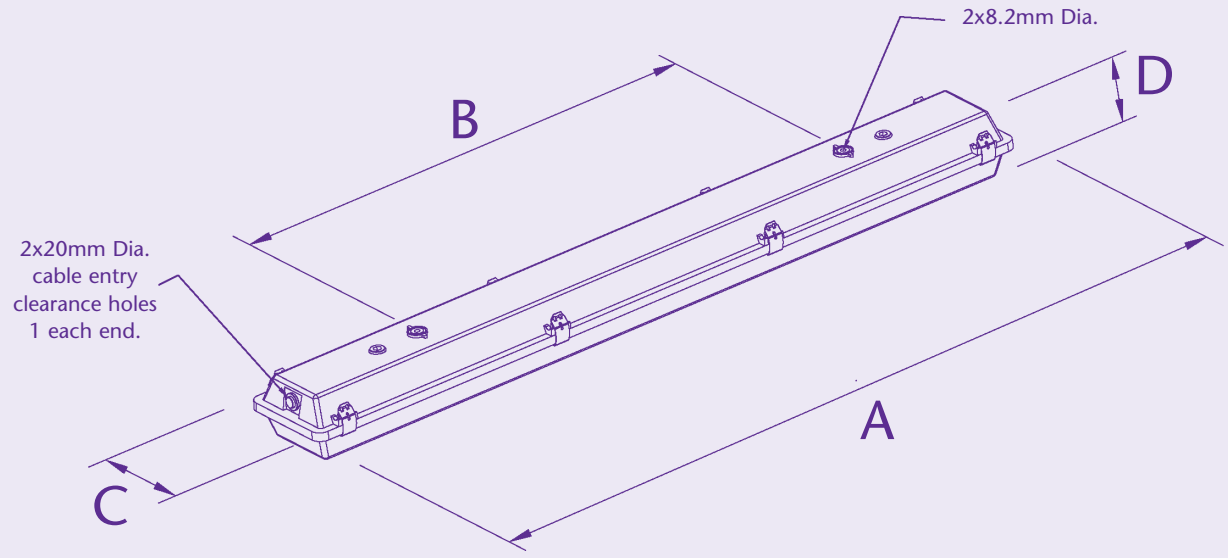
ATEX

IECEx Compliant

Std. Cat No.	Wattage	Voltage	TClass	T°(Dust)	Ambient °C	Weight
ST2N/218/BI/EM	2x18W	220V-254V	T4	85	-20 to +40	4.6kg
ST2N/136/BI/EM	1x36W	220V-254V	T4	85	-20 to +40	5.3kg
ST2N/236/BI/EM	2x36W	220V-254V	T4	85	-20 to +40	5.6kg
ST2N/158/BI/EM	1x58W	220V-254V	T4	85	-20 to +40	5.7kg
ST2N/258/BI/EM	2x58W	220V-254V	T4	85	-20 to +40	6.1kg

Options – Suffix to Catalogue No.

/120	110-130V 50/60Hz AC (Note: Upper ambient, limit of +30°C)	/NM	Non maintained version (Single lamp version only)
/MF	Mains fuse	/BMT	Battery management test



	2x18W	1x36W / 2x36W	1x58W / 2x58W
A	702	1312	1612
B	500	800	1100
C	172	102 / 172	102 / 172
D	106	106	106

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100004**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100005**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100006**
Hook type ceiling bracket assembly	**S3004-100003**
Ceiling bracket assembly	**S3004-100001**
Flush mounting wall bracket assembly	**S3004-100004**
18W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0008**
36W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0012**
58W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0022**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II S/S

STAINLESS STEEL Ex n FLUORESCENT

EOL Protected

The Sterling II is also available in a stainless steel body version. This incorporates the same design and protection features found in the GRP body Sterling II. The increased durability of its stainless steel construction makes this luminaire ideal for applications where there is a high risk of mechanical damage or exposure to chemical agents.

Standard Specification

Type of Protection	Ex nA (Non-sparking)
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate Sira 06ATEX4348X IEC Ex SIR06.0108X
Coding	Ex II 3 GD Ex nA II T4 (refer to table for T rating and Ambient)
Enclosure	Marine grade 316S31 stainless steel body with polycarbonate diffuser and stainless steel retaining clips
Reflector	White polyester painted zinc coated steel
Entry	3 x 20mm diameter holes, 2 at one end and 1 at the other end
Termination	3 core 4mm² max. conductor with looping and through wiring 16A rating
Installation	Two clearance holes for M8 fasteners located on rear of body, sealing washers provided
Control Gear	High Frequency ballast
Relamping	Access via front diffuser secured by quick release stainless steel clips
Burning Position	Universal
Ingress Protection	IP65 to EN 60529
Electrical Supply	220-254V 50/60Hz (AC/DC)

Features

Marine grade stainless steel body and polycarbonate diffuser

Mains connection terminals fixed to body

Gear tray suspended and fitted with control gear for ease of maintenance

High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output.

International Approvals

ATEX

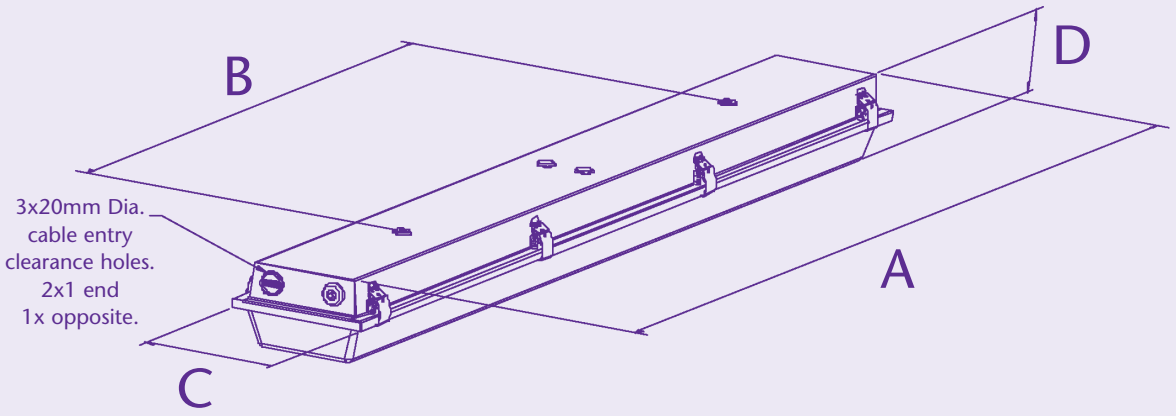
IECEx Compliant

Std. Cat No.	Wattage	TClass(Gas)	T°(Dust)	Ambient °C	Weight
SS2N/218/BI	2x18W	T4	85	-20 to +45	3.6kg
SS2N/136/BI*	1x36W	T4	85	-20 to +45	4.2kg
SS2N/236/BI	2x36W	T4	85	-20 to +45	4.8kg
SS2N/158/BI*	1x58W	T4	85	-20 to +45	6.1kg
SS2N/258/BI	2x58W	T4	85	-20 to +45	6.5kg

* Single lamp versions are in twin bodies.

Options – Suffix to Catalogue No.

/120	110-130V 50/60Hz AC (Note: Upper ambient, limit of +30°C)	/CM	Body c/w ceiling mounting brackets
/MF	Mains fuse	/TE	Threaded entry pads
/25	3 x 25mm cable entries	/EB	End mounting brackets attached



	2x18W	1x36W / 2x36W	1x58W / 2x58W
A	700	1312	1612
B	500	800	1100
C	172	172	172
D	106	106	106

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100004
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100005
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100006
Hook type ceiling bracket assembly	S3004-100003
Ceiling bracket assembly	S3004-100001
Flush mounting wall bracket assembly	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
58W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0022

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II E STAINLESS EMERGENCY Ex n FLUORESCENT

EOL Protected

The Sterling II Emergency is also available in a stainless steel body version. This incorporates the same design and protection features found in the GRP body Sterling II. The increased durability of its stainless steel construction makes this luminaire ideal for applications where there is a high risk of mechanical damage or exposure to chemical agents.

Standard Specification

Type of Protection	Ex nA (Non-sparking)
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate Sira 06ATEX4348X IEC Ex SIR06.0108X
Coding	Ex II 3 GD Ex nA II T4 (refer to table for T rating and Ambient)
Enclosure	Marine grade 316S31 stainless steel body with polycarbonate diffuser and stainless steel retaining clips
Reflector	White polyester painted zinc coated steel
Entry	3 x 20mm diameter holes, 2 at one end and 1 at the other end
Termination	4 core 4mm² max. conductor with looping and through wiring 16A rating
Installation	Two clearance holes for M8 fasteners located on rear of body, sealing washers provided
Control Gear	High Frequency ballast, electronic inverter
Relamping	Access via front diffuser secured by quick release stainless steel clips
Burning Position	Universal
Ingress Protection	IP65 to EN 60529
Electrical Supply	220-254V 50/60Hz
Battery	6V, 4Ah internal Ni-Cad
Duration	3 hours
Emergency Output	18W 32% of one lamp, 36W 14% of one lamp, 58W 9% of one lamp

Features

- Marine grade stainless steel body and polycarbonate diffuser
- Mains connection terminals fixed to body
- Gear tray suspended and fitted with control gear for ease of maintenance
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output.
- Long life nickel cadmium batteries
- Switchable mains supply for local operation
- LED charge indicator

International Approvals

ATEX

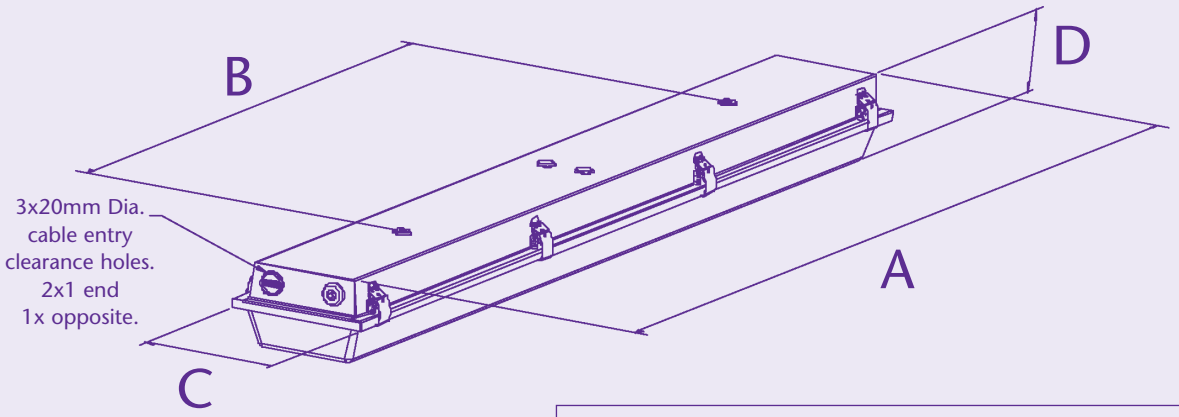
IECEx Compliant

Std. Cat No.	Wattage	TClass(Gas)	T°(Dust)	Ambient °C	Weight
SS2N/218/BI/EM	2x18W	T4	85	-20 to +40	4.6kg
SS2N/136/BI/EM*	1x36W	T4	85	-20 to +40	5.3kg
SS2N/236/BI/EM	2x36W	T4	85	-20 to +40	5.6kg
SS2N/158/BI/EM*	1x58W	T4	85	-20 to +40	5.7kg
SS2N/258/BI/EM	2x58W	T4	85	-20 to +40	6.1kg

* Single lamp versions are in twin bodies.

Options – Suffix to Catalogue No.

/120	110-130V 50/60Hz AC (Note: Upper ambient, limit of +30°C)	/CM	Body c/w ceiling mounting brackets
/NM	Non-maintained (single lamp version only)	/TE	Threaded entry pads
/MF	Mains fuse	/EB	End mounting brackets attached
/25	3 x 25mm cable entries	/BMT	Battery management test



	2x18W	1x36W / 2x36W	1x58W / 2x58W
A	700	1312	1612
B	500	800	1100
C	172	172	172
D	106	106	106

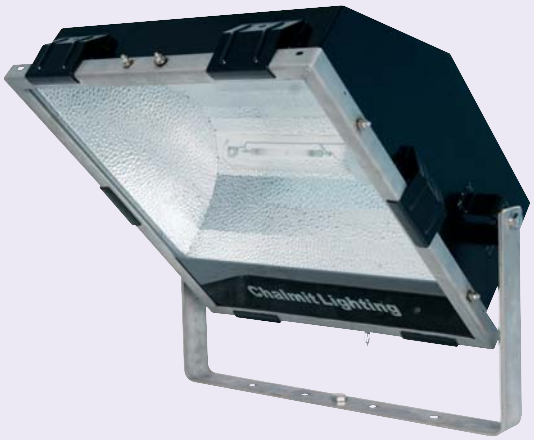
Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100004**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100005**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100006**
Hook type ceiling bracket assembly	**S3004-100003**
Ceiling bracket assembly	**S3004-100001**
Flush mounting wall bracket assembly	**S3004-100004**
18W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0008**
36W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0012**
58W wall mounting outreach bracket (use with SPOL4-100004)	**NPRO4-0022**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

800 SERIES

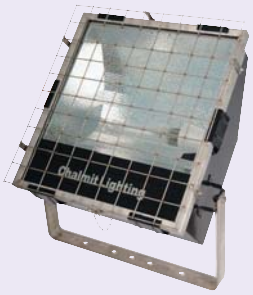
Ex n FLOODLIGHTS



Recommended maximum aiming angle 20˚
from horizontal plane

The 800 series is a range of stainless steel asymmetrical floodlights. These floods are designed for optimum light output and efficiency to ensure the minimum number of luminaires is required.

The 854 with anti-glare shield



The 854 with wire guard

Standard Specification

Type of Protection	Ex nR (Restricted Breathing)
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate BAS98ATEX3378
Coding	Ⓔx II 3 GD Ex nR II Refer to table overleaf for T rating and Ambient
Enclosure	Marine grade 316S31 stainless steel body with toughened glass window, silicone rubber gasket
Reflector	Wide beam high purity anodised aluminium
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting
Windage	0.052m² (844), 0.090m² (854), 0.107m² (864)
Control Gear	Internal copper and iron ballast with ignitor and PFC correction capacitors
Relamping	Access via front glass cover assembly secured by quick release stainless steel clips
Burning Position	Control gear must be level or below lamp position
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz

Features

- Photometrically superior asymmetric reflector
- Marine gradestainless steel body and toughened glass cover
- Quick release fasteners for ease of relamping and maintenance
- Suspended cover front
- Suitable for low temperature applications (-40°C)
- Standard control gear for use with IEC lamps

International Approvals

ATEX, GB (China), GOST and CEPEL

Std. Cat No.	Wattage	Lamp	Lampholder	T Class	Ambient °C	Weight
844N/070/MS	70W	HPS/Metal Halide	E27	150°C T3 T4	-40 to +50 -40 to +40	12.0kg
854N/100/HS	100W	HPS	E40	T4	-40 to +55	18.0kg
854N/150/HS	150W	HPS	E40	T3 T4	-25 to +55 -40 to +50	18.0kg
854N/250/MS	250W	HPS/Metal Halide	E40	T4	-25 to +40	19.0kg
854N/400/MS*	400W	HPS/Metal Halide	E40	T3	-25 to +40	17.0kg
854N/500/TH	500W	Single Ended T/Halogen	E40	T3 T2	-45 to +45 -45 to +60	16.5kg
864N/250/MS	250W	HPS/Metal Halide	E40	T3	-25 to +55	20.5kg
864N/400/MS	400W	HPS/Metal Halide	E40	T3	-40 to +50 (HPS) -25 to +40 (MH)	21.0kg
100/120V Cat Nos. The following models are for 120V, 50Hz as standard:						
864N/150/HS**	150W	HPS	E40	T3	-40 to +55	23.0kg
864N/250/HS/120**	250W	HPS	E40	T3	-40 to +55	23.0kg
864N/400/HS/120***	400W	HPS	E40	T3	-40 to +55	23.0kg

* Ignitor only fitted within floodlight. Remote gear box required (see Universal Box).

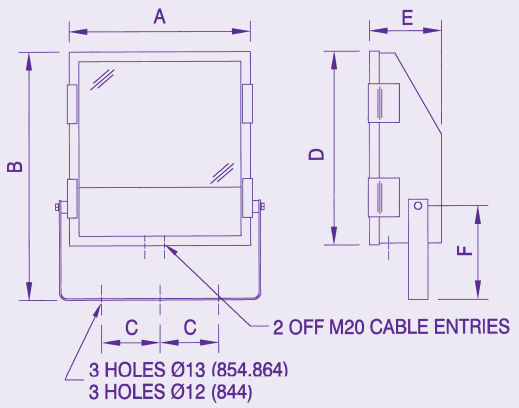
** c/w IEC control gear 110/120V supply.

*** Supplied with remote transformer box for 110/120V supply. (Control gear fitted for IEC lamps).

All control gear fitted for use with European lamps (IEC).

Options – Suffix to Catalogue No.

/60	60Hz
/M25	M25 cable entries
/N	Narrow beam reflector
/TI	Timed cut out ignitor
/WA	Suitable for wire guard or anti-glare shield
/TAP/CSA	Quad tapped ballast (120, 208, 240, 277V) (Internal control gear for NEC lamps only CSA certificate - non ATEX)



	A	B	C	D	E	F
844	308	443	75	348	150	175
854	415	630	150	490	185	260
864	456	640	150	490	219	260

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly - 844 (50-100mm diameter poles)	**S8444-0002**
Pole mounting bracket assembly - 854/864 (48-70mm diameter poles)	**S2400-0002**
Spigot top mounting bracket assembly - 854/864 (70-82mm diameter poles)	**S2400-0007**
Wire guard - 844 (requires "WA" suffix when ordering)	**S8444-0005**
Wire guard - 854 (requires "WA" suffix when ordering)	**S8544-0004**
Wire guard - 864 (requires "WA" suffix when ordering)	**S8644-0004**
Anti-glare shield - 844 (requires "WA" suffix when ordering)	**S8444-0001**
Anti-glare shield - 854 (requires "WA" suffix when ordering)	**S8544-0002**
Anti-glare shield - 864 (requires "WA" suffix when ordering)	**S8644-0002**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

MICRONEX and MAXINEX

Ex n FLOODLIGHTS

Recommended maximum aiming angle 20˚ from horizontal plane

The Maxinex is a lightweight asymmetric floodlight. Its compact design ensures low wind resistance so is ideal for high mast applications. The reflector design allows light to be thrown forward long distances whilst still lighting below the pole.

The Micronex is a compact version ideal for directional control lighting at low mounting heights such as perimeter lighting and loading areas.

Standard Specification

Type of Protection	Ex nR (Restricted Breathing)
ATEX Classification	Group II Category 3 G
Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Maxinex: Type Examination Certificate BAS97ATEX4368 Micronex: Type Examination Certificate BAS98ATEX3054
Coding	Ⓔx II 3 GD Ex nR II (Maxinex) Ⓔx II 3 G Ex nR II (Micronex) Refer to table for T rating and Ambient
Enclosure	Black epoxy painted aluminium body and frame with toughened glass window, silicone rubber gasket
Reflector	Wide beam high purity anodised aluminium
Entry	Maxinex: 2 x 20mm diameter holes Micronex: 1 x 20mm diameter holes
Termination	Maxinex: 3 core 6mm² max. conductor with looping Micronex: 3 core 6mm² max. conductor
Installation	Stirrup mounting
Windage	0.029m² (Micronex), 0.090m² (Maxinex)
Control Gear	Internal copper/iron ballast with ignitor and PFC correction capacitor
Relamping	Access via front glass cover assembly secured by stainless steel screws
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz

Features

- Photometrically superior asymmetric reflector design
- Low windage of 0.08m² (Micronex) and 0.25m² (Maxinex)
- High corrosion resistance
- All stainless steel fasteners
- Hinged front cover for easy access
- Choice of metal halide or high pressure sodium (HPS) lamps
- Suitable for low temperature applications
- Option available for Zone 22 combustable dust environments (Maxinex only)

International Approvals

ATEX and GOST
CEPEL (Maxinex only)

IECEx Compliant (Maxinex only)

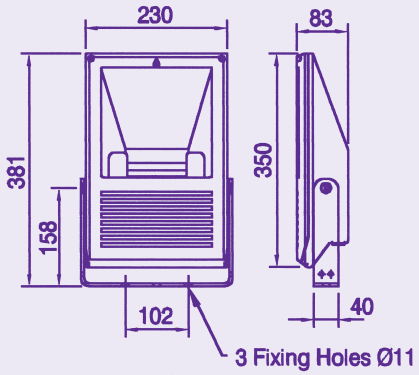
Std. Cat No.	Wattage	Lamp	Lampholder	TClass	T°C (Dust)	Ambient °C	Weight
MICN/070/MS	70W	Double Ended HPS/Metal Halide	Rx7's	T3	N/A	-30 to +40	5.9kg
MAXN/150/MS	150W	HPS/Metal Halide	E40	T4	130	-40 to +55	16.0kg
MAXN/250/MS	250W	HPS/Metal Halide	E40	T3	180	-40 to +55	17.0kg
MAXN/400/MS	400W	HPS/Metal Halide	E40	T3 T3	200 200	-40 to +45 (HPS) -40 to +30 (MH)	18.5kg

Note: Please specify voltage at time of enquiry/order

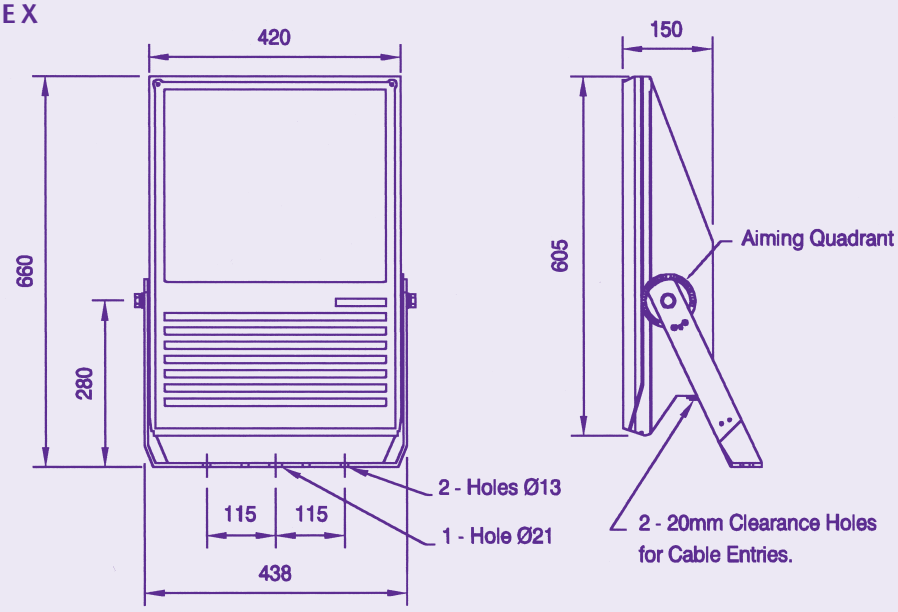
Options – Suffix to Catalogue No.

/60	60Hz	/TI	Timed ignitor (Maxinex only)
/D	Zone 2 and 22 dust applications (Maxinex only)	/IEC	Supplied with IECEx certification label

MICRONEX



MAXINEX



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly - Micronex (48-60mm diameter poles)	**SMIC1-0001**
Pole mounting bracket assembly - Maxinex (48-60mm diameter poles)	**SMAX4-0001**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

600W HPS

1000W Tungsten Halogen

The 503 is a high powered floodlight with a wide ambient temperature range. The high upper ambient and corrosion resistant aluminium constriction, make the 503 ideal for use even in the hottest and hostile environments.

Standard Specification

Type of Protection	Ex nR (Restricted breathing)
Area Classification	Zone 2 areas to EN 60079-10 with installation to EN 60079-14
Coding	Ex nR II Refer to table for T class and Ambient
Enclosure	Marine grade aluminium alloy LM6 body with toughened glass window, silicone rubber gasket
Reflector	Wide beam high purity anodised aluminium
Entry	1 x M20 cable entry
Termination	3 core 4mm² max. conductor
Installation	Foot mounted
Windage	0.227m²
Control Gear	Refer to Universal gear-box
Relamping	Access via end cover secured by stainless steel screws
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	Refer to Universal gear-box for 600W

Features

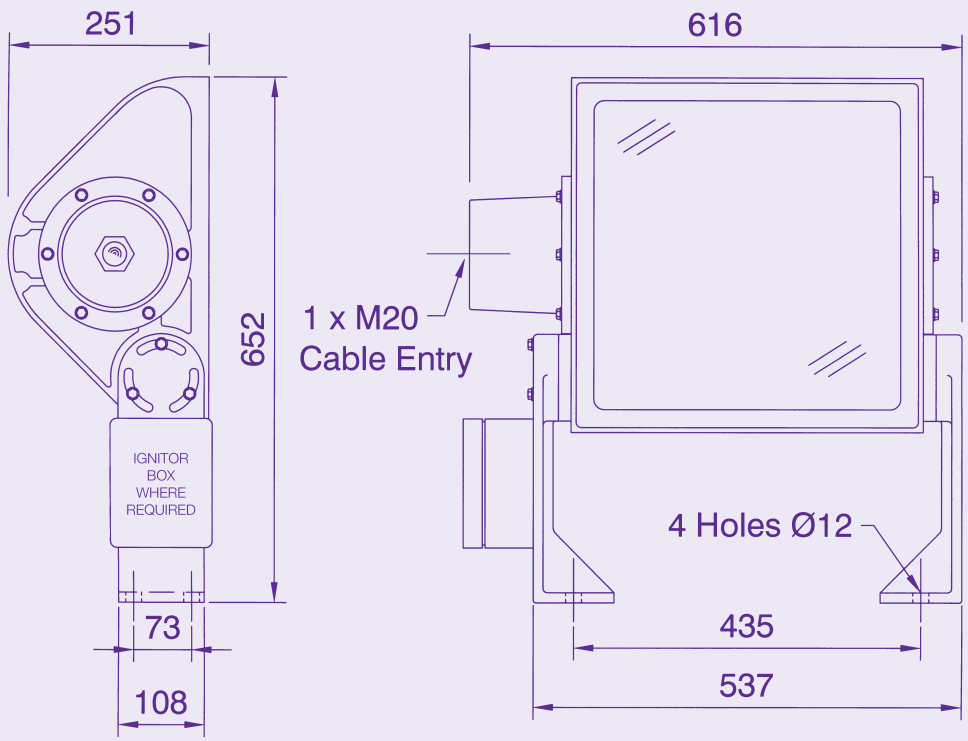
- Robust construction
- Highly resistant to corrosion and mechanical damage
- All stainless steel fasteners
- Extremely efficient reflector system
- Lamp support mechanism
- High ambient applications

Std. Cat No.	Wattage	Lamp	TClass	Ambient °C	Weight
503N/600/HS/IG*	600W	HPS	T3	-40 to +70	25.0kg
503N/1000/TH	1000W	Single Ended T/Halogen	T2	-40 to +60	25.0kg

* Remote gearbox required (see Universal Box).

Options – Suffix to Catalogue No.

/P	PTFE coating	/N	Narrow beam reflector



Accessories Should be ordered separately	Catalogue Order Code
Pole mounting bracket assembly (64-114mm pole diameter)	S2000-0007
Swinging jib bracket	S2000-0019
Anti-glare shield	S5030-0007
Wire guard	S5030-0008

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

NEXXUS II

Ex nA LED BULKHEAD

The Nexxus II low power LED bulkhead luminaire is suitable for a wide range of applications and ambient temperatures. The product utilises the latest technology of Light Emitting Diodes (LEDs) to provide an instant white light that is highly visible, overall whilst reducing energy consumption when compared to traditional light sources.

Standard Specification

Type of Protection	Ex mc nA
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 and Zone 22 area to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate pending
Coding	Ⓔx II 3 GD Ex mc nA IIC T5
Enclosure	Cast aluminium LM6 (AC 44100) with toughened glass and silicone gasket
Reflector	Brushed aluminium
Entry	3 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping or through wiring 16A max current rating
Light Source	16 x 1W light emitting diodes. Colour: white
Control Gear	Electronic
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	110/254V AC/DC

Features

- Fixing points outside restricted breathing enclosure
- High corrosion resistance
- Suitable for ceiling or wall mounting
- Through wire or looping as standard
- Prismatic lens
- Suitable for low temperature applications
- Very low power consumption
- Ultra long life, no relamping required
- Suitable for Zone 21 combustable dust environments

International Approvals

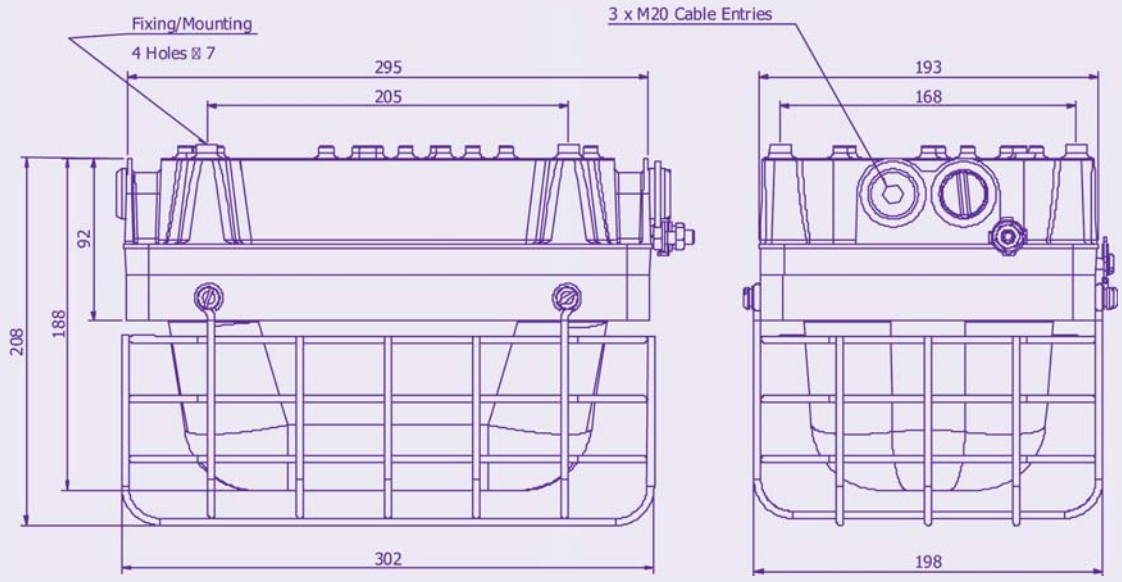
ATEX, GOST and CEPEL

Std. Cat No.	Wattage	Lamp	TClass	T°C (Dust)	Ambient °C	Weight
NE2N/161/LE	16W	Light Emitting Diode	T4	100	-45 to +55	5.7kg

Equivalent to 100W GLS lamp wattage output.

Options – Suffix to Catalogue No.

/RDE	Red LEDs	/ADE	Amber LEDs
/GDE	Green LEDs	/MF	Mains fuse



Accessories Should be ordered separately — Catalogue Order Code

Wire Guard Assembly	**SNEX1-0001**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The Nexxus is a corrosion resistant bulkhead with a prismatic glass lens. It is available with a range of lamp types and is suitable for low temperature operation (-45°C). For ease of installation and maintenance the fixing points are located outside the restricted breathing enclosure.

Standard Specification

Type of Protection	Ex nR (Restricted Breathing)
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 areas to EN 60079-10-1 with installation to EN 60079-14
Certificate	Type Examination Certificate BAS99ATEX3012
Coding	Ex II 3 GD Ex nR II Refer to table for T rating and Ambient
Enclosure	Painted LM6 (AC 44100) aluminium alloy body with prismatic glass lens, silicone rubber gasket and stainless steel fasteners
Reflector	High purity anodised aluminium
Entry	3 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping or through wiring 16A max current rating
Installation	4 x 7mm clearance holes in body fixing channel
Control Gear	Internal copper/iron ballast with ignitor and PFC correction capacitors as specified
Relamping	Access via front cover secured by four stainless steel screws
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz - 70W 220, 230, 240V 50Hz - 80W 220-240V 50Hz - 50W, 240V 50Hz - CF 250V max - 160 & 200W

Features

- Improved light output
- Easy control gear replacement
- Fixing points outside restricted breathing enclosure
- High corrosion resistance
- Suitable for ceiling or wall mounting
- Through wire or looping as standard
- Prismatic lens
- Suitable for low temperature applications

International Approvals

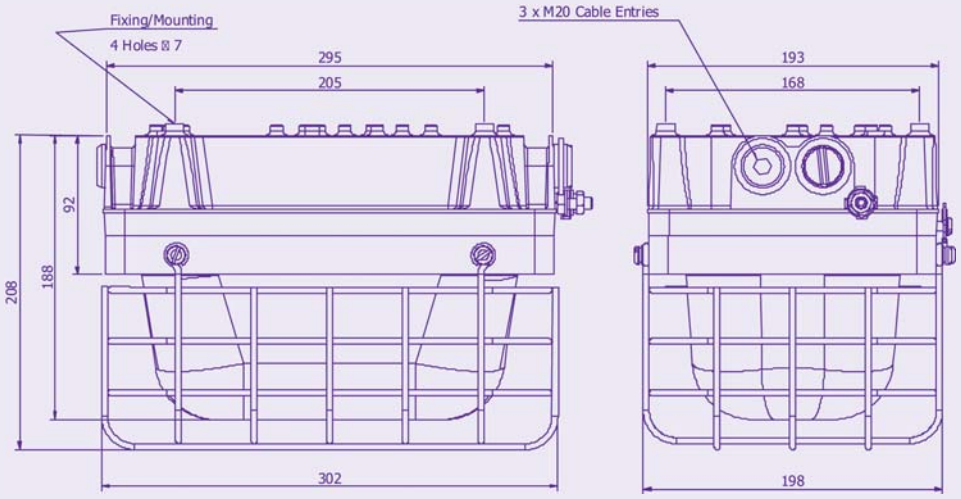
ATEX, GOST and CEPEL

Std. Cat No.	Wattage	Lamp	Lampholder	T Class	Ambient °C	Weight
NEXN/050/HS	50W	HPS	E27	T4	-45 to +35	7.2kg
NEXN/070/MS	70W	HPS/Metal Halide	E27	T4	-45 to +35	7.7kg
NEXN/080/MV	80W	Mercury Vapour	E27	150°C T3	-20 to +25	7.2kg
NEXN/160/MB	160W	MBTF	E27	T3	-25 to +30	5.7kg
NEXN/113/CF	1x13W	CFL	G24q	T5	-20 to +50	6.2kg
NEXN/118/CF	1x18W	CFL	G24q	T5	-20 to +50	6.2kg
NEXN/126/CF	1x26W	CFL	G24q	T5	-20 to +50	6.2kg
NEXN/213/CF	2x13W	CFL	G24q	T5	-20 to +30	6.7kg
NEXN/218/CF	2x18W	CFL	G24q	T5	-20 to +30	6.7kg
NEXN/226/CF	2x26W	CFL	G24q	T5	-20 to +30	6.7kg
NEXN/200/GL	200W max	GLS	E27	150°C T3	-45 to +30**	5.7kg
NEXN/050/HS/NC*	50W	HPS	E27	150°C T3	-45 to +50	7.2kg
NEXN/070/MS/NC*	70W	HPS/Metal Halide	E27	150°C T3	-45 to +50	7.7kg
NEXN/080/MV/NC*	80W	Mercury Vapour	E27	150°C T3	-20 to +50	7.2kg
NEXN/100/HS/NC*	100W	HPS	E27	150°C T3	-45 to +50	8.2kg

* No power factor correction capacitors fitted.
** Other 'T' ratings and ambients available for lower wattages. Contact sales for details.

Options – Suffix to Catalogue No.

/___	Specific voltage (254V) (50W and 80W)	/TI	Timed cut out ignitor
/60	60Hz (50W, 70W and 80W only)	/MF	Mains fuse



Accessories Should be ordered separately — Catalogue Order Code

Wire Guard Assembly	SNEX1-0001

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

ECLIPSE II

1

First secure the chosen mounting base to the desired wall, ceiling, pole or bulkhead. Mains cables can now be easily terminated into the base using the required cable glands to maintain the IP sealing.

2

Once the base is secure, hang the main body via the hook on the base. This will remain suspended leaving your hands free to complete the connections to the terminal block.

3

The main body can now be swung into place and secured using a screwdriver or nut driver. The terminal chamber is now sealed.

Chalmit

The Eclipse II incorporates unique features designed to make installation and maintenance quicker and easier. The lamp chamber utilises the restricted breathing Ex nR concept and lamp access is by means of the screwed cover glass, whilst the control gear area is separated from the lamp chamber by a barrier and is non sparking Ex nA, meaning that no special cable glands are required.

The luminaire makes use of the Swing-Barrel Nut System. This allows users to easily install the mounting base first and complete the mains wiring without the need to support the body and lamps during installation. This simple design saves on both time and labour costs during installation and maintenance activities. The Swing-Barrel Nut System can be tightened with an ordinary screwdriver or nut driver without the need for special tools.

The main body of the Eclipse II also features a built in external attachment point, this allows the luminaire to be secured using a secondary safety cable.

4

Now safely screw the appropriate lamp into the body.

5

Finally attach the unique threaded lamp glass and turn until a secure seal is achieved.

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Feb 2010
Rev 1

ECLIPSE II

Ex n WELL-GLASS

The Eclipse II with external reflector

The Eclipse II with glass refractor

The Eclipse II wellglass has been designed to make installation quick and simple. The lamp and gear chambers are separated for easy maintenance and require no special cable glands.

The luminaire also features a swing barrel nut system. This allows prior installation and wiring of the mounting base without the need to support the body and lamps. This unique design saves on both time and labour costs.

Standard Specification

Type of Protection	Ex nA nR(Non Sparking Restricted Breathing)
ATEX Classification	Group II Category 3 G
Area Classification	Zone 2 areas to EN 60079-10-1 and EN 60079-10-1 with installation to EN 60079-14
Certificate	Type Examination Certificate Baseefa04ATEX0393X
Coding	Ⓔx II 3 G Ex nA R II Refer to table for T class and Ambient
Enclosure	Painted aluminium body with glass globe. Silicone rubber gasket. Single stainless steel barrel nut fastener.
Entry	Up to 4 x M20 cable entries
Termination	3 core 6mm² max. With looping.
Lamp Type	Ceiling mounting
Windage	0.107m" (up to 150W Glass) 0.134m" (> 150W Glass) 0.210m" (Enclosed Reflector)
Control Gear	Internal copper/iron ballast with ignitor and PFC correction capacitors.
Relamping	Access via restricted breathing lamp chamber
Burning Position	Up to 25° off vertical
Ingress Protection	IP66 to EN 60529
Electrical Supply	220, 230, 240V 50Hz (50, 80, 100 & 125W) 220, 230, 240, 254V 50Hz (70, 150, 250 & 400W)

Features

- Easy access for wiring and control gear
- Unrestricted breathing gear enclosure removes the need for special glands or cable
- Corrosion resistant
- High, medium and low bay lighting
- Excellent light distribution
- Suitable for a wide range of ambient temperatures from -45°C to +55°C, dependant on lamp type and wattage
- Option available for Zone 22 combustable dust environments

International Approvals

ATEX and GOST

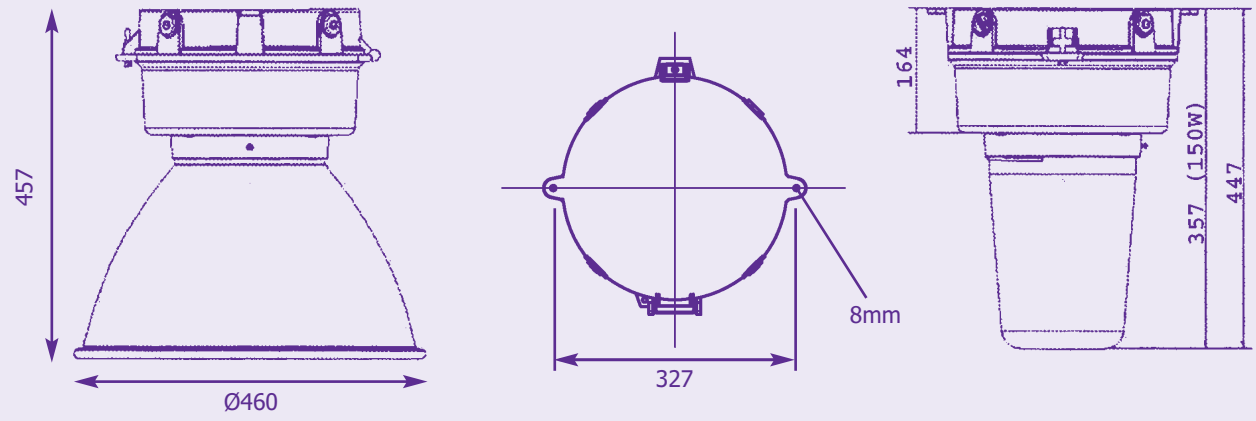
IECEx Compliant

Std. Cat No.	Wattage	Lamp	Lampholder	TClass	T°C (Dust)	Ambient °C	Weight
EC2N/050/HS	50W	HPS	E27	T4	110	-45 to +55	7.5kg
EC2N/070/MS	70W	HPS/Metal Halide	E27	T4	110	-45 to +55	8.0kg
EC2N/100/HS	100W	HPS	E40	T4	110	-45 to +55	9.0kg
EC2N/150/MS	150W	HPS/Metal Halide	E40	T4	110	-45 to +55	11.0kg
EC2N/250/MS	250W	HPS/Metal Halide	E40	T4	130	-45 to +50	15.0kg
EC2N/400/MS	400W	HPS/Metal Halide	E40	T3	160	-45 to +45	15.5kg
EC2N/080/MV	80W	Mercury Vapour	E27	T3	135	-20 to +45	7.5kg
EC2N/125/MV	125W	Mercury Vapour	E27	T3	135	-20 to +45	8.0kg
EC2N/250/MV	250W	Mercury Vapour	E40	T3	135	-20 to +40	15.0kg
EC2N/400/MV	400W	Mercury Vapour	E40	T3	180	-20 to +35	15.5kg

Options – Suffix to Catalogue No.

/60	60Hz	/ER	Sealed spun reflector
/M25	M25 cable entries	/R	Prismatic glass refractor (Up to 150W)
/WM	Wall mounted version*	/IEC	Supplied with IECEx Certification label
/ST	Stanchion mounted version*	/TI	Timed cut out ignitor
/PE	Pendant mounted version*	/D	Zone 22 dust applications

* See pages 94 and 95 for details



Accessories Should be ordered separately — Catalogue Order Code

Wire guard for low wattage glass globe (up to 150W)	**E0850-0042**
Wire guard for high wattage glass globe (250W/400W)	**E0850-0044**
Wire guard for enclosed reflector	**E0850-0043**
Dome reflector	**HEC20-0001**
30° angled reflector	**HEC20-0002**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

ECLIPSE JUNIOR Ex n WELL-GLASS

The Eclipse Junior is a compact wellglass that incorporates the low maintenance features of the Eclipse II. Its low profile design and range of mounting options, offers an all round lighting solution in areas of limited space.

The junior is available with a range up lamp types up to 150W and is suitable for use at low temperatures (-45°C).

The Eclipse Junior with external reflector

The Eclipse Junior with wire guard

Standard Specification

Type of Protection	Ex nA nR (Non-sparking, Restricted Breathing)
ATEX Classification	Group II Category 3 G
Area Classification	Zone 2 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN 60079-14
Certificate	Type Examination Certificate BAS04ATEX0393X
Coding	Ⓔx II 3 G Ex nAR II Refer to table for T class and Ambient
Enclosure	Painted aluminium body with glass globe. Silicone rubber gasket. Stainless steel fasteners
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Ceiling mounting
Windage	0.066m²
Control Gear	Internal copper/iron ballast with ignitor and PFC correction capacitor
Relamping	Access via sealed lamp chamber
Burning Position	Up to 25° off vertical
Ingress Protection	IP66 to EN 60529
Electrical Supply	220, 230, 240, 254V 50Hz - 70 & 80W (HID) 220, 230, 240V 50Hz - 50, 100 & 125W (HID) 240V 50Hz - CF, 250Vmax. 150W GLS

Features

- Compact size and low weight
- Easy access for wiring and control gear
- Unrestricted breathing gear enclosure removes the need for special glands or cable
- Corrosion resistant
- Excellent light distribution
- Suitable for a wide range of ambient temperatures from -45˚C to +55˚C, dependant on lamp type and wattage
- Option available for Zone 22 combustable dust environments

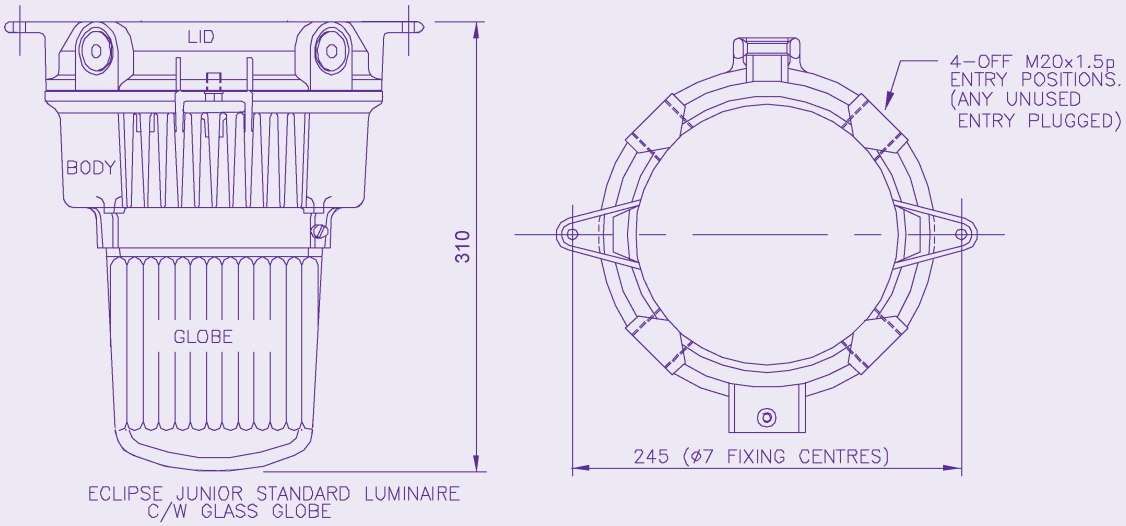
International Approvals

ATEX, GOST and CEPEL

Std. Cat No.	Wattage	Lamp	Lampholder	TClass	T°C (Dust)	Ambient °C	Weight
ECJN/050/HS	50W	HPS	E27	T4	130	-45 to +50	5.5kg
ECJN/070/MS	70W	HPS/Metal Halide	E27	T4	130	-45 to +50	6.0kg
ECJN/080/MV	80W	MBFU	E27	T3	135	-20 to +50	6.0kg
ECJN/125/MV	125W	MBFU	E27	T3	140	-20 to +40	6.5kg
ECJN/113/CF	1x13W	CFL	G24q	T4	130	-20 to +50	5.0kg
ECJN/118/CF	1x18W	CFL	G24q	T4	130	-20 to +50	5.0kg
ECJN/126/CF	1x26W	CFL	G24q	T4	130	-20 to +50	5.0kg
ECJN/150/GL	150W	GLS	E27	T4	100	-45 to +55	5.0kg

Options – Suffix to Catalogue No.

/___	Specific voltage (220,230,254)	/PE	Pendant mounted version
/60	60Hz	/NC	No capacitors
/WM	Wall mounted version	/D	Zone 22 dust applications
/ST	Stanchion mounted version		



ECLIPSE JUNIOR STANDARD LUMINAIRE
C/W GLASS GLOBE

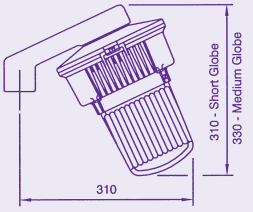
Accessories Should be ordered separately — Catalogue Order Code

Wire guard (can be used in conjunction with reflectors)	**E0850-00048**
Dome reflector	**SECL0-0001**
30° Angled reflector	**SECL0-0002**

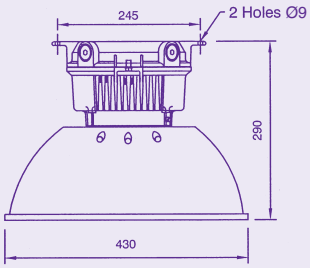
Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

ECLIPSE RANGE

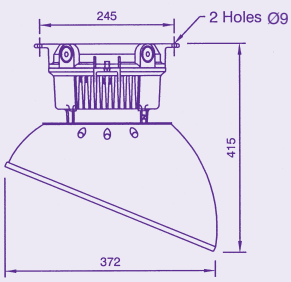
JUNIOR



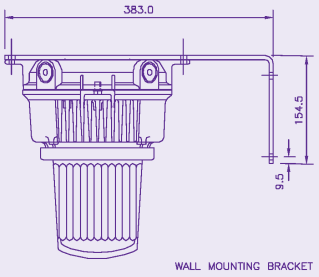
Stanchion mounting arrangement
To suit pole threaded 1¼ NPT



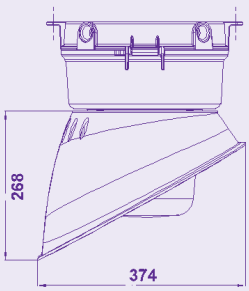
Eclipse Junior c/w glass globe
& full reflector



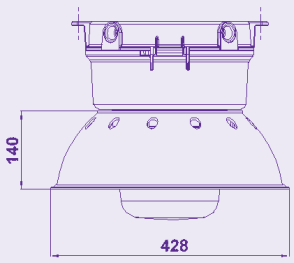
Eclipse Junior c/w glass globe
& 30° angled reflector



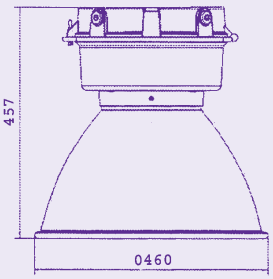
ECLIPSE II



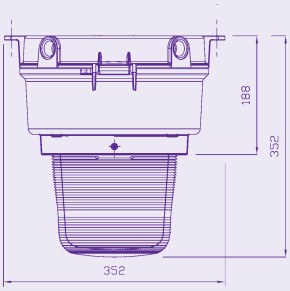
Angle reflector



Dome reflector



Sealed spun reflector

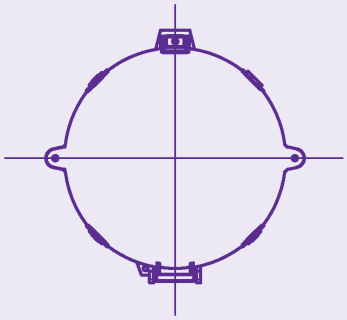


Prismatic glass refractor

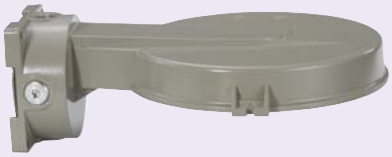
MOUNTING VARIATIONS and ACCESSORIES

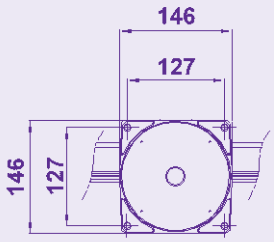
ECLIPSE II MOUNTING ACCESSORIES

CEILING and FLUSH MOUNTING

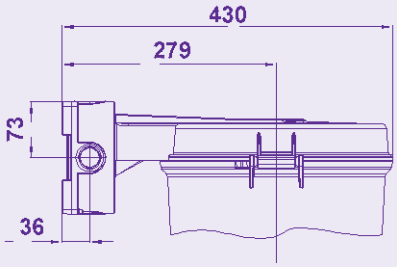


WALL MOUNTING

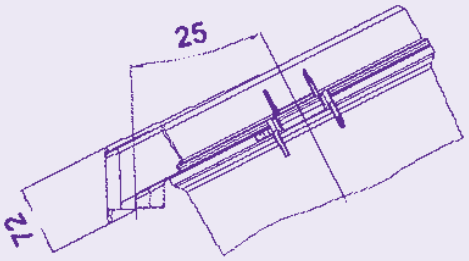




4 x MOUNTING HOLES
SUITABLE FOR M6 SCREWS

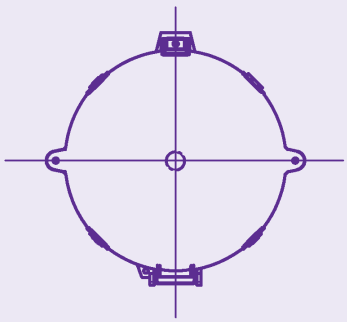


STANCHION MOUNTING



TO SUIT POLE DIAMETER 70mm (1 1/2" NPT threaded pipe (I/D 44mm max)

PENDANT MOUNTING



The Protecta is a proven and reliable T8 fluorescent luminaire. The Protecta's rugged, corrosion resistant construction (IP66/IP67) combined with an advanced high frequency ballast ensure minimum product maintenance is required.

When access is required the Protecta Industrial features an easy access clamp bar and automatic lamp de-energisation to allow quick and easy re-lamping.

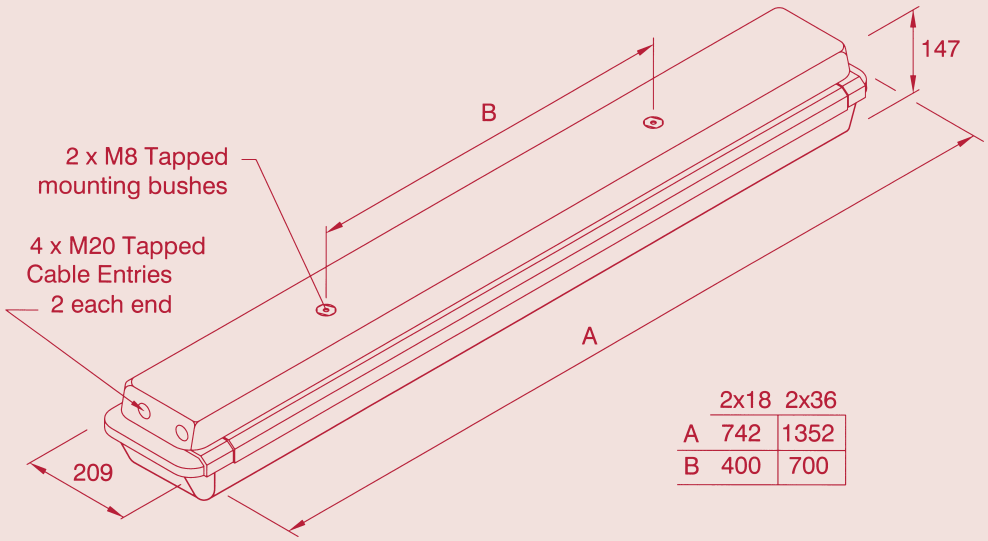
	Standard Specification
Ingress Protection	IP66/67 to EN60529
Enclosure	GRP body with clear polycarbonate diffuser and brass suspension points
Entries	4 x M20 cable entries (2 each end)
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and 16A rating through wiring. (6mm² terminations available - /SC option)
Reflector/Gear-tray	White polyester painted zinc coated steel
Mounting	Two M8 brass inserts on rear of body
Control Gear	High frequency electronic control gear
Relamping	Via quick-release diffuser clamp and hinged diffuser
Electrical Supply	110-254V 50/60Hz

Features
Simple rugged construction
Full length easy access diffuser clamp
Hinged cover
Standard fixing centres
When fitted high frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
Quick release mains terminals
DTS-01 deluge tested
Vibration tested to comply with Lloyds/DNV
A copper and iron version is also available. To order substitute /HF with /ES and specify the voltage

Std. Cat No.	Wattage	Lamp	TClass	Lampholder	Weight
PRGI/118/BI/HF	1x18W	Fluorescent	T8	G13	6.0kg
PRGI/218/BI/HF	2x18W	Fluorescent	T8	G13	6.1kg
PRGI/136/BI/HF	1x36W	Fluorescent	T8	G13	9.6kg
PRGI/236/BI/HF	2x36W	Fluorescent	T8	G13	9.8kg

Options – Suffix to Catalogue No.

/---	Specific voltage - Copper/iron ballasts: 120, 220, 230, 254V	**/3P**	3 phase termination facility (not available if looping is required)
/ES	Electronic start (copper/iron ballast only)	**/M25**	M25 cable entry
/60	60Hz supply (copper/iron ballasts only)	**/SC**	Screwed connection terminal block (up to 6mm² conductors)
/EL	Extra live termination (compatible with 4 core switched emergency models)	**/SB**	Stainless steel mounting bush
/MF	Mains fuse	**/SE**	Spigot entry



	2x18	2x36
A	742	1352
B	400	700

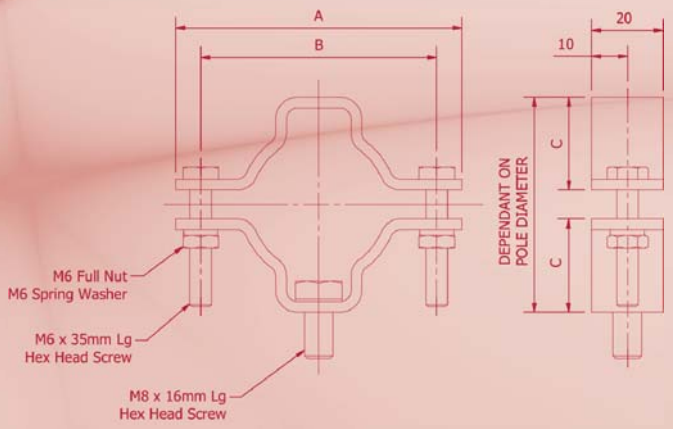
Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100001**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100002**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100003**
Hook type ceiling bracket assembly	**SPRO4-0005**
Ceiling bracket assembly	**SPRO4-0002**
Flush mounting wall bracket assembly	**SPRO4-0006**
Eyebolt mounting assembly	**SPRO5-0005**
Looping Kit (allows looping from both ends of luminaire)	**SPROT-0021**
18W wall mounting outreach bracket (use with SPOL4-100001)	**NPRO4-0008**
36W wall mounting outreach bracket (use with SPOL4-100001)	**NPRO4-0012**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

Pole Mounting Bracket Assembly — Cat No. SPOL4-100001/100002/100003

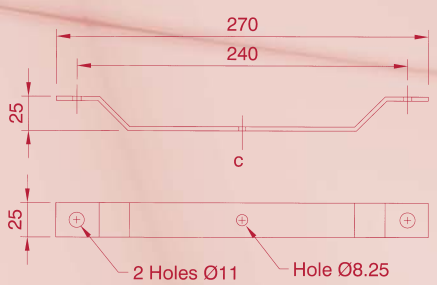
Pole mounting bracket to suit pole diameter
(38-42mm) SPOL4-100001
(48-52mm) SPOL4-100002
(58-62mm) SPOL4-100003



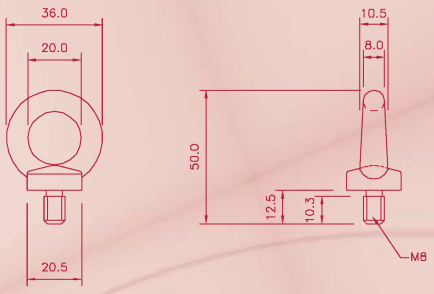
PART DETAILS				
Part Code	Part Description	A	B	C
SPOL4-100001	PROTECTA 38-42 P/M ASSY	80mm	66mm	26mm
SPOL4-100002	PROTECTA 48-52 P/M ASSY	90mm	76mm	32mm
SPOL4-100003	PROTECTA 58-62 P/M ASSY	96mm	80mm	38mm

Hook Type Ceiling Bracket Assembly — Cat No. SPR04-0005

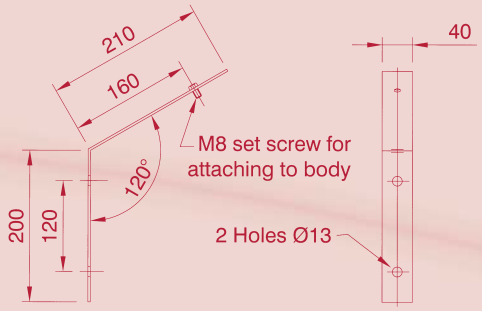
Ceiling Mounting Bracket Assembly — Cat No. SPR04-0002



Eyelet Mounting Assembly — Cat No. SPR05-0005

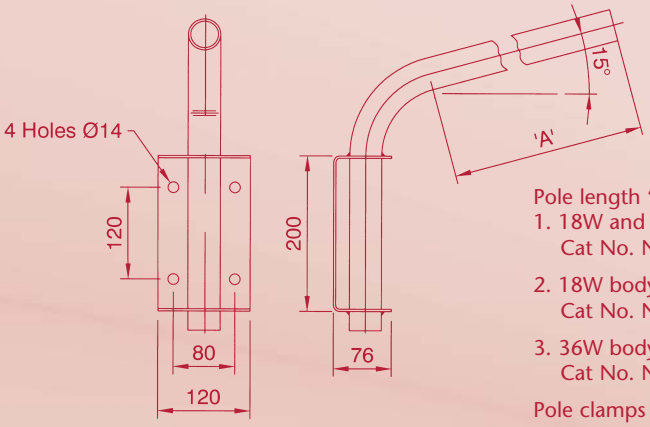


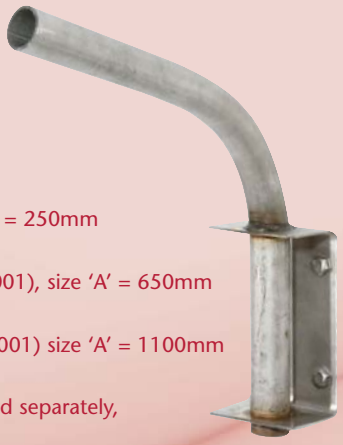
Flush Mounting Wall Bracket Assembly — Cat No. SPRO4-0006



Note: All brackets are made from 316 Stainless Steel

Wall Mounting Outreach Bracket — Cat No. NPRO4-0007/0008/0012



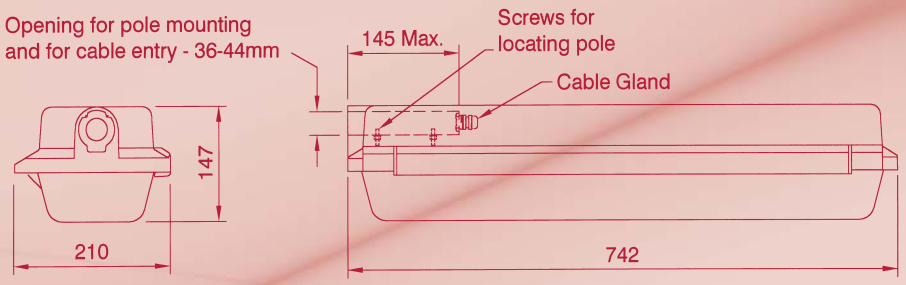


Pole length 'A' for use with the following:

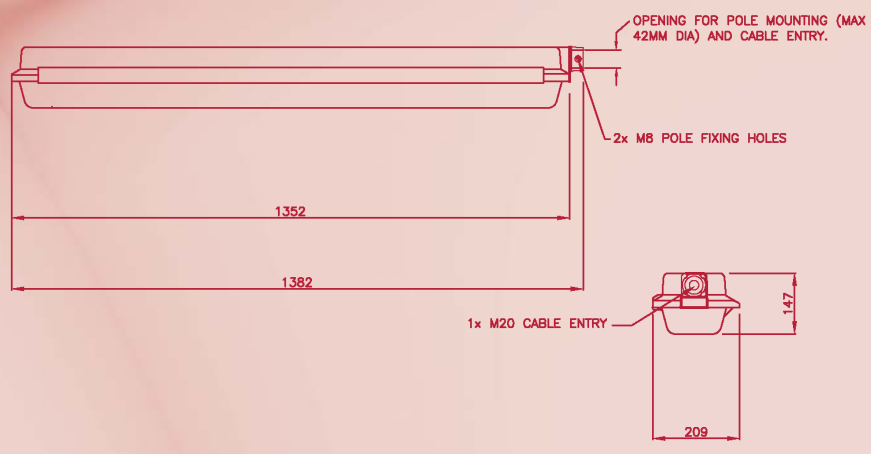
1. 18W and 36W spigot entry body, size 'A' = 250mm
   Cat No. NPRO4-0007
2. 18W body c/w pole clamps (SPOL4-100001), size 'A' = 650mm
   Cat No. NPRO4-0008
3. 36W body c/w pole clamps, (SPOL4-100001) size 'A' = 1100mm
   Cat No. NPRO4-0012

Pole clamps for items 2 & 3 must be ordered separately, see SPOL4-100001

18W Spigot Entry — Cat No. PRGE/218/BI/SE



36W Spigot Entry — Cat No. PRGE/236/BI/SE



PROTECTA E

EMERGENCY FLUORESCENT

The Protecta Industrial has the same rugged and proven design as the Ex Protecta. This includes high ingress protection with DTS-01 deluge compliance and vibration resistance in accordance with Lloyds/DNV standards.

The Emergency version also features an internal battery to allow operation in the event of mains power failure.

	Standard Specification
Ingress Protection	IP66/67 to EN60529
Enclosure	GRP body with clear polycarbonate diffuser and brass suspension points
Entries	4 x M20 cable entries (2 each end)
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and 16A rating through wiring. (6mm² terminations available - /SC option)
Reflector/Gear-tray	White polyester painted zinc coated steel
Mounting	Two M8 brass inserts on rear of body
Control Gear	High frequency ballast & invertor c/w battery pack
Relamping	Via quick-release diffuser clamp and hinged diffuser
Electrical Supply	220-240V 50/60Hz
Battery	Ni-Cd (6V)
Duration	3 Hours to EN 60598-2-22
Emergency Output	32% of one lamp (18W) 14% of one lamp (36W)

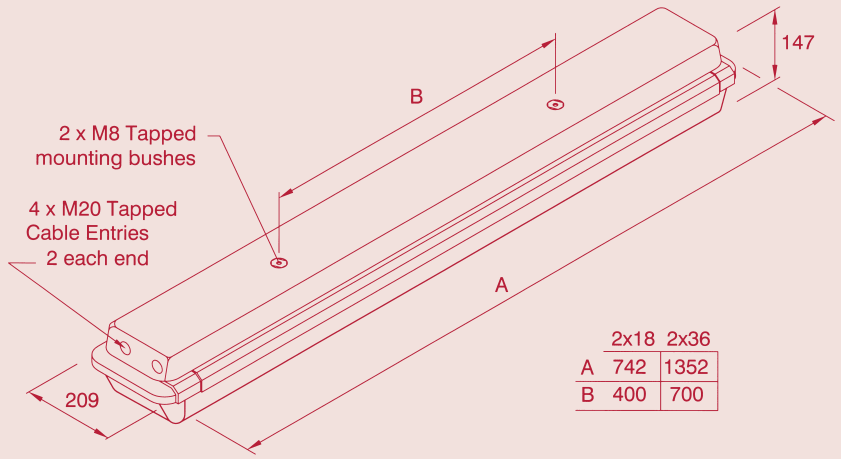
Features

- Simple rugged construction
- Full length easy access diffuser clamp
- Standard fixing centres
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- Quick release mains terminals
- DTS-01 deluge tested
- Vibration tested to comply with Lloyds/DNV
- Optional battery monitoring and self-testing control gear

Std. Cat No.	Wattage	Lamp	TClass	Lampholder	Weight
PRGI/118/BI/EM	1x18W	Fluorescent	T8	G13	8.1kg
PRGI/218/BI/EM	2x18W	Fluorescent	T8	G13	8.3kg
PRGI/136/BI/EM	1x36W	Fluorescent	T8	G13	12.2kg
PRGI/236/BI/EM	2x36W	Fluorescent	T8	G13	12.4kg

Options – Suffix to Catalogue No.

/120	110-130V	**/SC**	Screwed connection terminal block (up to 6mm² conductors)
/NM	Non-maintained (single lamp models only)	**/SB**	Stainless steel mounting bush
/MF	Mains fuse	**/LBE**	Looping both ends
/3P	3 phase termination facility (not available if through wiring is required)	**/BMT**	Battery monitoring and self-test
/M25	M25 cable entry	**/SE**	Spigot entry



	2x18	2x36
A	742	1352
B	400	700

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100001**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100002**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100003**
Hook type ceiling bracket assembly	**SPRO4-0005**
Ceiling bracket assembly	**SPRO4-0002**
Flush mounting wall bracket assembly	**SPRO4-0006**
Eyebolt mounting assembly	**SPRO5-0005**
Looping Kit (allows looping from both ends of luminaire)	**SPROT-0021**
18W wall mounting outreach bracket (use with SPOL4-100001)	**NPRO4-0008**
36W wall mounting outreach bracket (use with SPOL4-100001)	**NPRO4-0012**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

PROTECTA S/S

STAINLESS STEEL FLUORESCENT

The Protecta is also available in a stainless steel body version. This incorporates the same design and monitoring features found in the GRP body Protecta. The increased durability of its stainless steel construction makes this luminaire ideal for applications where there is a high risk of mechanical damage or exposure to chemical agents.

	Standard Specification
Ingress Protection	IP66/67 to EN60529
Enclosure	Marine grade 316S31 stainless steel body with clear polycarbonate diffuser
Entries	4 x M20 cable entries (2 each end)
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and 16A rating through wiring. (6mm² terminations available - /SC option)
Installation	Two M8 tapped stainless steel inserts located on rear of body
Reflector/Gear-tray	White polyester painted zinc coated steel
Control Gear	High frequency electronic control gear
Relamping	Via quick-release diffuser clamp and hinged diffuser
Electrical Supply	110-254V 50/60Hz Emergency version 220/254V 50/60Hz
Battery	Ni-Cd (6V)
Duration	3 Hours
Emergency Output	32% of one lamp (18W) 14% of one lamp (36W)

Features

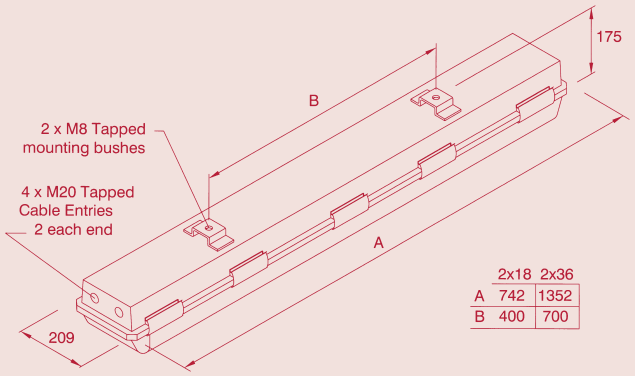
- Simple rugged construction
- Hinged cover with easily removeable cover clamps
- Standard fixing centres
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- Quick release mains terminals
- Resistance to voltage fluctuations
- Optional battery monitoring and self-testing control gear
- A non-emergency copper and iron version is also available. To order substitute /HF with /ES and specify the voltage

Std. Cat No.	Wattage	Lamp	TClass	Lampholder	Weight
PRSI/118/BI/HF	1x18W	Fluorescent	T8	G13	5.9kg
PRSI/218/BI/HF	2x18W	Fluorescent	T8	G13	6.2kg
PRSI/136/BI/HF	1x36W	Fluorescent	T8	G13	9.6kg
PRSI/236/BI/HF	2x36W	Fluorescent	T8	G13	10.0kg
PRSI/118/BI/EM	1x18W	Fluorescent	T8	G13	8.7kg
PRSI/218/BI/EM	2x18W	Fluorescent	T8	G13	9.0kg
PRSI/136/BI/EM	1x36W	Fluorescent	T8	G13	12.4kg
PRSI/236/BI/EM	2x36W	Fluorescent	T8	G13	12.8kg

Options – Suffix to Catalogue No.

/120	110-130V High frequency ballast (for /EM Emergency models only)
/ES	Electronic start (copper/iron ballast only)
/---	Specific voltage (120*, 220, 230 & 254V only available copper/iron gear)
/60	60Hz supply (copper/iron ballasts only)
/EL	Extra live termination (Compatible with four core switched emergency models)
/M25	M25 cable entries
/SC	Screwed connection terminal block (up to 6mm² conductors)
/MF	Mains fuse
/3P	3 phase termination facility
/LBE	Looping both ends
/BMT	Battery monitoring and self-test

* 120V copper/iron gear - non emergency only



	2x18	2x36
A	742	1352
B	400	700

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	**SPOL4-100001**
Pole mounting bracket assembly (48-52mm diameter poles)	**SPOL4-100002**
Pole mounting bracket assembly (58-62mm diameter poles)	**SPOL4-100003**
Hook type ceiling bracket assembly	**SPRO4-0005**
Ceiling bracket assembly	**SPRO4-0002**
Flush mounting wall bracket assembly	**SPRO4-0006**
Eyebolt mounting assembly	**SPRO5-0005**
Looping Kit (allows looping from both ends of luminaire)	**SPROT-0021**
18W wall mounting outreach bracket (use with SPOL4-100001)	**NPRO4-0008**
36W wall mounting outreach bracket (use with SPOL4-100001)	**NPRO4-0012**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II

SURFACE MOUNTED FLUORESCENT

The Sterling II is a high quality but cost effective fluorescent. Its lightweight and slimline construction make it simple to install and maintain.

The luminaire has copper and iron control gear and is available with single and twin lamp versions.

Standard Specification	
Ingress Protection	IP65 to EN60529
Enclosure	GRP body with clear polycarbonate diffuser Stainless steel retaining clips
Entries	2 x 20mm clearance holes (one either end)
Termination	4 core 4mm² max conductors
Reflector/Gear-tray	White polyester painted zinc coated steel
Mounting	8mm clearance holes, sealing washers are provided
Control Gear	Copper & Iron switch start ballast
Relamping	Access via front diffuser secured by quick release stainless steel clips
Electrical Supply	240V 50Hz
Battery	Ni-Cd (6V)
Duration	3 Hours
Emergency Output	32% of one lamp (18W) 14% of one lamp (36W) 9% of one lamp (58W)

Features

Robust polycarbonate diffuser with stainless steel clips as standard

Simple to install and maintain

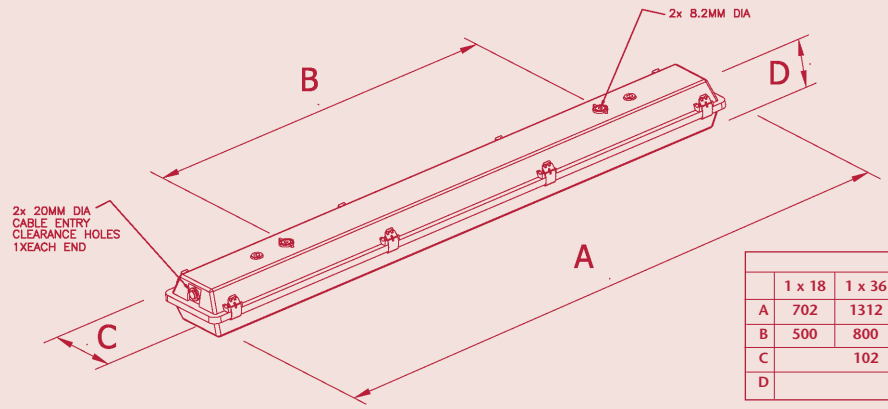
Lightweight and slim line construction

Std. Cat No.	Wattage	Voltage	Lamp Type	Lampholder	Weight
ST2I/118/BI	1x18W	240V 50Hz	T8 Fluorescent	G13	2.5kg
ST2I/218/BI	2x18W	240V 50Hz	T8 Fluorescent	G13	3.2kg
ST2I/136/BI	1x36W	240V 50Hz	T8 Fluorescent	G13	3.6kg
ST2I/236/BI	2x36W	240V 50Hz	T8 Fluorescent	G13	4.2kg
ST2I/158/BI	1x58W	240V 50Hz	T8 Fluorescent	G13	4.2kg
ST2I/258/BI	2x58W	240V 50Hz	T8 Fluorescent	G13	5.1kg
ST2I/118/BI/EM*	1x18W	240V 50Hz	T8 Fluorescent	G13	4.8kg
ST2I/218/BI/EM	2x18W	240V 50Hz	T8 Fluorescent	G13	5.2kg
ST2I/136/BI/EM*	1x36W	240V 50Hz	T8 Fluorescent	G13	5.6kg
ST2I/236/BI/EM	2x36W	240V 50Hz	T8 Fluorescent	G13	6.1kg
ST2I/158/BI/EM*	1x58W	240V 50Hz	T8 Fluorescent	G13	5.7kg
ST2I/258/BI/EM	2x58W	240V 50Hz	T8 Fluorescent	G13	7.1kg

* Emergency single lamp models are in twin lamp bodies

Options – Suffix to Catalogue No.

/NM	Non maintained emergency version (single lamp bodies only)	/T	Through wired
		/ES	Electronic starter
/MF	Mains fuse	/EA	External earth



Dimensions						
	1 x 18	1 x 36	1 x 58	2 x 18	2 x 36	2 x 58
A	702	1312	1612	702	1312	1612
B	500	800	1100	500	800	1100
C	102			172		
D	106					

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100004
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100005
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100006
Hook type ceiling bracket assembly	S3004-100003
Ceiling bracket assembly	S3004-100001
Flush mounting wall bracket assembly	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
58W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0022

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II H/F SURFACE MOUNTED FLUORESCENT

The Sterling II H/F features the same lightweight design but incorporates high frequency electronic control gear.

Standard Specification

Ingress Protection	IP65 to EN60529
Enclosure	GRP body with clear polycarbonate diffuser Stainless Steel retaining clips
Entries	2 x 20mm clearance holes (one either end)
Termination	4 core 4mm² max conductors
Reflector/Gear-tray	White polyester painted zinc coated steel
Mounting	8mm clearance holes, sealing washers are provided
Control Gear	High frequency electronic ballast
Relamping	Access via front diffuser secured by quick release stainless steel clips
Electrical Supply	Non-emergency version - 120V-254V 50/60Hz 175V-270V DC Emergency version - 220-254V 50/60Hz
Battery	Ni-Cd (6V)
Duration	3 Hours
Emergency Output	32% of one lamp (18W) 14% of one lamp (36W) 9% of one lamp (58W)

Features

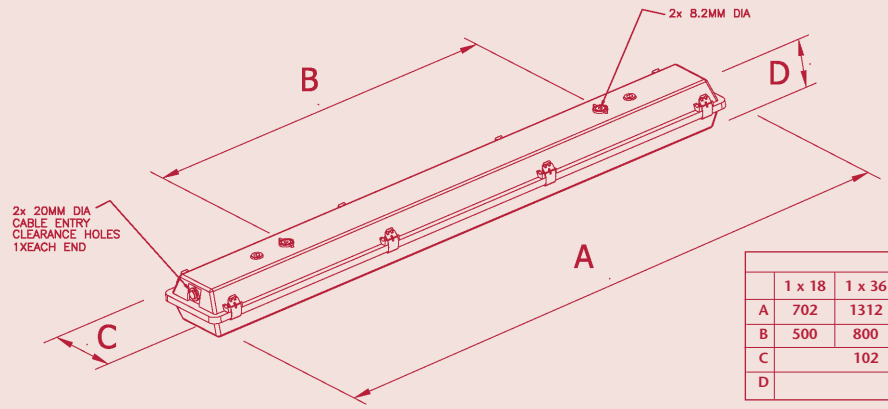
- Robust polycarbonate diffuser with stainless steel clips as standard
- High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- Simple to install and maintain
- Lightweight and slim line construction

Std. Cat No.	Wattage	Voltage	Lamp Type	Lampholder	Weight
ST2I/118/BI/HF	1x18W	120V-254V 50/60Hz	T8 Fluorescent	G13	2.3kg
ST2I/218/BI/HF	2x18W	120V-254V 50/60Hz	T8 Fluorescent	G13	2.6kg
ST2I/136/BI/HF	1x36W	120V-254V 50/60Hz	T8 Fluorescent	G13	3.3kg
ST2I/236/BI/HF	2x36W	120V-254V 50/60Hz	T8 Fluorescent	G13	3.6kg
ST2I/158/BI/HF	1x58W	120V-254V 50/60Hz	T8 Fluorescent	G13	3.7kg
ST2I/258/BI/HF	2x58W	120V-254V 50/60Hz	T8 Fluorescent	G13	4.1kg
ST2I/118/BI/EM/HF*	1x18W	220V-254V 50/60Hz	T8 Fluorescent	G13	4.3kg
ST2I/218/BI/EM/HF	2x18W	220V-254V 50/60Hz	T8 Fluorescent	G13	4.6kg
ST2I/136/BI/EM/HF*	1x36W	220V-254V 50/60Hz	T8 Fluorescent	G13	5.3kg
ST2I/236/BI/EM/HF	2x36W	220V-254V 50/60Hz	T8 Fluorescent	G13	5.6kg
ST2I/158/BI/EM/HF*	1x58W	220V-254V 50/60Hz	T8 Fluorescent	G13	5.7kg
ST2I/258/BI/EM/HF	2x58W	220V-254V 50/60Hz	T8 Fluorescent	G13	6.1kg

* Emergency single lamp models are in twin lamp bodies

Options – Suffix to Catalogue No.

/120	110-130V 50/60Hz High frequency ballast (Emergency version only)	/MF	Mains fuse
/NM	Non maintained emergency version (single lamp bodies only)	/T	Through wired
		/EA	External earth



Dimensions						
	1 x 18	1 x 36	1 x 58	2 x 18	2 x 36	2 x 58
A	702	1312	1612	702	1312	1612
B	500	800	1100	500	800	1100
C	102			172		
D	106					

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100004
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100005
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100006
Hook type ceiling bracket assembly	S3004-100003
Ceiling bracket assembly	S3004-100001
Flush mounting wall bracket assembly	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
58W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0022

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II S/S

STAINLESS STEEL FLUORESCENT

The Sterling II is also available in a stainless steel body version. This incorporates the same design and protection features found in the GRP body Sterling II. The increased durability of its stainless steel construction makes this luminaire ideal for applications where there is a high risk of mechanical damage or exposure to chemical agents.

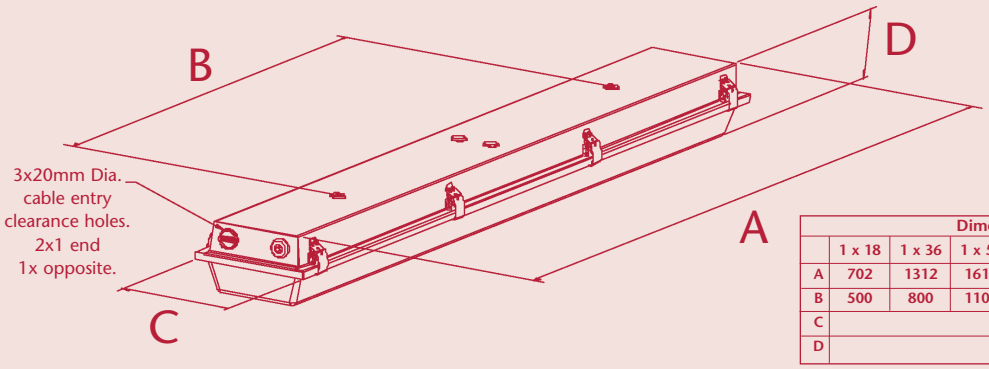
Standard Specification	
Ingress Protection	IP65 to EN60529
Enclosure	Marine grade 316S31 stainless steel body, clear polycarbonate diffuser & quick release stainless steel clips
Reflector/Geartray	White epoxy polyester coated steel
Entries	3 x 20mm entries (2 at one end, 1 at other end)
Termination	Looping & through wiring for 3 core 4mm² conductors (4 core on Emergency models)
Installation	Access via two 8mm holes on rear of body
Control Gear	Copper & iron switchstart ballast
Relamping	Via quick release stainless steel clips
Electrical Supply	240V 50Hz (Always state V/Hz when ordering)
Battery	Ni-Cd (6V)
Duration	3 Hours
Emergency Output	32% of one lamp (18W) 14% of one lamp (36W) 9% of one lamp (58W)

Features
Marine grade stainless steel body and polycarbonate diffuser
3 clips per side on 18W, 4 on 36W and 5 on 58W
Mains connection terminals fixed to body
Gear tray suspended and fitted with control gear for ease of maintenance

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
SS2I/118/BI	1x18W	T8 Fluorescent	G13	4.2kg
SS2I/218/BI	2x18W	T8 Fluorescent	G13	3.6kg
SS2I/136/BI	1x36W	T8 Fluorescent	G13	4.2kg
SS2I/236/BI	2x36W	T8 Fluorescent	G13	4.8kg
SS2I/158/BI	1x58W	T8 Fluorescent	G13	6.1kg
SS2I/258/BI	2x58W	T8 Fluorescent	G13	6.5kg
SS2I/118/BI/EM	1x18W	T8 Fluorescent	G13	7.0kg
SS2I/218/BI/EM	2x18W	T8 Fluorescent	G13	6.4kg
SS2I/136/BI/EM	1x36W	T8 Fluorescent	G13	7.0kg
SS2I/236/BI/EM	2x36W	T8 Fluorescent	G13	7.6kg
SS2I/158/BI/EM	1x58W	T8 Fluorescent	G13	8.9kg
SS2I/258/BI/EM	2x58W	T8 Fluorescent	G13	9.3kg

Options – Suffix to Catalogue No.

/ES	Electronic start (copper & iron ballast only)	/60	60Hz supply (copper/iron ballasts only)
/___	Specific voltage: 120V Emergency only (if 120V non-emergency is required, a High Frequency (HF) version is available)	/M25	M25 cable entries
		/CM	Body c/w ceiling mounting brackets



Dimensions						
	1 x 18	1 x 36	1 x 58	2 x 18	2 x 36	2 x 58
A	702	1312	1612	702	1312	1612
B	500	800	1100	500	800	1100
C	172					
D	106					

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100004
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100005
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100006
Hook type ceiling bracket assembly	S3004-100003
Ceiling bracket assembly	S3004-100001
Flush mounting wall bracket assembly	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
58W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0022

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

STERLING II S/S H/F

STAINLESS FLUORESCENT

The Sterling II H/F is also available in a stainless steel body version. This incorporates the same design and protection features found in the GRP body Sterling II. The increased durability of its stainless steel construction makes this luminaire ideal for applications where there is a high risk of mechanical damage or exposure to chemical agents.

	Standard Specification
Ingress Protection	IP65 to EN60529
Enclosure	Marine grade 316S31 stainless steel body, clear polycarbonate diffuser & quick release stainless steel clips
Reflector/Geartray	White epoxy polyester coated steel
Entries	3 x 20mm entries (2 at one end, 1 at other end)
Termination	Looping & through wiring for 3 core 4mm² conductors (4 core on Emergency models)
Installation	Access via two 8mm holes on rear of body
Control Gear	High frequency electronic control gear
Relamping	Via quick release stainless steel clips
Electrical Supply	240V 50Hz (Always state V/Hz when ordering)
Battery	Ni-Cd (6V)
Duration	3 Hours
Emergency Output	32% of one lamp (18W) 14% of one lamp (36W) 9% of one lamp (58W)

Features

Marine grade stainless steel body and polycarbonate diffuser

High frequency control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output

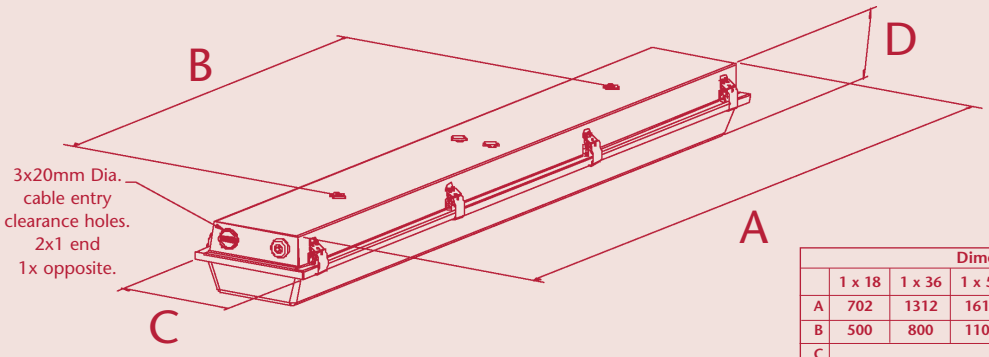
Mains connection terminals fixed to body

Gear tray suspended and fitted with control gear for ease of maintenance

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
SS2I/118/BI/HF	1x18W	T8 Fluorescent	G13	4.2kg
SS2I/218/BI/HF	2x18W	T8 Fluorescent	G13	3.6kg
SS2I/136/BI/HF	1x36W	T8 Fluorescent	G13	4.2kg
SS2I/236/BI/HF	2x36W	T8 Fluorescent	G13	4.8kg
SS2I/158/BI/HF	1x58W	T8 Fluorescent	G13	6.1kg
SS2I/258/BI/HF	2x58W	T8 Fluorescent	G13	6.5kg
SS2I/118/BI/EM/HF	1x18W	T8 Fluorescent	G13	7.0kg
SS2I/218/BI/EM/HF	2x18W	T8 Fluorescent	G13	6.4kg
SS2I/136/BI/EM/HF	1x36W	T8 Fluorescent	G13	7.0kg
SS2I/236/BI/EM/HF	2x36W	T8 Fluorescent	G13	7.6kg
SS2I/158/BI/EM/HF	1x58W	T8 Fluorescent	G13	8.9kg
SS2I/258/BI/EM/HF	2x58W	T8 Fluorescent	G13	9.3kg

Options – Suffix to Catalogue No.

/120	110-130V Emergency only (if 120V non-emergency is required, a High Frequency (HF) version is available)	/M25	M25 cable entries
		/CM	Body c/w ceiling mounting brackets



Dimensions						
	1 x 18	1 x 36	1 x 58	2 x 18	2 x 36	2 x 58
A	702	1312	1612	702	1312	1612
B	500	800	1100	500	800	1100
C	172					
D	106					

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100004
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100005
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100006
Hook type ceiling bracket assembly	S3004-100003
Ceiling bracket assembly	S3004-100001
Flush mounting wall bracket assembly	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
58W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0022

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The Acclaim is a recessed fluorescent specifically designed for use in solid or plank ceiling types. The luminaire is SOLAS B15 approved and suitable for use in offshore accommodation modules for both task and emergency lighting.

To allow safe and easy maintenance Acclaim features automatic lamp de-energisation upon opening. An emergency version with internal battery is also available.

Standard Specification

Ingress Protection	IP54 to EN60529
Enclosure	White polyester painted zintec body and frame. Clear polycarbonate diffuser
Entries	4 x 20mm clearance holes (supplied plug)
Internal Wiring	Stranded, heat resistant wiring up to 105˚C
Termination	Quick release mains terminals - 3 core 4mm² max. conductor with looping and through wiring facility (4 core on emergency). (6mm² terminations available - /SC option)
Mounting	Swing out side arms (also suitable for drop rod mounting through 9mm holes)
Control Gear	High Frequency
Relamping	Via front cover, secured by pan head screws
Electrical Supply	110-254V 50/60Hz, 220-254V 50/60Hz (emergency model) Always state V/Hz when ordering
Battery duration	3 Hours (emergency models)

Features

- Suitable for various ceiling types
- Quick release mains terminals
- Resistant to voltage fluctuations
- Local switching arrangement as standard
- Electronic control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- dc operation (non emergency)
- 3 hour emergency duration
- B15 SOLAS fire rating - appropriate insulation is required over the luminaire
- Optional battery monitoring and self-testing control gear

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
ACLI/218/BI	2x18W	T8 Fluorescent	G13	6.0kg
ACLI/236/BI	2x36W	T8 Fluorescent	G13	11.0kg
ACLI/218/BI/EM	2x18W	T8 Fluorescent	G13	8.5kg
ACLI/236/BI/EM	2x36W	T8 Fluorescent	G13	13.5kg

Options – Suffix to Catalogue No.

/120 Specific voltage (110/130 - Emergency version only)

/PC Solid plank ceiling

/3P 3 phase termination facility (not available if through wiring required)

/EL Extra live termination facility (compatible with 4 core switched emergency circuits)

/25 25mm cable entries

/SC Screwed connection terminal block (up to 6mm² conductors)

/DIM Analogue dimming

/LG Low glare louvre

/PD Prismatic diffuser

/MF Mains fuse

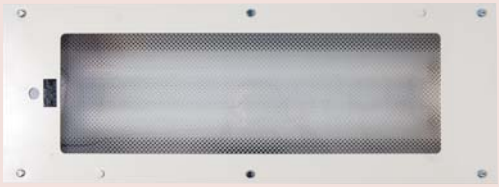
/BMT Battery monitoring and self-test

Please refer overleaf for ceiling types

Single screw height adjustment

Adjust to ensure ceiling integrity

Standard Clear Diffuser



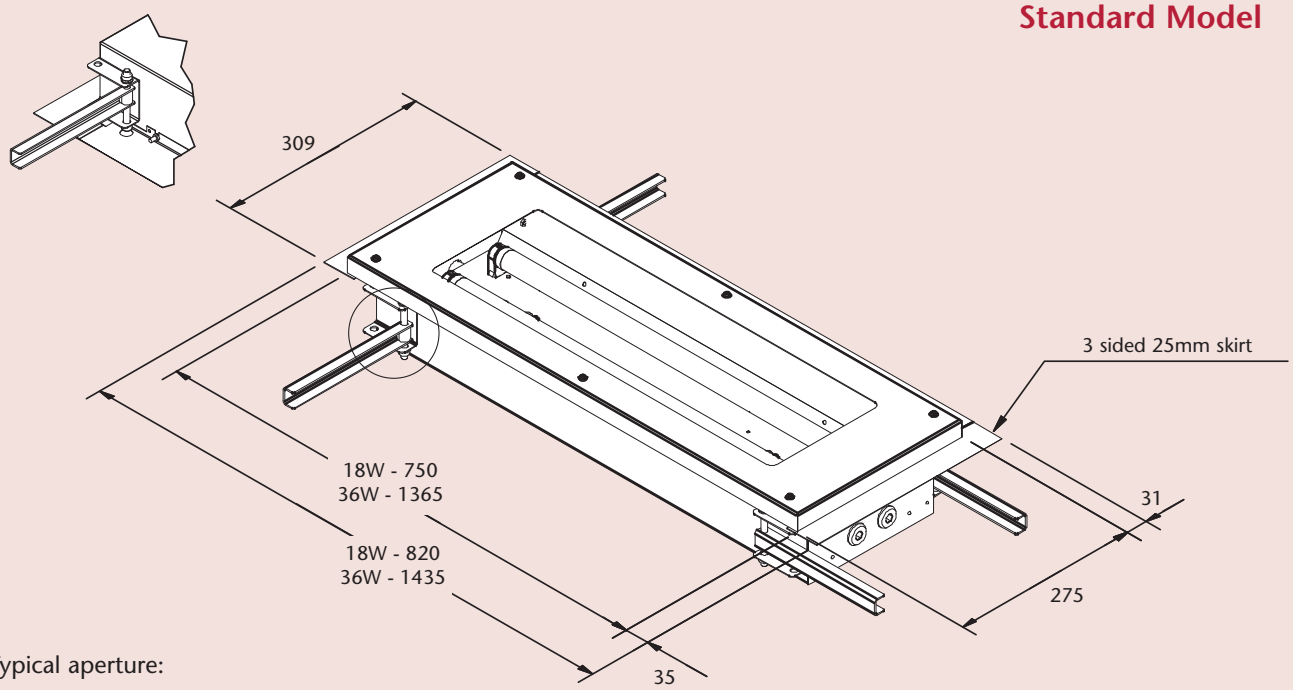
Prismatic Diffuser (/PD)

Low Glare Louvre (/LG)

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

M300 Plank Ceiling Types

Standard Model



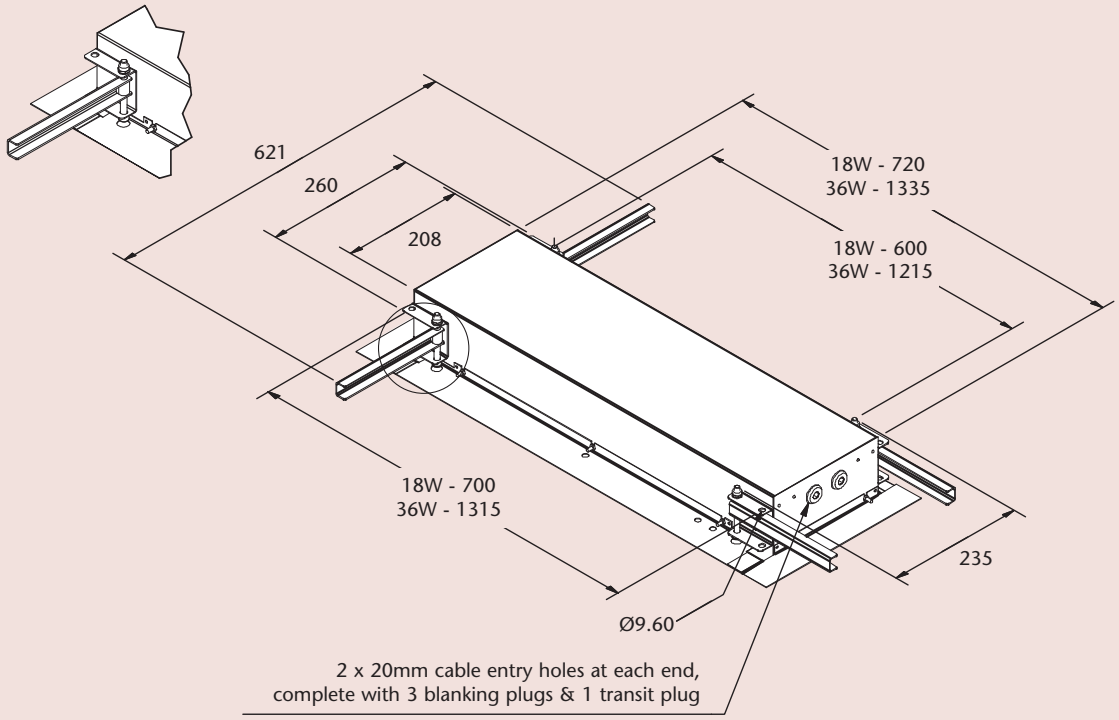
Typical aperture:

Tile length x 800mm (18W)

Tile length x 1315mm (36W)

Front cover depth 25mm

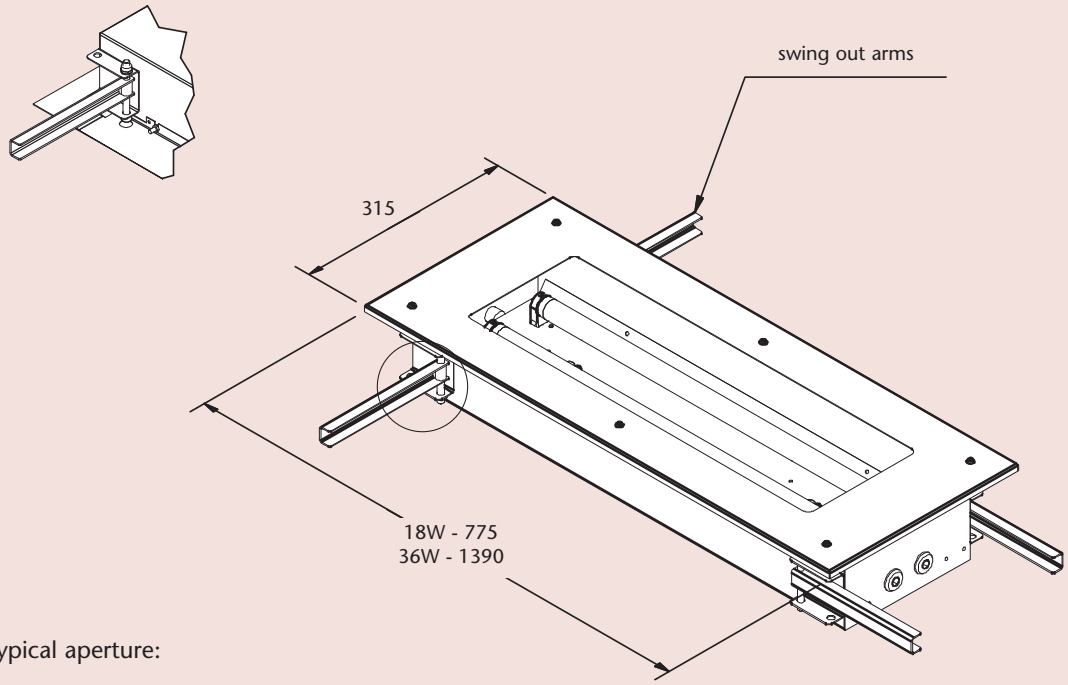
Front view of recessed luminaire



Front cover depth 25mm

Rear view of recessed luminaire

/PC Model



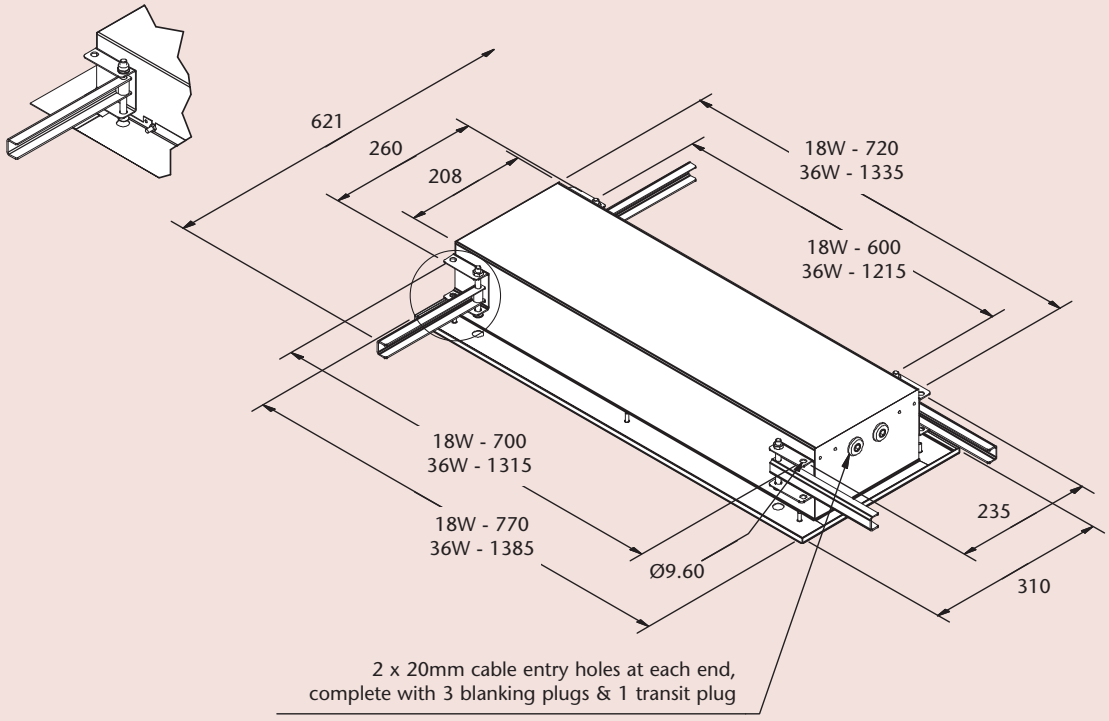
Typical aperture:

300mm x 740/750mm (18W)

300mm x 1355/1356mm (36W)

Front cover depth 10mm

Front view of recessed luminaire



Front cover depth 10mm

Rear view of recessed luminaire

The Curie is a recessed fluorescent specifically designed for use in solid or modular ceiling types.

The luminaire is SOLAS B15 approved and suitable for use in offshore accommodation modules for both task and emergency lighting.

	Standard Specification
Ingress Protection	IP44 to EN60598-1 (Front cover only)
Enclosure	White polyester painted zintec body and frame Prismatic polycarbonate diffuser
Entries	2 x 20mm clearance holes (supplied plug)
Internal Wiring	Stranded, heat resistant wiring up to 105˚C
Termination	4 core 4mm² max conductors
Mounting	Side brackets with adjustable arms (solid ceilings) Rotating cams (Exposed 'T' and Spring 'T' ceilings). There is also a provision for drop rod mounting
Control Gear	High Frequency
Relamping	Via front cover, secured by pan head screws
Electrical Supply	220-240V 50/60Hz AC/DC
Battery duration	3 Hours (emergency models)

Features

- Suitable for solid and modular ceiling types
- B15 SOLAS fire rating - appropriate insulation is required over the luminaire
- Option of battery management monitoring & automatic self test
- Simple and easy access via front cover for lamp replacement and maintenance
- Electronic control gear gives 50/60Hz operation, high power factor correction and regulation of lamp output
- dc operation (non emergency)
- Local switching arrangement as standard
- Optional battery monitoring and self-testing control gear

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
CURI/218/BI*	2x18W	T8 fluorescent	G13	8.0kg
CURI/418/BI	4x18W	T8 fluorescent	G13	8.0kg
CURI/236/BI*	2x36W	T8 fluorescent	G13	14.6kg
CURI/436/BI	4x36W	T8 fluorescent	G13	15.0kg
CURI/218/BI/EM*	2x18W	T8 fluorescent	G13	8.6kg
CURI/418/BI/EM	4x18W	T8 fluorescent	G13	8.6kg
CURI/236/BI/EM*	2x36W	T8 fluorescent	G13	16.6kg
CURI/436/BI/EM	4x36W	T8 fluorescent	G13	18.0kg

*Only available in 600mm x 600mm (2 x 18W) and 600mm x 1200mm (2 x 36W body)

Note: All above standard versions are for non modular ceilings. Modular ceiling types require the /MES suffix. Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/MES	Modular – (Spring 'T' or Exposed 'T' ceiling types)	/25	25mm cable entries
/120	Specific voltage (110/120V)	/LG	Low glare louvre
/254	Specific voltage (254V)	/BMT	Battery monitoring & self test
/SC	Screwed connection terminal block (up to 6mm² conductors)	/2L	2 lamp emergency mode

Please refer overleaf for ceiling types and dimensions

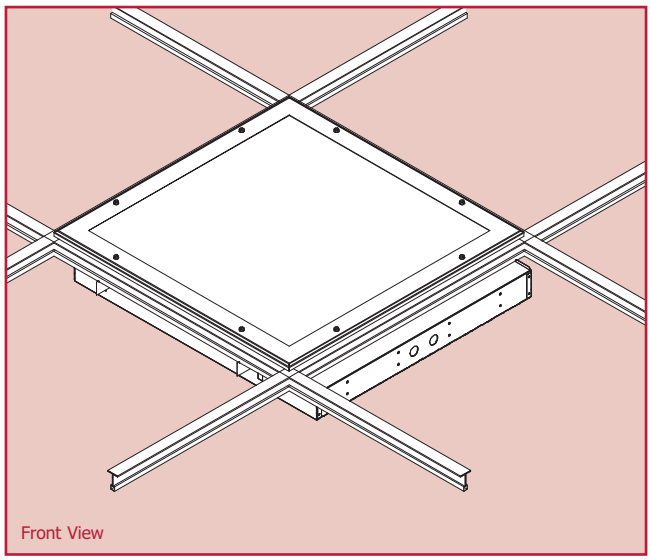
/LG - Low glare louvre

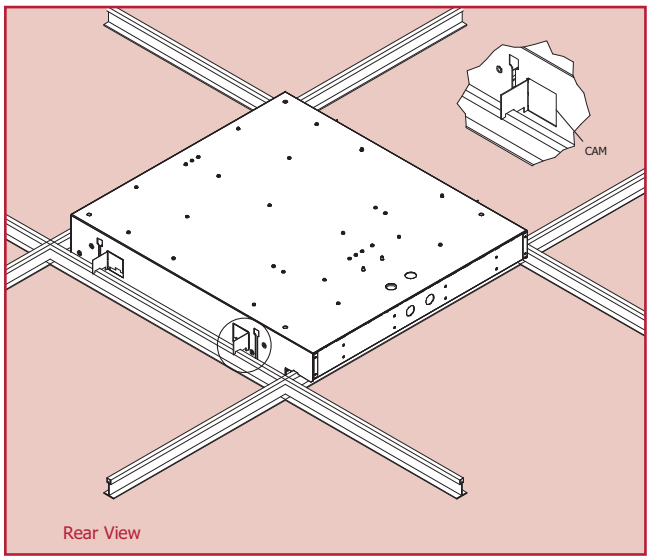
Accessories Should be ordered separately — Catalogue Order Code

Adjustable arm mounting kit	**SMOKI-00002**

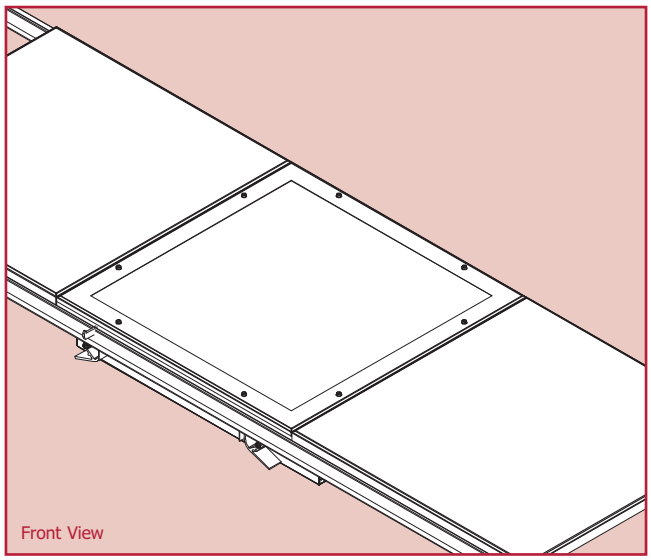
Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

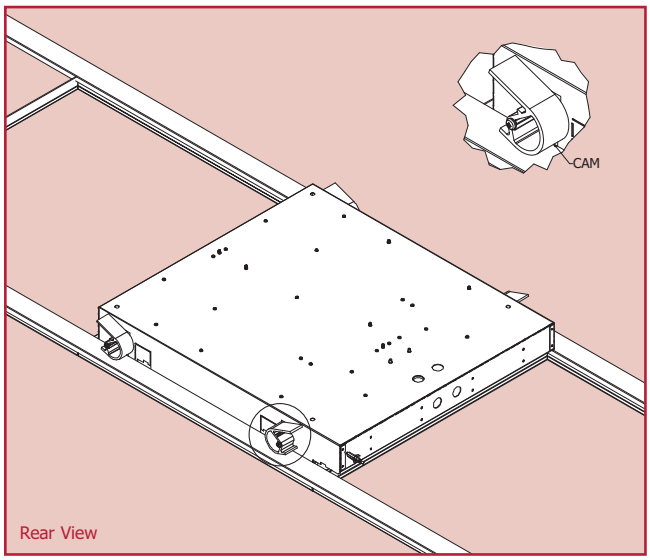
CEILING TYPE OPTIONS



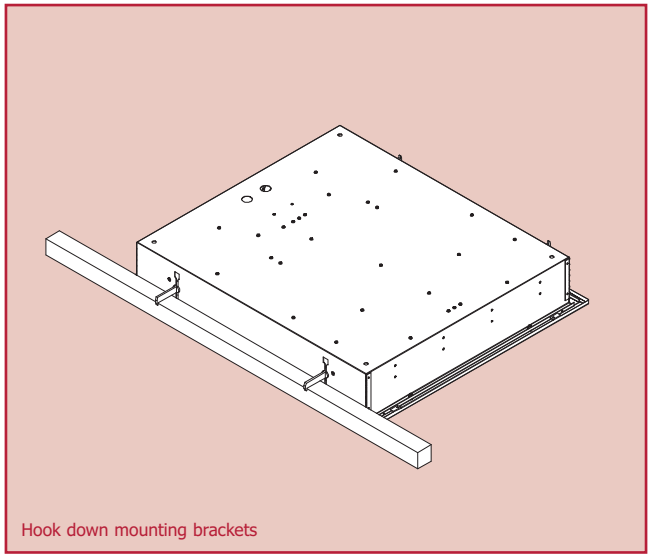


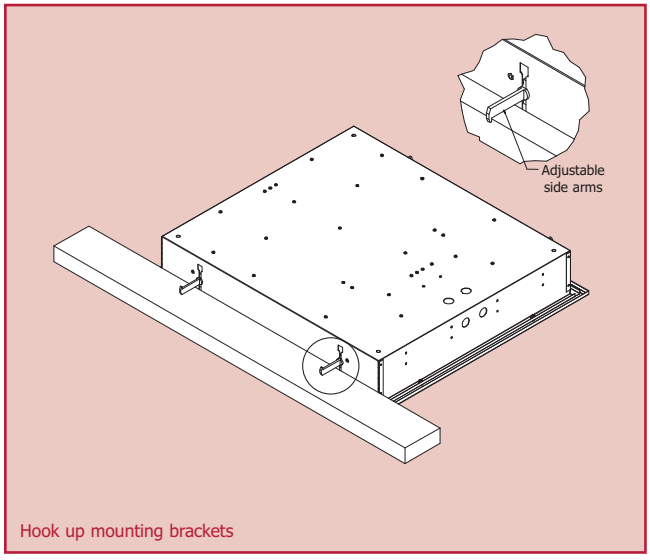
View of Exposed "T" Ceiling with integrated luminaire, typical 600mm x 600mm tile grid mounting system (/MES).



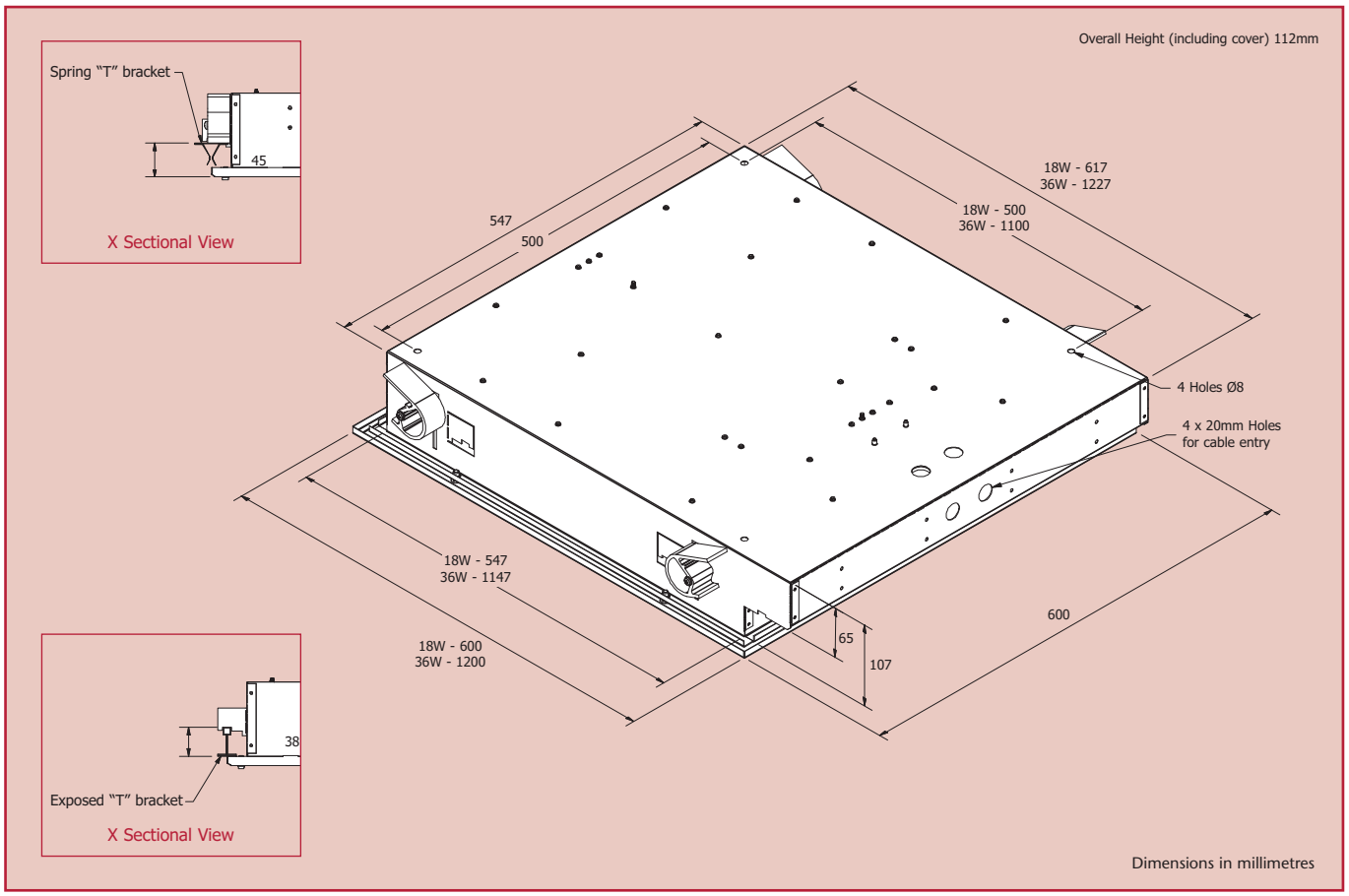


View of Spring "T" Ceiling with integrated luminaire, typical 600mm x 600mm tile grid mounting system (/MES).

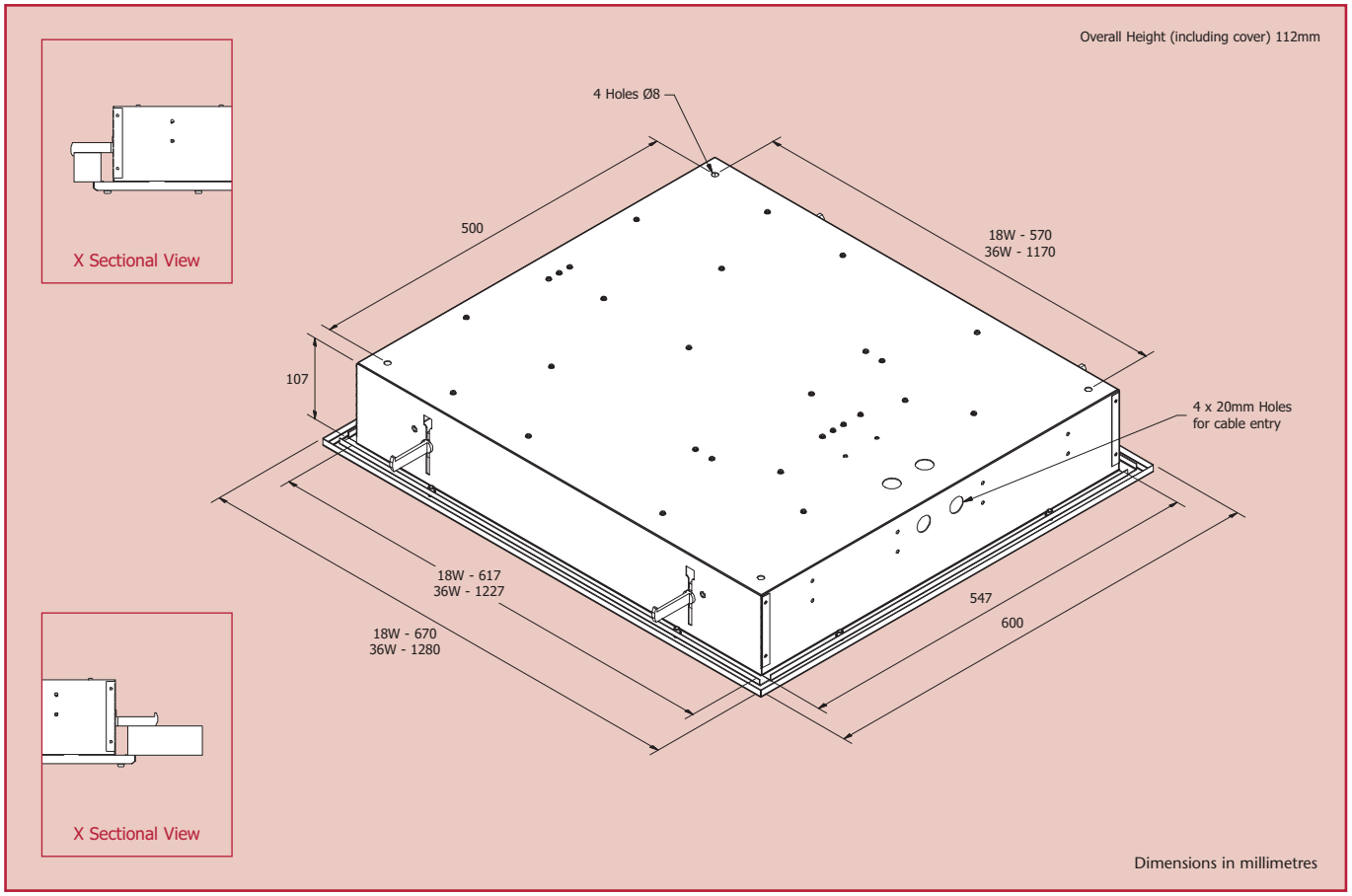




View of Solid Ceiling with integrated luminaire.



Exposed "T" and Spring "T" Ceiling types (/MES) dimensions.



Solid Ceiling dimensions.

NexLED with Exit Sign kit

NexLED with green LED's

The NexLED bulkhead utilises the latest LED technology to provide instant illumination. The NexLED requires no re-lamping making it virtually maintenance free and unaffected by low temperatures. This combination makes the NexLED ideal for extreme environmental applications.

Coloured LED options are also available.

Standard Specification

Enclosure	Cast aluminium with toughened glass and silicone gasket
Reflector	Brushed aluminium
Entry	3 x M20 cable entries
Termination	4 core 4mm² max conductor with looping
Installation	Surface mounted, 4 mounting holes located outside of seal
Lamp Type	2 x 1W light emitting diodes or 8 x 1W light emitting diodes. Colour: white
Control Gear	Electronic
Burning Position	Universal
Ingress Protection	IP66/67 to EN 60529
Emergency Duration	3 hours (emergency models)
Electrical Supply	220-240V ac/dc

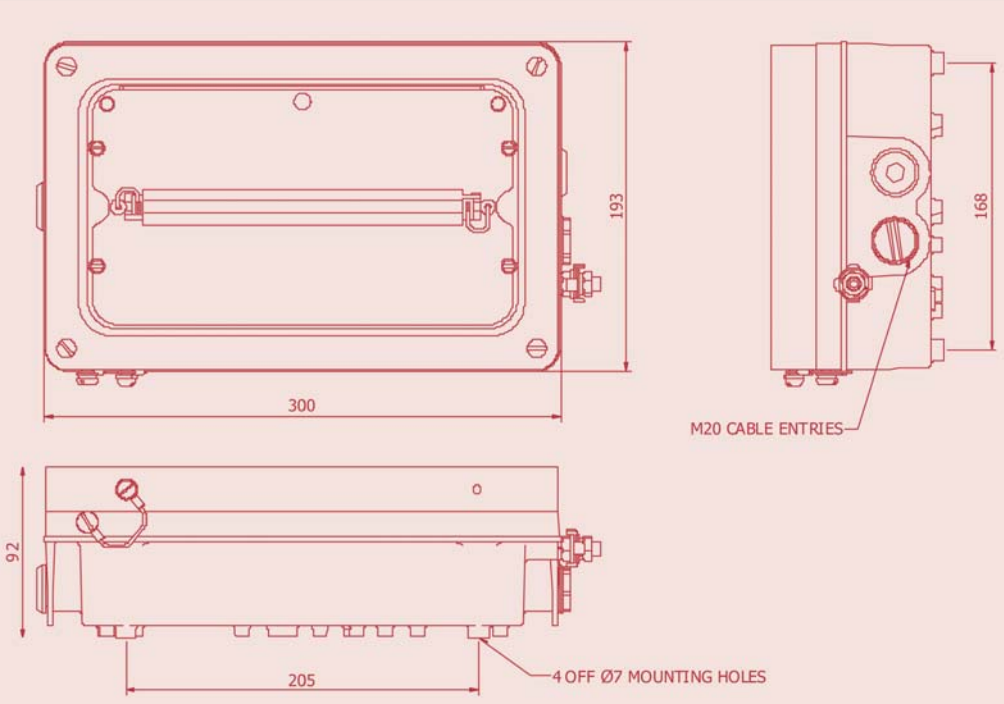
Features

- Highly visible, instant light
- Easy to install and maintain
- Ultra long life, no relamping required
- Very low power consumption
- 100% output in emergency mode (Up to 3 hours)
- Rechargable Ni-mH batteries with charging indication
- Compatible with UPS systems

Std. Cat No.	Wattage	Lamp Type	Ambient °C	Weight
NELI/201/LE	2W	Light Emitting Diode	-20 to 45	3.5kg
NELI/801/LE	8W	Light Emitting Diode	-20 to 45	3.5kg
NELI/201/LE/EM	2W	Light Emitting Diode	-20 to 45	3.5kg
NELI/801/LE/EM	8W	Light Emitting Diode	-20 to 45	3.5kg

Options – Suffix to Catalogue No.

/RDE	Red LED's	/ADE	Amber LED's
/GDE	Green LED's	/LT	Low temperature -45°C to +45°C
/BDE	Blue LED's		



Accessories Should be ordered separately — Catalogue Order Code

Green exit sign kit (4 labels - up, down, left and right)	**SNEL1-0008**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The Nexxus is a corrosion resistant bulkhead with a prismatic glass lens. It is available with a range of lamp types and is suitable for low temperature operation. For ease of installation and maintenance the fixing points are located outside the restricted breathing enclosure.

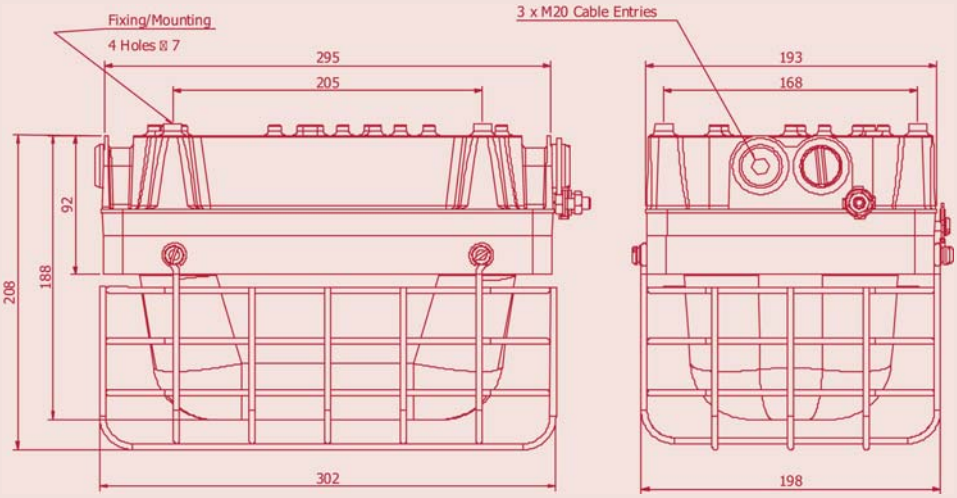
	Standard Specification
Ingress Protection	IP66/67 to EN60529
Enclosure	Epoxy painted aluminium alloy LM6 body with prismatic glass lens, silicone rubber gasket and stainless steel fixings
Entries	3 x M20 cable entries
Termination	3 core 6mm² max conductors with looping or through wiring
Reflector	High purity anodised aluminium
Mounting	4 x 7mm clearance holes in body fixing channel
Relamping	Access via glass cover secured by 4 stainless steel screws
Control Gear	Internal copper/iron ballast with ignitor and PFC capacitors (HID lamp models)
Electrical Supply	220-240V 50Hz (50W HPS lamp model) 220-254V 50Hz (70W & 80W models) 240V 50Hz (CFL models) 250V Max ac/dc (50Hz GLS lamp model)

Features
Improved light output
Easy control gear replacement
Fixing points outside restricted breathing enclosure
High corrosion resistance
Suitable for ceiling or wall mounting
Through wire or looping as standard
Prismatic lens
Suitable for low temperature applications

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
NEXI/050/HS	50W	HPS	E27	7.2kg
NEXI/070/MS	70W	HPS/Metal Halide	E27	7.7kg
NEXI/080/MV	80W	Mercury Vapour	E27	7.2kg
NEXI/113/CF	1x13W	CFL	G24	6.2kg
NEXI/118/CF	1x18W	CFL	G24	6.2kg
NEXI/126/CF	1x26W	CFL	G24	6.2kg
NEXI/213/CF	2x13W	CFL	G24	6.7kg
NEXI/218/CF	2x18W	CFL	G24	6.7kg
NEXI/226/CF	2x26W	CFL	G24	6.7kg
NEXI/200/GL	200W	GLS	E27	5.7kg

Options – Suffix to Catalogue No.

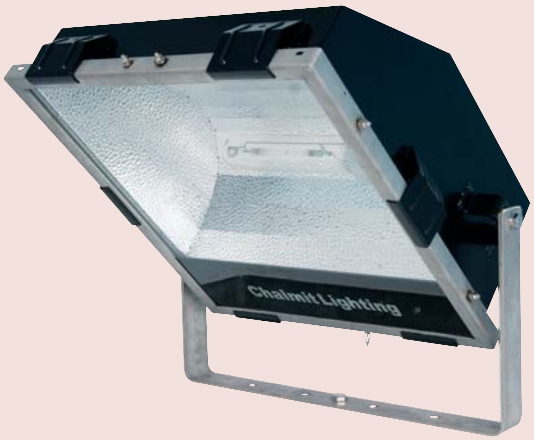
/60	60Hz (50W, 70W and 80W only)	**/MF**	Mains fuse
/TI	Timed cut out ignitor		



Accessories Should be ordered separately — Catalogue Order Code

Wire Guard Assembly	**SNEX1-0001**

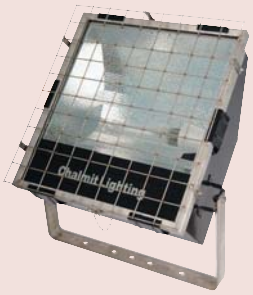
Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.



Recommended maximum aiming angle 20˚
from horizontal plane

The 800 series is a range of stainless steel asymmetrical floodlights. These floods are designed for optimum light output and efficiency to ensure the minimum number of luminaires is required.

The 854 with anti-glare shield



The 854 with wire guard

Standard Specification

Ingress Protection	IP66/67 to EN60529
Enclosure	Marine grade 316S31 stainless steel body with toughened glass window, silicone rubber gasket
Entries	2 x M20 cable entries
Termination	3 core 4mm² max conductors
Reflector	Wide beam high purity anodised aluminium
Mounting	Adjustable stirrup bracket
Windage	0.052m² (844), 0.090m² (854), 0.107m² (864)
Control Gear	Internal (with remote option using control gear box)
Relamping	Via front cover (c/w safety chains) and quick release clips
Electrical Supply	220, 230, 240, 254V 50Hz for SON-T & MBI-T lamp models. 250V Max ac/dc for tungsten halogen lamps

Features

- Marine grade stainless steel body and toughened glass cover
- Quick release fasteners for ease of relamping and maintenance
- Suspended cover front
- photometrically superior asymmetric reflector
- Suitable for low temperature applications
- Standard control gear for use with IEC lamps

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
844I/070/MS	70W	HPS/Metal Halide	E27	12.0kg
854I/100/HS	100W	HPS	E40	18.0kg
854I/150/MS	150W	HPS/Metal Halide	E40	18.0kg
854I/250/MS	250W	HPS/Metal Halide	E40	19.0kg
854I/400/MS*	400W	HPS/Metal Halide	E40	17.0kg
864I/400/MS	400W	HPS/Metal Halide	E40	21.0kg
854I/500/TH	500W	Single ended T/Halogen	E40	16.5kg
864I/600/HS*	600W	HPS	E40	21.0kg
100/120V Cat Nos. The following models are for 120V, 50Hz as standard:				
864I/150/HS/120**	150W	HPS	E40	18.0kg
864I/250/HS/120**	250w	HPS	E40	19.0kg
864I/400/HS/120***	400W	HPS	E40	17.0kg

* Ignitor only fitted within floodlight.
Remote gear box required (see Universal Box)
** c/w IEC control gear 110/120V supply.
*** Supplied with remote transformer box for 110/120V supply.
gear fitted for IEC lamps).

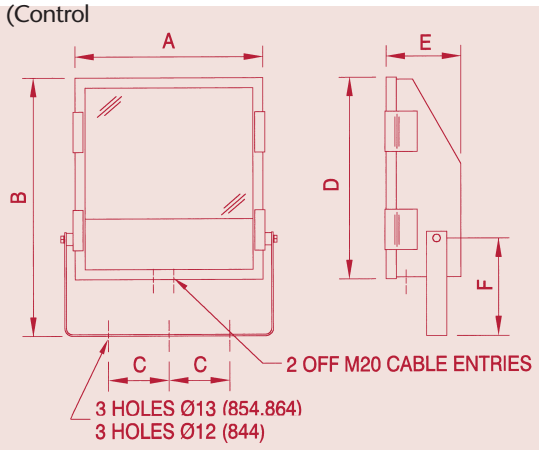
All control gear fitted for use with European lamps (IEC).

Note: Please specify voltage at time of enquiry/order

(Control

Options – Suffix to Catalogue No.

/60	60Hz
/M25	2 x M25 cable entries
/N	Narrow beam reflector
/TI	Timed cut-out ignitor
/WA	Suitable for wire guard or anti-glare shield
/NEC	NEC control gear (for US lamps only) (120, 208, 240 and 277V)



	A	B	C	D	E	F
844	308	443	75	348	150	175
854	415	630	150	490	185	260
864	456	640	150	490	219	260

Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly - 844 (50-100mm diameter poles)	S8444-0002
Pole mounting bracket assembly - 854/864 (48-70mm diameter poles)	S2400-0002
Spigot top mounting bracket assembly - 854/864 (70-82mm diameter poles)	S2400-0007
Wire guard - 844 (requires "WA" suffix when ordering)	S8444-0005
Wire guard - 854 (requires "WA" suffix when ordering)	S8544-0004
Wire guard - 864 (requires "WA" suffix when ordering)	S8644-0004
Anti-glare shield - 844 (requires "WA" suffix when ordering)	S8444-0001
Anti-glare shield - 854 (requires "WA" suffix when ordering)	S8544-0002
Anti-glare shield - 864 (requires "WA" suffix when ordering)	S8644-0002

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

MICRONEX and MAXINEX

FLOODLIGHTS

Recommended maximum aiming angle 20° from horizontal plane

The Maxinex is a lightweight asymmetric floodlight. Its compact design ensures low wind resistance so is ideal for high mast applications. The reflector design allows light to be thrown forward long distances whilst still lighting below the pole.

The Micronex is a compact version ideal for directional control lighting at low mounting heights such as perimeter lighting and loading areas.

Standard Specification	
Ingress Protection	IP66/67 to BS EN60529
Enclosure	Aluminium body, glass lens, stainless steel fasteners
Reflector	Wide beam high purity anodised aluminium
Cable Entry	Maxinex (150W - 400W) - 2 x M20 cable entries (looping) Micronex (70W) - 1 x M20 cable entry
Termination	3 core 6mm² conductors
Installation	Via stirrup bracket, fitted as standard
Windage	0.029m² (Micronex), 0.090m² (Maxinex)
Relamping	Via hinged front cover
Control Gear	Internal
P F Correction	0.85 minimum
Electrical Supply	220-254V 50Hz

Features
Lightweight
High corrosion resistance
All stainless steel fasteners
Hinged front cover for easy access
High efficiency asymmetric reflector design
Low windage of 0.08m² (Micronex) and 0.25m² (Maxinex)
Choice of metal halide or high pressure sodium (HPS) lamps
Suitable for low temperature applications

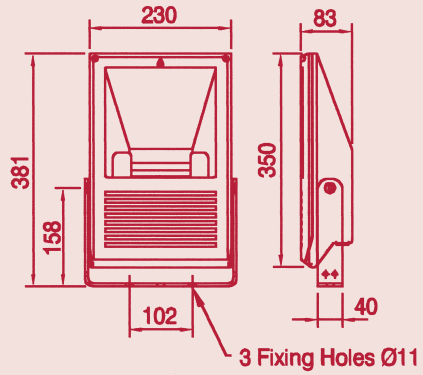
Std. Cat No.	Wattage	Lamp	Lampholder	Ambient °C	Weight
MICI/070/MS	70W	Double Ended HPS/Metal Halide	Rx7's	40	5.1kg
MAXI/150/MS	150W	HPS/Metal Halide	E40	55	14.5kg
MAXI/250/MS	250W	HPS/Metal Halide	E40	55	15.5kg
MAXI/400/MS	400W	HPS/Metal Halide	E40	45 (HPS) 30(MH)	17.0kg

Note: Please specify voltage at time of enquiry/order

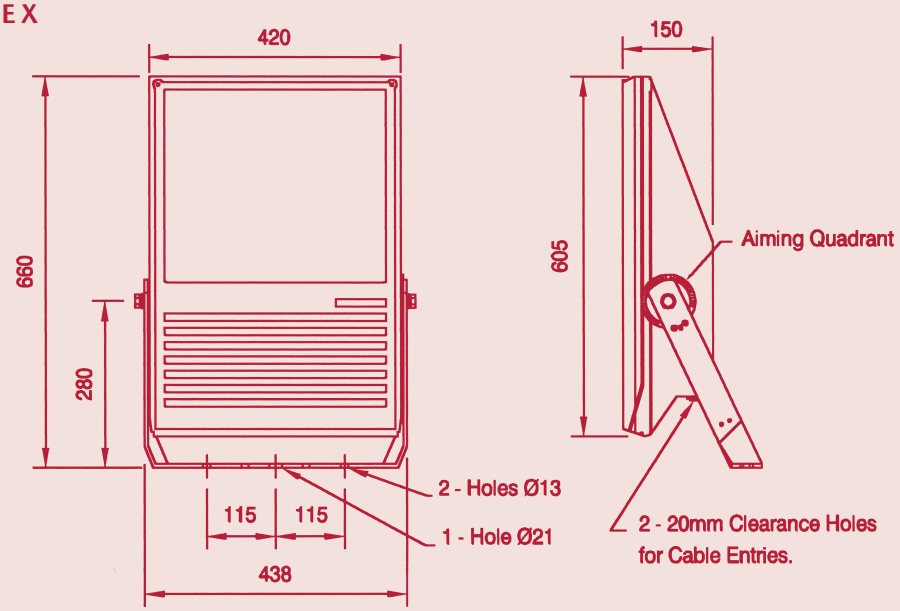
Options – Suffix to Catalogue No.

/60	60Hz	/TI	Timed ignitor (Maxinex only)

MICRONEX



MAXINEX



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket - Micronex (48-60mm pole diameter)	**SMIC1-0001**
Pole mounting bracket - Maxinex (48-60mm pole diameter)	**SMAX4-0001**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

DEXLUX STAINLESS STEEL FLOODLIGHT

Dexlux with anti-glare shield

The Dexlux is a stainless steel floodlight that offers high levels of corrosion resistance.
It is ideally suited for use in marine or saline environments.

Standard Specification

Ingress Protection	IP66/67 to EN60529
Enclosure	316S31 marine grade stainless steel body with toughened glass window. Silicone rubber gasket and GRP terminal box
Entries	1 x 20mm clearance hole in junction box
Termination	3 core 6mm² max conductors
Reflector	Wide beam high purity anodised aluminium
Mounting	Stirrup bracket
Windage	0.047m² (200W), 0.058m² (500W), 0.114m² (1000W)
Control Gear	N/A
Relamping	Via front cover and quick release clips
Electrical Supply	250V Max ac/dc

Features

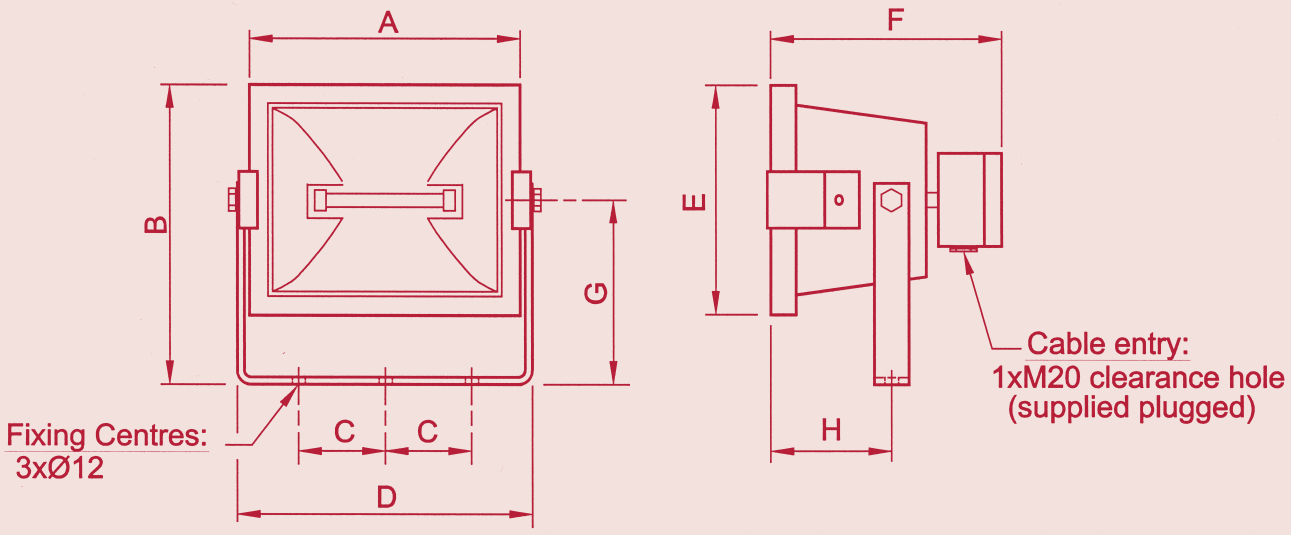
Lightweight marine grade 316S31 stainless steel body and toughened glass cover

Suspended cover front

Std. Cat No.	Wattage	Lamp	Lampholder	Weight
DEXI/200/TL	200W	Tungsten-Halogen	R7s	5.0kg
DEXI/500/TL	500W	Tungsten-Halogen	R7s	6.5kg
DEXI/1000/TL	1000W	Tungsten-Halogen	R7s	9.0kg

Options – Suffix to Catalogue No.

/25	1 x 25mm cable entry	/WA	Suitable for wire guard or anti-glare shield



DIMS	200W	500W	1000W
A	235	290	385
B	275	275	275
C	75	75	75
D	230	325	425
E	200	200	295
F	200	200	235
G	175	175	200
H	105	105	155
WEIGHT	5.0kg	6.5kg	9.0kg

Accessories Should be ordered separately — Catalogue Order Code

Anti-vibration damper assembly	S8000-0001
Pole-mounting bracket assembly (48-64mm pole diameter)	S8134-0002
Anti-glare shield - 200W (requires /WA suffix when ordering)	N8004-0269
Anti-glare shield - 500W (requires /WA suffix when ordering)	N8004-0215
Anti-glare shield - 1000W (requires /WA suffix when ordering)	N8234-0001
Wire Guard - 200W (requires /WA suffix when ordering)	E0850-0024
Wire Guard - 500W (requires /WA suffix when ordering)	E0850-0025
Wire Guard - 1000W (requires /WA suffix when ordering)	E0850-0041

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

600W HPS

1000W and 2000W versions

The 503 is a high powered floodlight with a wide ambient temperature range. The high upper ambient and corrosion resistant aluminium constriction, make the 503 ideal for use even in the hottest and hostile environments.

Standard Specification	
Ingress Protection	IP66/67 to EN60529
Enclosure	Marine grade aluminium LM6 alloy body with toughened glass window, silicone rubber gasket
Entries	1 x M20 cable entries
Termination	3 core 4mm² max conductors
Reflector	Wide beam high purity anodised aluminium
Mounting	Foot mounted
Windage	0.227m²
Control Gear	Refer to universal control gear box for models with HPS or Metal Halide lamps
Relamping	Via end cover secured by stainless steel screws
Electrical Supply	250V Max ac/dc for tungsten halogen lamps

Features

Highly resistant to corrosion and mechanical damage

All A4 stainless steel fasteners

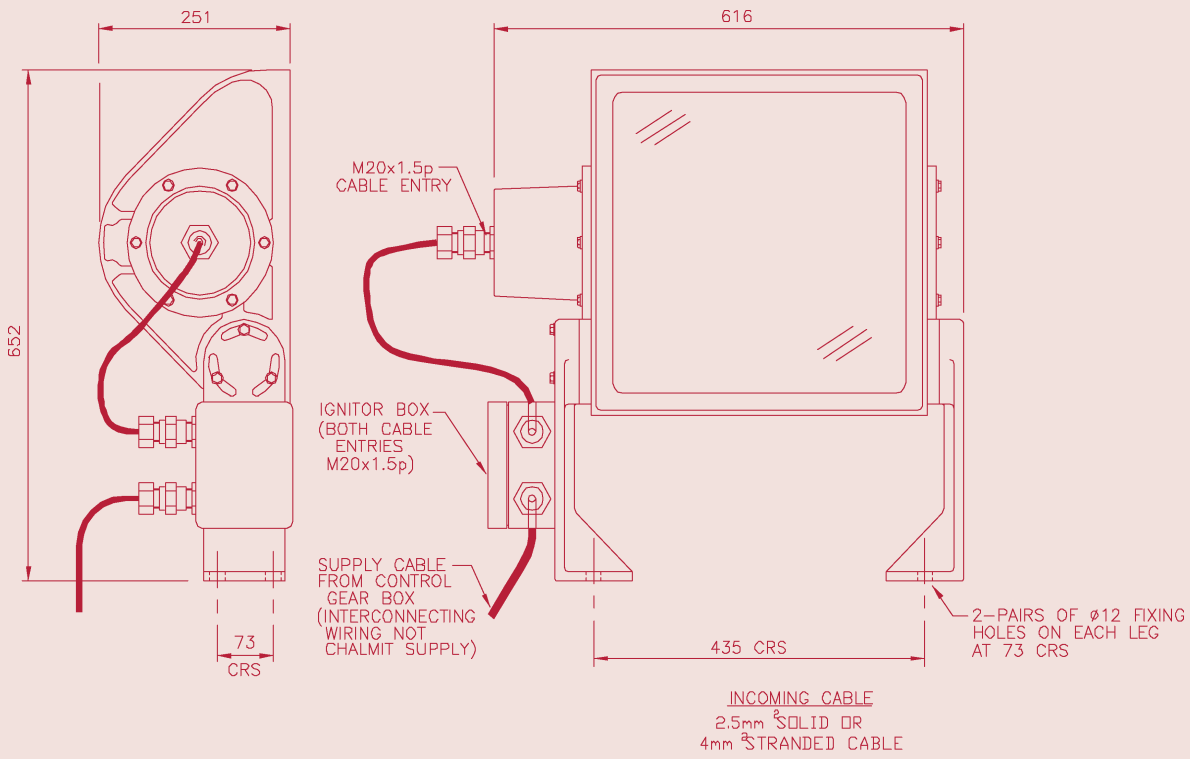
High ambient applications

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
503I/600/HS/IG*	600W	HPS	E40	25kg
503I/1000/HS/IG*	1000W	HPS	E40	25kg
503I/1000/MH/IG*	1000W	Metal Halide	E40	25kg
503I/2000/MH/IG*	2000W	Metal Halide	E40	25kg
503I/2000/TH	2000W	Single ended T/Halogen	E40	25kg

* Remote gearbox required (see Universal Box) or (502 box).

Options – Suffix to Catalogue No.

/P	PTFE coating	**/N**	Narrow beam reflector



Accessories Should be ordered separately — Catalogue Order Code

Pole mounting bracket assembly (64-114mm pole diameter)	**S2000-0007**
Swinging jib bracket	**S2000-0019**
Anti-glare shield	**S5030-0007**
Wire guard	**S5030-0008**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The Eclipse II with external reflector

The Eclipse II with glass refractor

The Eclipse II wellglass has been designed to make installation quick and simple. The lamp and gear chambers are separated for easy maintenance and require no special cable glands.

The luminaire also features a swing barrel nut system. This allows prior installation and wiring of the mounting base without the need to support the body and lamps. This unique design saves on both time and labour costs.

Standard Specification

Ingress Protection	IP66 to EN60529
Enclosure	Painted aluminium body with glass globe Silicone rubber gasket
Entry	Single stainless steel barrel nut fastener 4 x M20 cable entries
Termination	3 core 6mm² max, with looping
Installation	Ceiling mounting
Windage	0.107m" (up to 150W Glass) 0.134m" (> 150W Glass) 0.210m" (Enclosed Reflector)
Control Gear	Internal copper/iron ballast with ignitor and PFC correction capacitors
Relamping	Access via lamp chamber
Burning Position	Up to 25° off vertical
Electrical Supply	220, 230, 240V 50Hz (50, 80, 100 & 125W) 220, 230, 240, 254V 50Hz (70, 150, 250 & 400W)

Features

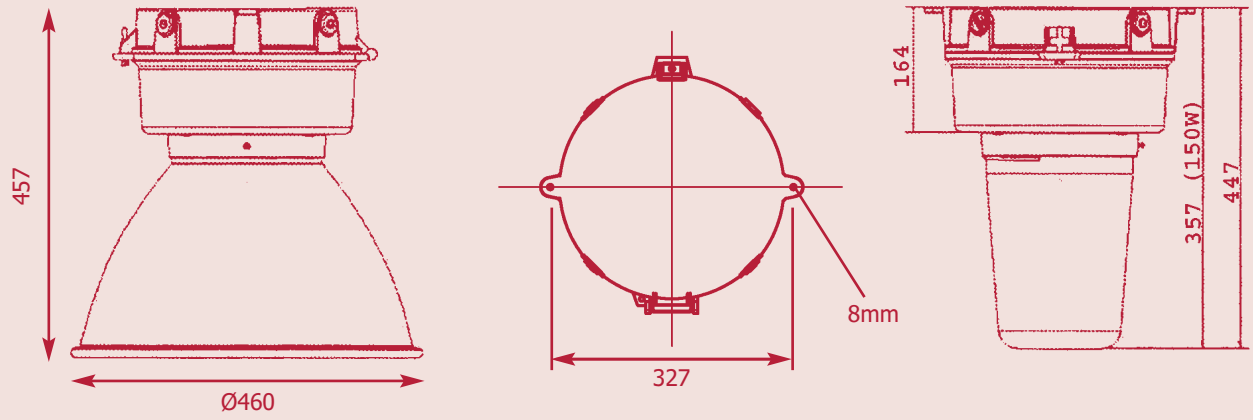
- Easy access for wiring and control gear
- Corrosion resistant
- High, medium and low bay lighting
- Excellent light distribution
- Wide range of mounting options available

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
EC2I/050/HS	50W	HPS	E27	7.5kg
EC2I/070/MS	70W	HPS/Metal Halide	E27	8.0kg
EC2I/100/HS	100W	HPS	E40	9.0kg
EC2I/150/MS	150W	HPS/Metal Halide	E40	11.0kg
EC2I/250/MS	250W	HPS/Metal Halide	E40	15.0kg
EC2I/400/MS	400W	HPS/Metal Halide	E40	15.5kg
EC2I/080/MV	80W	Mercury Vapour	E27	7.5kg
EC2I/125/MV	125W	Mercury Vapour	E27	8.0kg
EC2I/250/MV	250W	Mercury Vapour	E40	15.0kg
EC2I/400/MV	400W	Mercury Vapour	E40	15.5kg

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/60	60Hz	/PE	Pendant mounted version
/M25	M25 cable entries	/TI	Timed cut out ignitor
/WM	Wall mounted version	/R	Prismatic glass refractor (up to 150W)
/ST	Stanchion mounted version	/ER	Sealed spun reflector



Accessories Should be ordered separately	Catalogue Order Code
Wire guard for low wattage glass globe (up to 150W)	E0850-0042
Wire guard for high wattage glass globe (250W/400W)	E0850-0044
Wire guard for enclosed reflector	E0850-0043
Dome reflector	HEC20-0001
30˚ angled reflector	HEC20-0002

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

ECLIPSE JUNIOR

WELL-GLASS

The Eclipse Junior is a compact wellglass that incorporates the low maintenance features of the Eclipse II.

Its low profile design and range of mounting options, offers an all round lighting solution in areas of limited space.

The Eclipse Junior with external reflector

The Eclipse Junior with wire guard

Standard Specification

Ingress Protection	IP66/67 to EN60529
Enclosure	Painted aluminium body with glass globe Silicone rubber gasket
Entries	1 x M20 cable entries
Termination	3 core 4mm² max conductors
Reflector	Wide beam high purity anodised aluminium
Mounting	Ceiling mounted
Windage	0.066m²
Control Gear	Refer to universal control gear box for models with HPS or Metal Halide lamps
Relamping	Via end cover secured by stainless steel screws
Electrical Supply	250V Max ac/dc for tungsten halogen lamps

Features

- Compact size and low weight
- Easy access for wiring and control gear
- Corrosion resistant
- Excellent light distribution

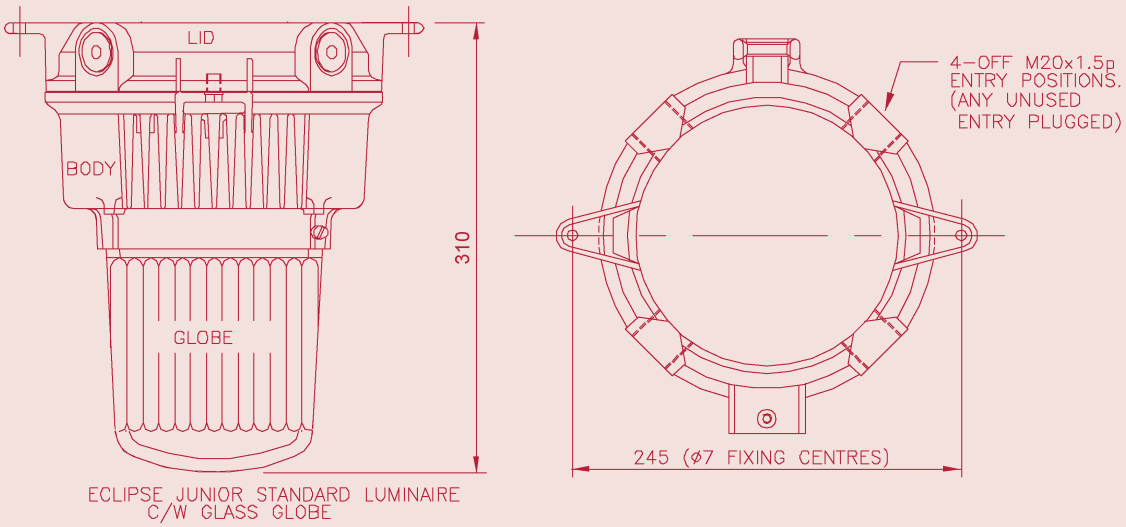
Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
ECJI/050/HS	50W	HPS	E27	5.5kg
ECJI/070/MS	70W	HPS/Metal Halide	E27	6.0kg
ECJI/080/MV	80W	MBFU	E27	6.0kg
ECJI/125/MV	125W	MBFU	E27	6.5kg
ECJI/150/GLS	150W	GLS	E27	5.0kg

For mounting options refer to page 94.

Note: Please specify voltage at time of enquiry/order

Options – Suffix to Catalogue No.

/60	60Hz	**/ST**	Stanchion mounted version
/WM	Wall mounted version	**/PE**	Pendant mounted version



ECLIPSE JUNIOR STANDARD LUMINAIRE C/W GLASS GLOBE

Accessories Should be ordered separately — Catalogue Order Code

Wire guard (can be used in conjunction with reflectors)	**E0850-00048**
Dome reflector	**SECL0-0001**
30° Angled reflector	**SECL0-0002**

Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

CHIEFTAIN II

STREET LANTERN

The Chieftain II is a dedicated street lantern that provides high levels of diffused light. The body features integrated control gear and quick release fasteners to allow simple maintenance and re-lamping.

Standard Specification	
Ingress Protection	IP66
Enclosure	Body in cast aluminium, polyester powder finish
Diffuser	Tempered Glass
Reflector	Removable, high purity aluminium, anodised and highly polished
Installation	Spigot Entry
Pole Diameter	48-60mm
Relamping	Quick release clips
Lampholder	E40
Burning Position	Universal
Electrical Supply	220/230/240/254V 50Hz (HPS/Metal Halide) 220/230/240V 50Hz (MBFU)

Features

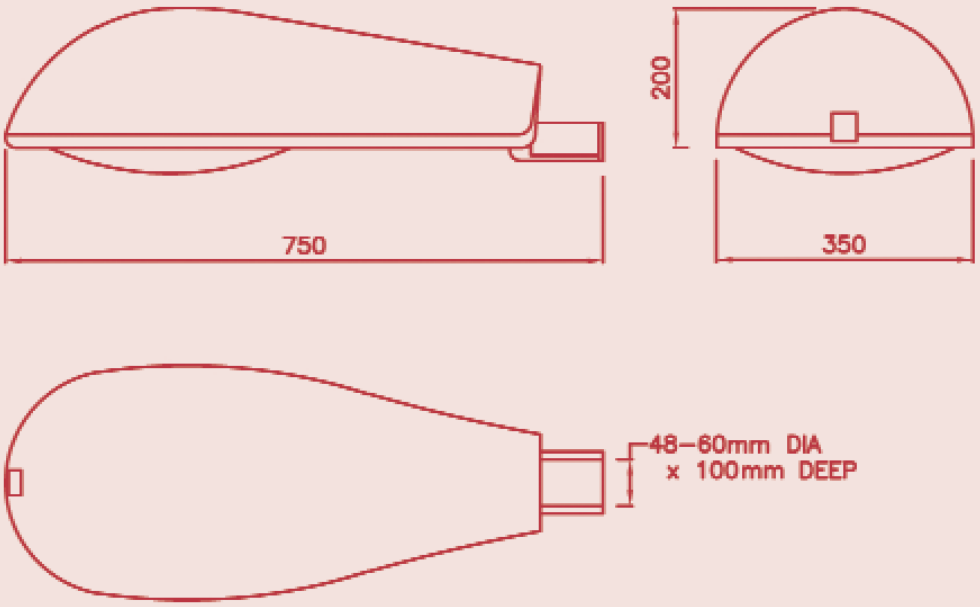
- Control gear hosed within main body
- Quick release fasteners for easy access and maintenance
- Suitable for 48-60mm diameter poles

Std. Cat No.	Wattage	Lamp	Lampholder	Weight
CH2I/150/MS	150	HPS/Metal Halide	E40	10.5kg
CH2I/250/MS	250	HPS/Metal Halide	E40	11.5kg
CH2I/250/MV	250	MBFU	E40	11.5kg

Other streetlighting options available upon request. Please contact technical sales (techsupport@chalmit.com)

Options – Suffix to Catalogue No.

/60	60Hz supply	**/TI**	Timed Ignitor



Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

UNIVERSAL BOX

CONTROL BOX

The Universal is a lamp control and transformer box for use in Industrial areas.

It can be used as a control box for up to 600W HID lamp sources.
The Universal box can also be specified as a 120V transformer box up to 1000VA.

	Standard Specification
Ingress Protection	IP66/67 to EN 60529
Enclosure	316S31 Marine grade stainless steel with silicone rubber gasket
Entry	3 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Base mounting straps
Control Gear	Internal copper/iron and PFC correction capacitor as required
Operating Position	Cable entries on lower end, if mounted vertically
Electrical Supply	220-254V 50Hz - Control box version, 120V 50-60Hz - Transformer box version

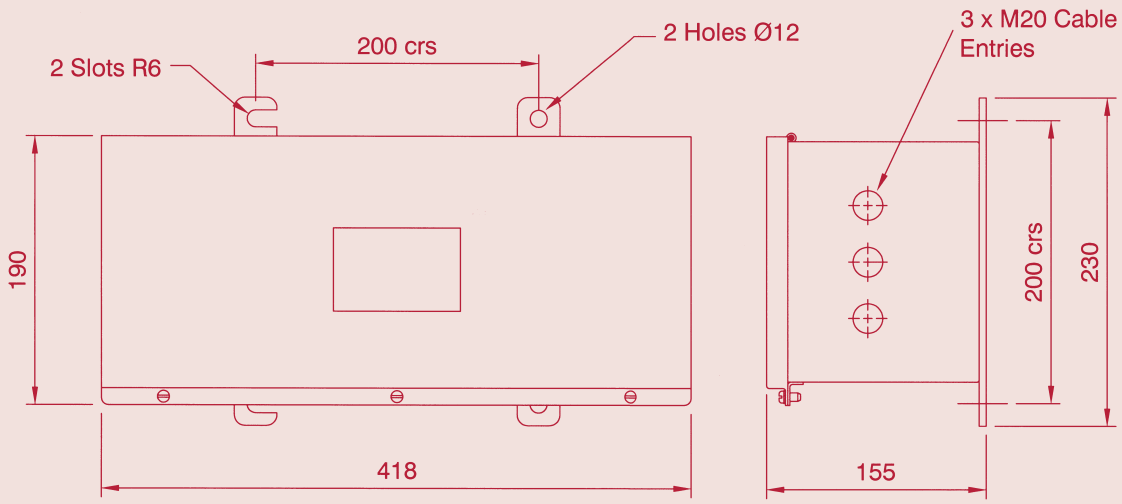
Features
Marine grade stainless steel construction
Easy to install and maintain
Hinged lid with three captive fixing screws
Lightweight
Control gear easily accessed and can be replaced
Thermal cut-outs fitted on ballast and transformer

Std. Cat No.	Wattage	Lamp	Weight
UNII/150/MS	150W	HPS/Metal Halide	10.5kg
UNII/250/MS	250W	HPS/Metal Halide	11.5kg
UNII/400/MS	400W	HPS/Metal Halide	12.0kg
UNII/600/HS	600W	HPS	14.0kg
UNII/500/TF*	500VA	Transformer	11.0kg
UNII/1000/TF*	1000VA	Transformer	12.0kg

*120 to 240V step up transformer boxes for fixed applications only. (Not portable).

Options – Suffix to Catalogue No.

/60	60Hz	**/MF**	Mains fuse
/M25	M25 cable entries	**/3P**	3 Phase termination



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Rev 1

502 CONTROL BOX

The 502 control gearbox is designed for use with high wattage High Pressure Sodium and Metal Halide lamp types. The 502 is manufactured from marine grade stainless steel making it suitable for use in corrosive and saline environments.

	Standard Specification
Ingress Protection	IP66/67 to EN60529
Enclosure	316S31 marine grade stainless steel construction
Entries	3 x 20mm cable entries
Termination	3 core 4mm² max conductors
Mounting	Base mounted straps
Control Gear	Internal copper/iron multi-tapped ballast and PFC capacitors (Ignitor not fitted on standard models)
Electrical Supply	220, 230, 240, 254V 50Hz (Always state V/Hz when ordering)

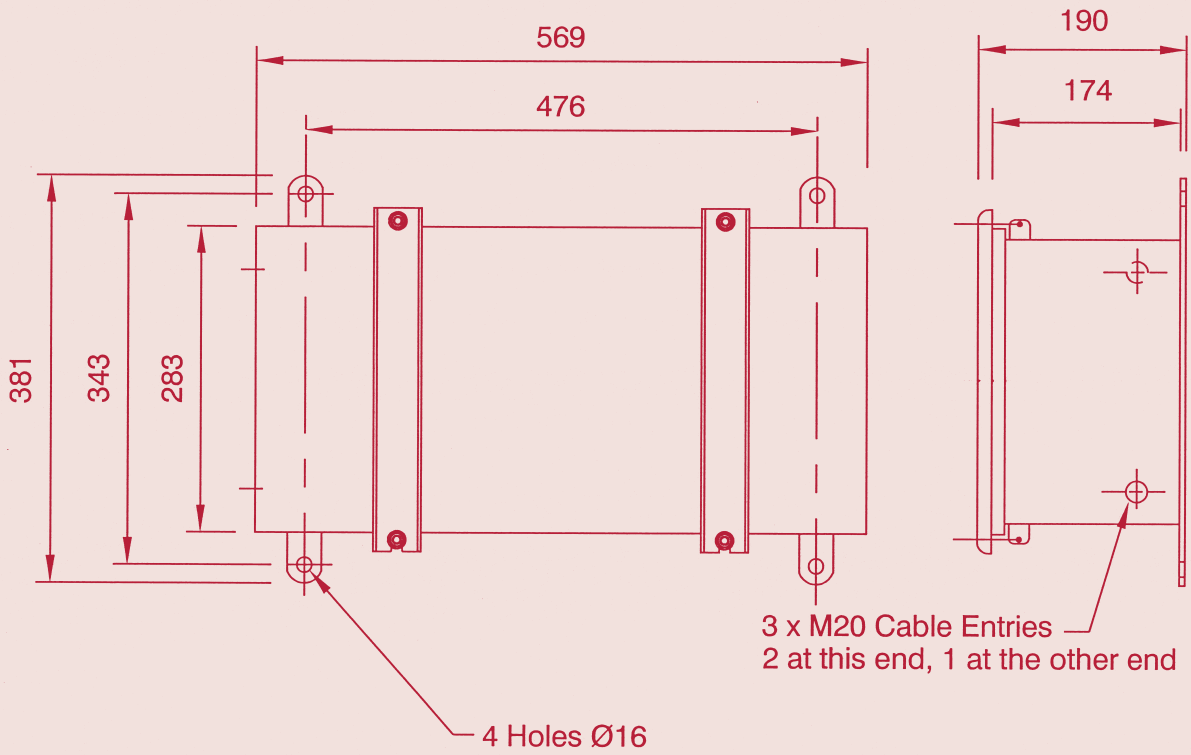
Features

- Marine grade stainless steel construction
- Easy to install and maintain
- Hinged lid with three captive fixing screws
- Lightweight
- Control gear easily accessed and can be replaced
- Thermal cut-outs fitted on ballast and transformer

Std. Cat No.	Wattage	Lamp	Weight
502I/1000/MH	1000W	Metal Halide	32.0kg
502I/1000/HS	1000W	HPS	32.0kg
502I/2000/MH	2000W	Metal Halide	36.0kg

Options – Suffix to Catalogue No.

/60	60Hz supply	/NC	No capacitors
/M25	M25 cable entries		



Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The 279 is a lightweight bulkhead, its EPDM rubber construction provides excellent vibration resistance and is particularly suited to marine environments. The 279 is designed for use with energy efficient compact fluorescent lamps.

Standard Specification

Ingress Protection	IP65 to EN60529
Enclosure	EPDM rubber with polycarbonate lens
Entries	2 x 10mm cable compression entry points complete with cable clamps
Termination	2 core 1.5mm conductors (through wiring 2 x 1mm)
Mounting	Via 4 x 8mm clearance holes on two stainless steel mounting straps
Control Gear	Copper/iron control gear (compact fluorescent models)
Electrical Supply	240V 50Hz (Compact fluorescent) 12V-250V ac/dc (GLS)

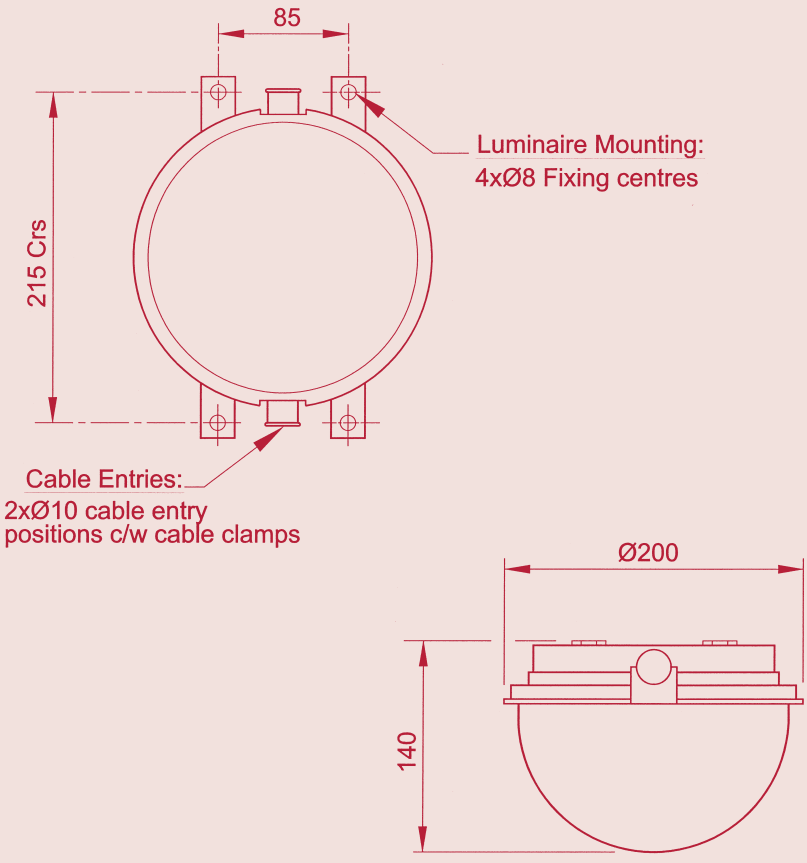
Features

- Lightweight EPDM construction
- High impact protection
- Ideal for marine applications
- Double insulated

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
279I/107/CF	1x7W	PL-S/2P	G23	1.0kg
279I/207/CF	2x7W	PL-S/2P	G23	1.2kg
279I/060/GL	60W	GLS	E27	9.6kg

Options – Suffix to Catalogue No.

/SP	IP68 Submersible version



Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

The 458 is a compact, weatherproof floodlight. Its EPDM rubber construction provides excellent vibration resistance and is particularly suited to marine environments. The 458 is designed for use with self ballasted compact fluorescent lamps. Ideal for portable lighting applications with a range of mounting arrangements.

Standard Specification

Ingress Protection	IP65 to EN60529
Enclosure	EPDM rubber with toughened front glass
Entries	1 x 10mm cable compression entry point complete with cable clamp
Termination	2 core 1.5mm² max conductors
Mounting	Standard fixing is via lifting hook for portable use Base-mounted or pole-mounted versions available
Control Gear	N/A
Electrical Supply	250V Max ac/dc (Always state V/Hz when ordering)
Protection	Class II

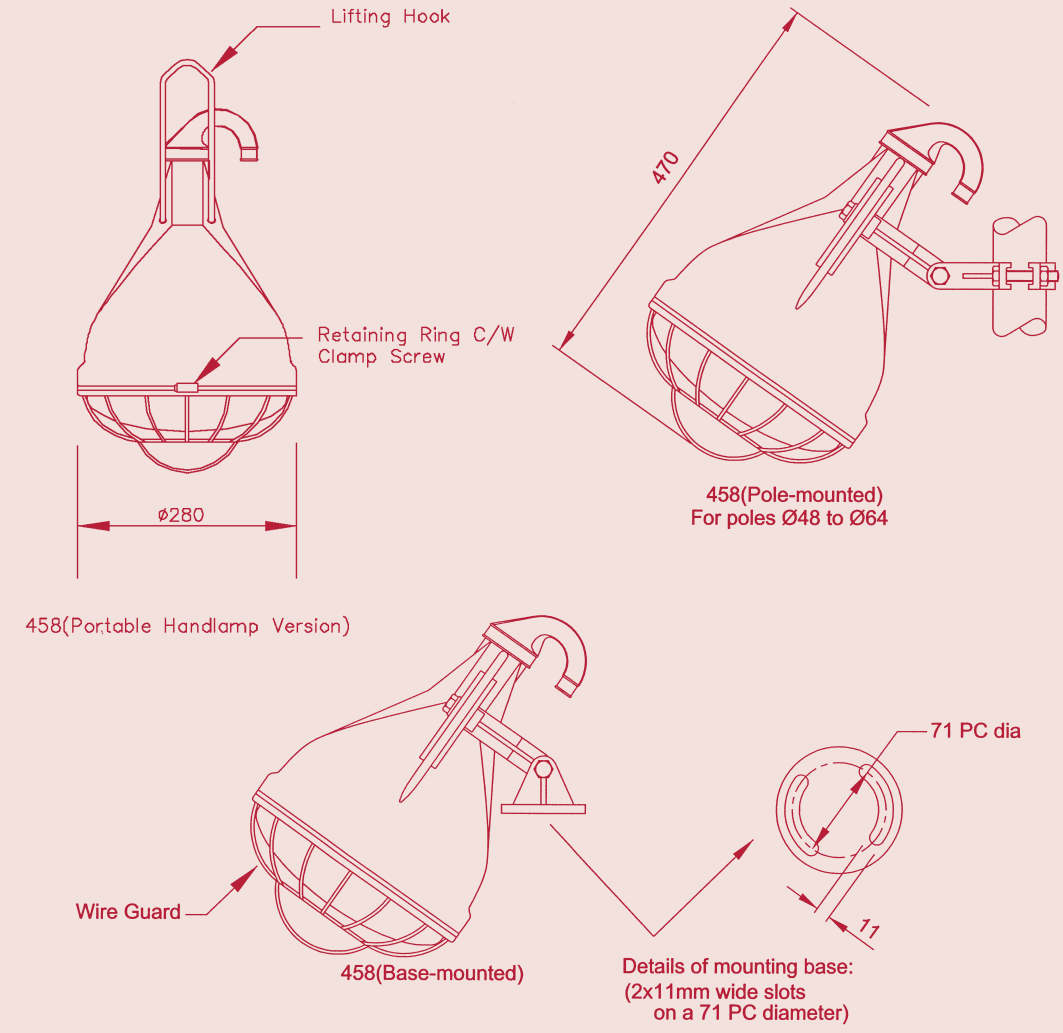
Features

- High wattage lamp options
- Resistant to high impact & vibration
- Ideal for marine applications
- Double insulated

Std. Cat No.	Wattage	Lamp Type	Lampholder	Weight
458I/150/HS	150W	HPS	E40	4.2kg
458I/250/HS	250W	HPS	E40	4.2kg
458I/300/GL	300W	GLS	GLS	4.2kg

Options – Suffix to Catalogue No.

/B	Base-mounted	**/PM**	Pole mounted



Product design and specifications are subject to change without notice, please check the Chalmit website for latest specifications.

COMMON SPARE PARTS

Although all the products on the Hazardous Lighting range are made to the highest standards using quality materials and workmanship, over time these may need to be replaced. To assist you we have compiled a list of the most commonly requested spare parts and ballasts for our Hazardous Area range.

If you need to replace an item that is not listed below, please contact your local agent or directly to **info@chalmit.com**

ZONE 1

PROTECTA

Wattage	Spare	Partcode	Description
2x18watt	Ballast	G7536-2240-E0L	220-254V 50/60Hz
	Ballast	G7536-2120-E0L	110-120V 50/60Hz
	Em ballast - 90min	G7618-5240-E0L	220-254V 50/60Hz
	Em ballast - 90min	G7618-5120-E0L	110-120V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1240-E0L	220-254V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1120-E0L	110-120V 50/60Hz
	Battery	PROT2-0005	4Ah (180min)
2x36watt	Ballast	G7536-2240-E0L	220-254V 50/60Hz
	Ballast	G7536-2120-E0L	110-120V 50/60Hz
	Em ballast - 90min	G7636-4240-E0L	220-254V 50/60Hz
	Em ballast - 90min	G7636-4120-E0L	110-120V 50/60Hz
	Em ballast - 3 hour (/3H)	G7636-1240-E0L	220-254V 50/60Hz
	Em ballast - 3 hour (/3H)	G7636-1120-E0L	110-120V 50/60Hz
	Em ballast - 90min (/HEO)	G7636-5240-E0L	220-254V 50/60Hz
	Em ballast - 90min (/HEO)	G7636-5120-E0L	110-120V 50/60Hz
	Battery	PROT2-0005	4Ah (90min)
	Battery	PROT2-0006	7Ah - /3H (180 min) 7Ah - /HEO (90 min)

ACCLAIM

Wattage	Spare	Partcode	Description
2x18watt	Ballast	G7536-2240-E0L	220-254V 50/60Hz
	Ballast	G7536-2120-E0L	110-120V 50/60Hz
	Em ballast - 90min	G7618-5240-E0L	220-254V 50/60Hz
	Em ballast - 90min	G7618-5120-E0L	110-120V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1240-E0L	220-254V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1120-E0L	110-120V 50/60Hz
	Battery	PROT2-0005	4Ah (180min)
2x36watt	Ballast	G7536-2240-E0L	220-254V 50/60Hz
	Ballast	G7536-2120-E0L	110-120V 50/60Hz
	Em ballast - 90min	G7636-4240-E0L	220-254V 50/60Hz
	Em ballast - 90min	G7636-4120-E0L	110-120V 50/60Hz
	Em ballast - 3 hour (/3H)	G7636-1240-E0L	220-254V 50/60Hz
	Em ballast - 3 hour (/3H)	G7636-1120-E0L	110-120V 50/60Hz
	Em ballast - 90min (/HEO)	G7636-5240-E0L	220-254V 50/60Hz
	Em ballast - 90min (/HEO)	G7636-5120-E0L	110-120V 50/60Hz
	Battery	PROT2-0005	4Ah (90min)
	Battery	PROT2-0006	7Ah - /3H (180 min) 7Ah - /HEO (90 min)

CURIE ELITE

Wattage	Spare	Partcode	Description
2x18watt	Ballast	G7536-2240-E0L	220-277V 50/60Hz
	Em ballast - 90min	G7618-5240-E0L	220-277V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1240-E0L	220-277V 50/60Hz
	Battery	PROT2-0005	4Ah (180min)
2x36watt	Ballast	G7536-2240-E0L	220-277V 50/60Hz
	Em ballast - 90min	G7618-5240-E0L	220-277V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1240-E0L	220-277V 50/60Hz
	Battery	PROT2-0005	4Ah (90min)
	Battery	PROT2-0006	7Ah / 3H (180min) 7Ah / HEO (90min)
4x18watt	Ballast	G7536-2240-E0L	220-277V 50/60Hz
	Em ballast - 90min	G7618-5240-E0L	220-277V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1240-E0L	220-277V 50/60Hz
	Battery	PROT2-0005	4Ah (180min)
4x36watt	Ballast	G7536-2240-E0L	220-277V 50/60Hz
	Em ballast - 90min	G7618-5240-E0L	220-277V 50/60Hz
	Em ballast - 3 hour (/3H)	G7618-1240-E0L	220-277V 50/60Hz
	Battery	PROT2-0005	4Ah (90min)
	Battery	PROT2-0006	7Ah - /3H (180 min) 7Ah - /HEO (90 min)

LOMOND

Wattage	Spare	Partcode	Description
1x8watt	Em Inverter	SLOMD-000022	230/240V 50/60Hz (Non Maintained)
	Em Inverter	SLOMD-000023	230/240V 50/60Hz (Maintained)
	Ballast	SLOMD-000031	220-240V 50/60Hz
	Battery Assembly	SLOMD-000024	4Ah (180min)
2x8watt	Ballast	SLOMD-000032	220-240V 50/60Hz
	1ft Lamp Glass Assembly	SLOMD-000014	1ft Lamp Glass Assembly
2x18watt	Ballast	SLOMD-000028	220-254V 50/60Hz
	Em Ballast/Inverter	SLOMD-000029	220-254V 50/60Hz
	Ballast Low Voltage	SLOMD-000028	110-130V 50/60Hz
	Ballast/Inverter Low Voltage	SLOMD-000034	110-130V 50/60Hz
	2ft Lamp Glass Assembly	SLOMD-000013	2ft Lamp Glass Assembly
	Battery Assembly	SLOMD-000027	4Ah (180min)
1x36watt	Ballast	SLOMD-000025	220-254V 50/60Hz
2x36watt	Ballast	SLOMD-000015	220-254V 50/60Hz
	Em Ballast/Inverter	SLOMD-000016	220-254V 50/60Hz
	Ballast Low Voltage	SLOMD-000033	110-130V 50/60Hz
	Ballast/Inverter Low Voltage	SLOMD-000036	110-130V 50/60Hz
	4ft Lamp Glass Assembly	SLOMD-000012	4ft Lamp Glass Assembly
	Battery Assembly	SLOMD-000027	4Ah (180min)
1x58watt	Ballast	SLOMD-000035	220-254V 50/60Hz
	Battery Assembly	SLOMD-000027	4Ah (180min)
2x58watt	Ballast	SLOMD-000017	220-254V 50/60Hz
	Em Ballast /Inverter	SLOMD-000018	220-254V 50/60Hz
	5ft Lamp Glass Assembly	SLOMD-000011	5ft Lamp Glass Assembly
	Battery Assembly	SLOMD-000027	4Ah (180min)

EVOLUTION II

Wattage	Spare	Partcode	Description
EV2D/150/MS	Ballast	SEV21-100220	150W Kit 220-254V 50Hz
	Ballast	SEV21-100223	150W Kit 220-254V 60Hz
	Capacitor	G4801-2000	20µF
	Ignitor	SEV21-0024	150w Assembly
EV2D/250/MS	Ballast	SEV21-100221	250W Kit 220-254V 50Hz
	Ballast	SEV21-100224	250W Kit 220-254V 60Hz
	Capacitor	G4801-3000	30 µF
	Ignitor	SEV21-0022	250W Assembly
EV2D/400/MS	Ballast	SEV21-100222	400W Kit 220-254V 50Hz
	Ballast	SEV21-100225	400W Kit 220-254V 60Hz
	Capacitor	G4801-4000	40 µF
	Ignitor	SEV1-0022	400W Assembly
EV2D/600/MS	Ballast	N/A	N/A
	Capacitor	N/A	N/A
	Ignitor	SEV01-100244	600W Assembly

EVOLUTION

Wattage	Spare	Partcode	Description
EVOD/150/MS	Ballast	SEVO1-0019	150W Kit 220-254V 50Hz
	Ballast	SEVO1-0020	150W Kit 220-254V 60Hz
	Capacitor	G4801-2000	20µF
	Ignitor	SEV21-0024	150W Assembly
EVOD/250/MS	Ballast	SEVO1-0017	250W Kit 220-254V 50Hz
	Ballast	SEVO1-0018	250W Kit 220-254V 60Hz
	Capacitor	G4801-3000	30 µF
	Ignitor	SEV21-0022	250W Assembly
EVOD/400/MS	Ballast	SEVO1-0006	400W Kit 220-254V 50Hz
	Ballast	SEVO1-0012	400W Kit 220-254V 60Hz
	Capacitor	G4801-4000	40 µF
	Ignitor	SEV21-0022	400W Assembly
EVOD/600MS	Ballast	N/A	N/A
	Capacitor	N/A	N/A
	Ignitor	SEV01-100244	600W Assembly

EVOLUTION JUNIOR

Wattage	Spare	Partcode	Description
EVJD/070/MS	Ballast	G0110-7028	70W 220-254V 50Hz
	Ballast	G1251-1070V	70W 220-254V 60Hz
	Capacitor	G4800-1000	10 µF
	Ignitor	SEVJR-0006	70W Assembly

NEVIS

Wattage	Spare	Partcode	Description
NEVD/050/HS	Ballast	G1251-0050V	50W 220-240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	50W (PXE070255)
NEVD/070/MS	Ballast	G1251-0070V	50W 220-254V 50Hz
	Ballast	G1251-1070V	50W 220-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W (PXE070255)
NEVD/080/MV	Ballast	G9000-0123	80W 220-240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
NEVD/125/MV	Ballast	G1252-0125V	125W 220-240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
NEVD/118/CF	Ballast	G8107-0104	18W 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
NEVD/126/CF	Ballast	G7026-0230	26W 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
NEVD/055/QL	Ballast	G9200-0002	55W 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A

216

Wattage	Spare	Partcode	Description
216D/050/HS	Ballast	G1251-0050V	50W 220-240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	50W (PXE070255)
216D/070/HS	Ballast	G1251-0050V	70W 220-254V 50Hz
	Ballast	G1251-1070V	70W 220-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W (PXE070255)
216D/080/MV	Ballast	G9000-0123	80W 220-240V 50Hz
	Ballast	G0120-8013	80W 220-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
216D/113/CF	Ballast	G7013-0230	13W HF 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
216D/118/CF	Ballast	G7018-0230	18W HF 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
216D/126/CF	Ballast	G7026-0230	26W HF 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
216D/213/CF	Ballast x 2	G7026-0230	13W HF 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
216D/218/CF	Ballast x 2	G7018-0230	18W HF 220-240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A

238

Wattage	Spare	Partcode	Description
238D/070/HS	Ballast	G0110-7028	70W 220-254V 50Hz
	Ballast	G1251-1070V	70W 220-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W (PXE070255)
238D/100/HS	Ballast	G1251-0100V	100W 220-240V 50Hz
	Capacitor	G4800-1200	12µF
	Ignitor	G2200-6400	100W (PAE400255)
238D/150/MS	Ballast	G1158-1100A	150W 220-254V 50Hz
	Ballast	G1156-0150B	150w 220-254V 60Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-6400	150W (PAE400255)
238D/250/MS	Ballast	G9000-0085	250W 220-254V 50Hz
	Ballast	G9000-0103	250W 220-254V 60Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-6400	250W (PAE400255)
238D/080/MV	Ballast	G9000-0123	80W 220-240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
238D/125/MV	Ballast	G1252-0125V	125W 220-240V 50Hz
	Ballast	G1252-1125V	125W 220-240V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
238D/250/MV	Ballast	G9000-0125	250W 220-240V 50Hz
	Ballast	G9000-0159	250W 220-240V 60Hz
	Capacitor	G4800-2000	20µF
	Ignitor	N/A	N/A
238D/085/QL	Ballast	G9200-0003	85W 240V 50/60Hz
	Capacitor	N/A	N/A
	Ignitor	N/A	N/A
238D/150MS/T3	Ballast	G1156-0150A	150W 220-254V 50Hz
	Ballast	G1156-0150B	150W 220-254V 60Hz
	Capacitor	G4800-2000	20 µF
	Ignitor	G2200-6400	150W (PAE400255)
238D/125/MV/T3	Ballast	G1252-0125V	125W 220-240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A

261

Wattage	Spare	Partcode	Description
261D/150/HS	Ballast	G1191-0150A	150W 220-254V 50Hz
	Ballast	G1191-1150A	150W 220-254V 60Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-6400	150W (PAE400255)
261D/250/HS	Ballast	G1191-0250A	250W 220-254V 50Hz
	Capacitor x 1	G4800-1000	10µF
	Capacitor x 1	G4800-2000	20µF
	Ignitor	G2200-6400	250W (PAE400255)

261 Continued

Wattage	Spare	Partcode	Description
261D/400/HS	Ballast	G1191-0400A	400W 220-254V 50Hz
	Ballast	G1191-1400A	400W 220-254V 60Hz
	Capacitor x 2	G4800-2000	20µF
	Ignitor	G2200-6400	400W (PAE400255)
261D/125/MV	Ballast	G1252-0125V	125W 220-254V 50Hz
	Ballast	G9000-0127	125W 220-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
261D/250/MV	Ballast	G9000-0125	250W 220-254V 50Hz
	Ballast	G1252-1250V	125W 220-254V 60Hz
	Capacitor	G4800-1500	15µF
	Ignitor	N/A	N/A
261D/400/MV	Ballast	G9000-0128	400W 220-254V 50Hz
	Capacitor	G4800-2000	20µF
	Ignitor	N/A	N/A
261D/250/MH	Ballast	G1191-0250A	250W 220-254V 50Hz
	Ballast	G1191-1250A	250W 220-254V 60Hz
	Capacitor x 1	G4800-1000	10µF
	Capacitor x 1	G4800-2000	20µF
	Ignitor	G2200-6400	250W (PAE400255)
261D/400/MH	Ballast	G1191-0400A	400W 20-254V 50Hz
	Ballast	G1191-1400A	400W 20-254V 60Hz
	Capacitor x 2	G4800-2000	20µF
	Ignitor	G2200-6400	400W (PAE400255)

261E

Wattage	Spare	Partcode	Description
261E/070/HS/EM	Lamp Unit	S2610-0008	70W 220-254V 50/60Hz
	Charger Unit	S2610-0009	70W 220-254V 50/60Hz Charger Unit
	Ignitor Assembly	S261E-0001	70W Assembly
	Flatglass Covers Assembly	P2611-0002	
	Lampholder	E0373-0043	E27
261E/070/MS/EM	Lamp Unit	S2610-0008	70W 220-254V 50/60Hz Lamp Unit
	Charger Unit	S2610-0009	70W 220-254V 50/60Hz Charger Unit
	Ignitor Assembly	S261E-0001	70W Ignitor
	Flatglass Covers Assembly	P2611-0002	
	Lampholder	E0373-0043	E27

723 BATTERY BOX

Wattage	Spare	Partcode	Description
723 Battery Box	Potted Fuse	1S1810-0000	3Amp
	Battey Pack	G9000-0082	7Ah (90min)

NEXLED

Wattage	Spare	Partcode	Description
2x1watt	Led White Reflector Array	SNEL1-0023	100-254V 50/60/0Hz
	Led Green Reflector Array	SNEL1-0025	100-254V 50/60/0Hz
	Driver Assembly	SNEL1-0026	100-254V 50/60/0Hz
	Emerg. Driver Assembly	SNEL1-0027	100-254V 50/60/0Hz
	Low Temp. Emerg. Driver Assembly	SNEL1-0028	100-254V 50/60/0Hz
	Battery	SNEL1-0029	4Ah (180min)
	Low Temp. Battery Assembly	SNEL1-0030	4Ah (180min)
8x1watt	Led White Reflector Array	SNEL1-0022	100-254V 50/60/0Hz
	Led Green Reflector Array	SNEL1-0024	100-254V 50/60/0Hz
	Driver Assembly	SNEL1-0026	100-254V 50/60/0Hz
	Emerg. Driver Assembly	SNEL1-0027	100-254V 50/60/0Hz
	Low Temp. Emerg. Driver Assembly	SNEL1-0028	100-254V 50/60/0Hz
	Battery	SNEL1-0029	4Ah (90min)
	Low Temp. Battery	SNEL1-0030	4Ah (90min)

UNIVERSAL BOX

Wattage	Spare	Partcode	Description
150W	Ballast	G1256-0150	220/230/240/254V 50Hz
	Ballast	G1256-1150	220/230/240/254V 60Hz
	Capacitor	SUNI1-000005	20µF
	Fuse	G6900-0400	4amp Assembly
250W	Ballast	G1256-0250	220/230/240/254V 50Hz
	Ballast	G1256-1250	220/230/240/254V 60Hz
	Capacitor	SUNI1-000004	30µF
	Fuse	G6900-0400	4amp Assembly
400W	Ballast	G1256-0400	220/230/240/254V 50Hz
	Ballast	G1256-1400	220/230/240/254V 60Hz
	Capacitor	SUNI1-000003	40µF
	Fuse	G6900-0400	4amp Assembly
600W	Ballast	G1256-0600	220/230/240/254V 50Hz
	Ballast	G1256-1600	220/230/240/254V 60Hz
	Capacitor x 2	SUNI1-000002	30µF
	Fuse	G6900-0400	4amp Assembly
500VA	1000VA Transformer	G3100-1000	120-240V 50/60Hz Auto step-up
	Fuse	G6900-0400	4amp Assembly
1000VA	1000VA Transformer	G3100-1000	120-240V 50/60Hz Auto step-up
	Fuse	G6900-0400	4amp Assembly

ZONE 2

PROTECTA n

Wattage	Spare	Partcode	Description
1x18watt	Ballast	G8400-0004	220-254V 50/60Hz
	Em Inverter	PST2N-0001	220-254V 50/60Hz
	Diffuser	B0801-0101	Clear Polycarbonate
	Battery	G9000-0145	4Ah (180min)

PROTECTA n Continued

Wattage	Spare	Partcode	Description
2x18watt	Ballast	G8400-0001	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0001	110-130V 50/60Hz
	Em Inverter	PST2N-0001	220-254V 50/60Hz
	Diffuser	B0801-0104	Clear Polycarbonate
	Battery	G9000-0145	4Ah (180min)
1x36watt	Ballast	G8400-0005	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0005	110-130V 50/60Hz
	Em Inverter	PST2N-0002	220-254V 50/60Hz
	Em Inverter – Low Voltage	PST2N-0005	110-130V 50/60Hz
	Diffuser	B0801-0102	Clear Polycarbonate
	Battery	G9000-0145	4Ah (180min)
2x36watt	Ballast	G8400-0002	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0002	110-130V 50/60Hz
	Em Inverter	PST2N-0002	220-254V 50/60Hz
	Em Inverter – Low Voltage	PST2N-0005	110-130V 50/60Hz
	Diffuser	B0801-0005	Clear Polycarbonate
	Battery	G9000-0145	4Ah (180min)

STERLING II

Wattage	Spare	Partcode	Description
1x18watt	Ballast	G8400-0004	220-254V 50/60Hz
	Em Inverter	PST2N-0001	220-254V 50/60Hz
	Diffuser	B0801-0101	Prismatic Polycarbonate
	Battery	G9000-0145	4Ah (180min)
2x18watt	Ballast	G8400-0001	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0001	110-130V 50/60Hz
	Em Inverter	PST2N-0001	220-254V 50/60Hz
	Diffuser	B0801-0104	Prismatic Polycarbonate
	Battery	G9000-0145	4Ah (180min)
1x36watt	Ballast	G8400-0005	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0005	110-130V 50/60Hz
	Em Inverter	PST2N-0002	220-254V 50/60Hz
	Em Inverter – Low Voltage	PST2N-0005	110-130V 50/60Hz
	Diffuser	B0801-0102	Prismatic Polycarbonate
	Battery	G9000-0145	4Ah (180min)
2x36watt	Ballast	G8400-0002	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0002	110-130V 50/60Hz
	Em Inverter	PST2N-0002	220-254V 50/60Hz
	Em Inverter – Low Voltage	PST2N-0005	110-130V 50/60Hz
	Diffuser	B0801-0005	Prismatic Polycarbonate
	Battery	G9000-0145	4Ah (180min)
1x58watt	Ballast	G8400-0006	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0006	110-130V 50/60Hz
	Em Inverter	PST2N-0003	220-254V 50/60Hz
	Em Inverter – Low Voltage	PST2N-0006	110-130V 50/60Hz
	Diffuser	B0801-0003	Prismatic Polycarbonate
	Battery	G9000-0145	4Ah (180min)
2x58watt	Ballast	G8400-0003	220-254V 50/60Hz
	Ballast – Low Voltage	G8400-0003	110-130V 50/60Hz
	Em Inverter	PST2N-0003	220-254V 50/60Hz
	Em Inverter – Low Voltage	PST2N-0006	110-130V 50/60Hz
	Diffuser	B0801-0106	Prismatic Polycarbonate
	Battery	G9000-0145	4Ah (180min)

800 SERIES

Wattage	Spare	Partcode	Description
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast	G1251-1070V	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5071	70W (PXA070)
	Lampholder	E0373-0043	E27
100watt	Ballast	G1158-0100A	220-230-240-254V 50Hz
	Ballast	G1158-1100A	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5000	100W (PXA000)
	Lampholder	E0304-0035	E40
150watt	Ballast	G1158-0150A	220-230-240-254V 50Hz
	Ballast	G9000-0102	220-230-240-254V 60Hz
	Ballast	G1191-0150A	220-230-240-254V 50Hz for 110-120V versions
	Ballast	G1191-1150A	220-230-240-254V 60Hz for 110-120V versions
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-5000	150W (PXA000)
	Lampholder	E0304-0035	E40
250watt	Ballast	G1158-0250A	220-230-240-254V 50Hz
	Ballast	G1158-1250A	220-230-240-254V 60Hz
	Ballast	G1191-0250A	220-230-240-254V 50Hz for 110-120V versions
	Ballast	G1191-1250A	220-230-240-254V 60Hz for 110-120V versions
	Capacitor	G4800-3000	30µF
	Ignitor	G2200-5000	250W (PXA000)
	Transformer (110-120V)	G3005-0502	Low to High voltage
	Lampholder	E0304-0035	E40
400watt	Ballast	G1151-0400A	220-230-240-254V 50Hz
	Ballast (60Hz)	G9000-0130	220-230-240-254V 60Hz
	Ballast	G1191-0400A	220-230-240-254V 50Hz for 110-120V versions
	Ballast (60Hz)	G1191-1400A	220-230-240-254V 60Hz for 110-120V versions
	Capacitor x 2	G4800-2000	20µF
	Ignitor	G2200-5000	400W (PXA000)
	Transformer (110-120V)	G3005-0502	Low to High voltage
	Lampholder	E0304-0035	E40
500watt	Lampholder	E0304-0035	E40

MICRONEX/MAXINEX

Wattage	Spare	Partcode	Description
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast	G1251-1070V	220-230-240-254V 60Hz
	Ignitor	G2200-5100	70W (PXA070)
	Capacitor	G4800-1000	10µF
	Lampholder x 2	E0375-0006	RX7s
150watt	Ballast	G1191-0150A	220-230-240-254V 50Hz
	Ballast	G1191-1150A	220-230-240-254V 60Hz
	Ignitor	G2200-5000	150W (PXA000)
	Capacitor	G4800-2000	20µF
	Lampholder	E0304-0035	E40
250watt	Ballast	G1191-0250A	220-230-240-254V 50Hz
	Ballast	G1191-1250A	220-230-240-254V 60Hz
	Ignitor	G2200-5000	250W (PXA000)
	Capacitor x 2	G4800-1500	15µF 220/254V 50/60Hz
	Lampholder	E0304-0035	E40

MAXINEX / MICRONEX Continued

Wattage	Spare	Partcode	Description
400watt	Ballast	G1191-0400A	220-230-240-254V 50Hz
	Ballast	G1191-1400A	220-230-240-254V 60Hz
	Ignitor	G2200-5000	400W (PXA000)
	Capacitor x 2	G4800-2000	20µF
	Lampholder	E0304-0035	E40

NEXXUS II

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NEXXUS

Wattage	Spare	Partcode	Description
50watt	Ballast	G1251-0050V	220-230-240V 50Hz
	Ballast	G0110-5003	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5071	50W (PXA070)
	Lampholder	E0373-0043	E27
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast	G1251-1070V	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5071	70W (PXA070)
	Lampholder	E0373-0043	E27
80watt	Ballast	G9000-0123	220-230-240V 50Hz
	Ballast	G0120-8013	220-230-240V 60Hz
	Capacitor	G4800-1000	10µF
	Lampholder	E0373-0043	E27
160watt	Lampholder	E0373-0043	E27
200watt	Lampholder	E0373-0043	E27
1x13watt	Ballast	G1155-0013A	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0016	13W (EFS120P)
	Lampholder	E0357-0026	G24q-1
1x18watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0016	18W (EFS120P)
	Lampholder	E0379-0044	G24q-2
1x26watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0016	26W (EFS120P)
	Lampholder	E0379-0046	G24q-3
2x13watt	Ballast x 2	G1155-0013A	240V 50Hz
	Capacitor	G4800-0600	6µF
	Starter x 2	G5100-0016	2x13W (EFS120P)
	Lampholder x 2	E0357-0026	G24q-1
2x18watt	Ballast x 2	G1554-0018	240V 50Hz
	Capacitor	G4800-0600	6µF
	Starter x 2	G5100-0016	2x18W (EFS120P)
	Lampholder x 2	E0379-0044	G24q-2

ECLIPSE II

Wattage	Spare	Partcode	Description
50watt HS	Ballast	G1250-0050V	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5100	70W/100W
70watt MS	Ballast	G0110-7028	240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5100	70W/100W HS
80watt MV	Ballast	G9000-0123	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF
100watt MS	Ballast	G0111-0014	220/240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5100	70W/100W
125watt MV	Ballast	G9000-0124	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF
150watt MS	Ballast	G1156-0150A	220/230/240/250V 50Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-5000	150W/250W/400W
250watt MS	Ballast	G1158-0250A	220/230/240/254V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5000	150W/250W/400W
250watt MV	Ballast	G9000-0125	220/230/240V 50Hz
	Capacitor	G4800-2000	20µF
400watt MS	Ballast	G1191-0400A	220/230/240/254V 50Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-5000	150W/250W/400W
400watt MV	Ballast	G9000-0128	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF

ECLIPSE JUNIOR

Wattage	Spare	Partcode	Description
50watt	Ballast	G0110-5011	220-230-240-254V 50Hz
	Ballast	G0110-5003	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5071	50W (PXA070)
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast	G1251-1070V	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
80watt	Ignitor	G2200-5071	80W (PXA070)
	Ballast	G9000-0123	220-230-240V 50Hz
	Ballast	G0120-8013	220-230-240V 60Hz
	Capacitor	G4800-1000	80W 10µF
125watt	Ballast	G1252-0125V	220-230-240V 50Hz
	Ballast	G0121-2523	220-230-240V 60Hz
	Capacitor	G4800-1000	10µF
1x13watt	Ballast	G1155-0013A	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0016	13W (EFS120P)
1x18watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0016	18W (EFS120P)
1x26watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0016	26W (EFS120P)

503

Wattage	Spare	Partcode	Description
400watt	Ignitor (S.I.P)	G2200-5000	400W (PXA000)
	Lampholder	E0304-0035	E40
600watt	Ignitor (S.I.P)	G2200-5000	600W (PXA000)
	Lampholder	E0304-0035	E40

INDUSTRIAL

PROTECTA

Wattage	Spare	Partcode	Description
1x18watt	Ballast	G1114-0018A	240V 50Hz
	Ballast - Low Voltage	G8803-1840	110-254V 50/60Hz
	Em Ballast - Low Voltage	G8803-1840	110-254V 50/60Hz
	Starter	G5100-0012	18W (EFS 120)
	Capacitor	G4800-0400	4µF
	Inverter & Battery Pack c/w LED	G7358-0006	220-240V 50/60Hz
	Inverter & Battery Pack c/w LED (120V)	G7358-0008	110-130V 50/60Hz
2x18watt	Ballast	G1113-0036A	240V 50Hz
	Em Ballast - Low Voltage	G8802-1840	110-254V 50/60Hz
	Starter x 2	G5100-0012	18W (EFS 120)
	Capacitor	G4800-0400	4µF
	Inverter & Battery Pack c/w LED	G7358-0006	220-240V 50/60Hz
	Inverter & Battery Pack c/w LED (120V)	G7358-0008	110-130V 50/60Hz
1x36watt	Ballast	G1113-0036A	240V 50Hz
	Ballast - Low Voltage	G8803-1840	110-254V 50/60Hz
	Em Ballast - Low Voltage	G8803-1840	110-254V 50/60Hz
	Starter	G5100-0012	36W (EFS 120)
	Capacitor	G4800-0400	4µF
	Inverter & Battery Pack c/w LED	G7358-0006	220-240V 50/60Hz
	Inverter & Battery Pack c/w LED (120V)	G7358-0008	110-130V 50/60Hz
2x36watt	Ballast x 2	G1113-0036A	240V 50Hz
	Ballast - Low Voltage	G8802-1840	110-254V 50/60Hz
	Em Ballast - Low Voltage	G8802-1840	110-254V 50/60Hz
	Starter x 2	G5100-0012	36W (EFS 120)
	Capacitor	G4800-0800	8µF
	Inverter & Battery Pack c/w LED	G7358-0006	220-240V 50/60Hz
	Inverter & Battery Pack c/w LED (120V)	G7358-0008	110-130V 50/60Hz

STERLING II

Wattage	Spare	Partcode	Description
	Ballast	G1554-0018	240V 50Hz
1x18watt	Ballast (HF)	G8803-1840	120-280V 50/60 Hz
	Capacitor	G4800-0400	4µF
	Ballast	G1113-1036	240V 50Hz
2x18watt	Ballast (HF)	G8802-1840	120-254V 50/60Hz
	Capacitor	G4800-0400	4µF
	Ballast	G1113-1036	240V 50Hz
1x36watt	Ballast (HF)	G8803-1840	120-254V 50/60Hz
	Capacitor	G4800-0400	4µF
	Ballast	G1113-1036	240V 50Hz
2x36watt	Ballast (HF)	G8802-1840	120-254V 50/60Hz
	Capacitor	G4800-0400	4µF
	Ballast	G1113-1058	240V 50Hz
1x58watt	Ballast (HF)	G8801-5458	120-254V 50/60Hz
	Capacitor	G4800-0600	6µF
	Ballast	G1113-1058	240V 50Hz
2x58watt	Ballast (HF)	G8802-5458	120-254V 50/60Hz
	Capacitor	G4800-1200	12µF

ACCLAIM

Wattage	Spare	Partcode	Description
	Ballast	G8802-1840	110-254V 50/60Hz
	Em Ballast	G8802-1840	110-254V 50/60Hz
2x18watt	Inverter & LED Indicator	G7336-0109	220-240V 50/60Hz
	Inverter	G7336-0110	110-130V 50/60Hz
	Battery	G9000-0145	4Ah (180min)
	LED Indicator (only for 110-130V Inverter)	G9000-0147	N/A
	Ballast High Frequency	G8802-1840	110-254V 50/60Hz
	Inverter & LED Indicator	G7336-0109	220-240V 50/60Hz
2x36watt	Inverter	G7336-0110	110-130V 50/60Hz
	Battery	G9000-0145	4Ah Battery (180min)
	LED Indicator (only for 110-130V Inverter)	G9000-0147	N/A

CURIE

Wattage NON DIMMABLE	Spare	Partcode	Description
	Ballast	G8101-0203	220-240V 50/60Hz
2x18watt	Em Inverter	G7336-0109	240V 50Hz
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
	Ballast	G8102-0203	220-240V 50/60Hz
2x36watt	Em Ballast	G8101-2405	220-240V 50/60Hz
	Green LED Leads	G9000-0201	N/A
	Battery	G9000-0200	4Ah (180min)

CURIE CONTINUED

Wattage	Spare	Partcode	Description
NON DIMMABLE			
4x18watt	Ballast	G8102-2403	220-240V 50/60Hz
	Em Ballast	G8102-2404	220-240V 50/60Hz
	Green LED Leads	G9000-0201	N/A
	Battery	G9000-0200	4Ah (180min)
4x18watt (120V)	Ballast - Low Voltage	G8802-1840	120-254V 50/60Hz
	Em Inverter	G7336-0110	110V 50Hz
	Green LED Leads	G9000-0201	N/A
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
4x36watt	Ballast	G8102-2406	220-240V 50/60Hz
	Em Ballast	G8101-2405	220-240V 50/60Hz
	Ballast	G8102-0203	220-240V 50/60Hz
	Green LED Leads	G9000-0201	N/A
	Battery	G9000-0200	4Ah (180min)
4x36watt	(120V) Ballast - Low Voltage	G8802-1840	120-254V 50/60Hz
	Em Inverter	G7336-0110	110V 50Hz
	Green LED Leads	G9000-0201	N/A
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
DIMMABLE			
2x18watt	Ballast	G8101-1203	220-240V 50/60Hz
	Em Inverter	G7336-0109	240V 50Hz
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
4x18watt	Ballast	G8102-0403	220-240V 50/60Hz
	Em Inverter	G7336-0110	240V 50Hz
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
4x18watt (120V)	Ballast - Low Voltage	G8802-1841	120-254V 50/60Hz
	Em Inverter	G7336-0110	110V 50Hz
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
4x36watt	Ballast	G8102-1203	220-240V 50/60Hz
	Em Inverter	G7336-0109	240V 50Hz
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket
4x36watt (120V)	Ballast - Low Voltage	G8802-1841	120-254V 50/60Hz
	Em Inverter	G7336-0110	110V 50Hz
	Battery	G9000-0144	4Ah (180min)
	Battery Connection	G9000-0146	Socket

NEXLED

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NEXXUS

Wattage	Spare	Partcode	Description
50watt	Ballast	G1251-0050V	220-230-240V 50Hz
	Ballast (60Hz)	G0110-5003	220-230-240V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	50W (PXE070)
	Lampholder	E0373-5071	E27
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast (60Hz)	G1251-1070V	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W (PXE070)
	Lampholder	E0373-5071	E27
80watt	Ballast	G9000-0123	220-230-240V 50Hz
	Ballast (60Hz)	G0120-8013	220-230-240V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	N/A	N/A
	Lampholder	E0373-5071	E27
1x13watt	Ballast	G1155-0013A	240V 50Hz
	Capacitor	G4800-0400	4uF
	Starter	G5100-0012	13W (EFS120P)
	Lampholder	E0357-0026	G24q-1
1x18watt	Ballast	G1554-0018	18W 240v-50Hz
	Capacitor	G4800-0400	4µF
	Ignitor	N/A	N/A
	Starter	G5100-0012	18W (EFS120P)
	Lampholder	E0379-0044	G24q-2
1x26watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Ignitor	N/A	N/A
	Starter	G5100-0012	26W (EFS120P)
	Lampholder	E0379-0046	G24q-3
2x13watt	Ballast x 2	G1155-0013A	240V 50Hz
	Capacitor	G4800-0600	6uF
	Ignitor	N/A	N/A
	Starter x 2	G5100-0012	2x13W (EFS120P)
	Lampholder x 2	E0357-0026	G24q-1
2x18watt	Ballast x 2	G1554-0018	240V 50Hz
	Capacitor	G4800-0600	6uF
	Ignitor	N/A	N/A
	Starter x 2	G5100-0012 EFS120P	220/240V 50/60Hz
	Lampholder x 2	E0379-0046	G24q-3

800 SERIES

Wattage	Spare	Partcode	Description
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast	G1251-1070V	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G0210-7010	70W (ZRM.2ES)
	Lampholder	E0373-0043	E27
100watt	Ballast	G1158-0100A	220-230-240-254V 50Hz
	Ballast	G1158-1100A	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G0211-5010	100W (ZRM.6ES)
	Lampholder	E0304-0035	E40

800 SERIES

Wattage	Spare	Partcode	Description
150watt	Ballast	G1158-0150A	220-230-240-254V 50Hz
	Ballast	G9000-0102	220-230-240-254V 60Hz
	Ballast	G1191-0150A	220-230-240-254V 50Hz for 110-120V versions
	Ballast	G1191-1150A	220-230-240-254V 60Hz for 110-120V versions
	Capacitor	G4800-2000	20µF
	Ignitor	G0211-5010	150W (ZRM.6ES)
	Lampholder	E0304-0035	E40
250watt	Ballast	G1158-0250A	220-230-240-254V 50Hz
	Ballast	G1158-1250A	220-230-240-254V 60Hz
	Ballast	G1191-0250A	220-230-240-254V 50Hz for 110-120V versions
	Ballast	G1191-1250A	220-230-240-254V 60Hz for 110-120V versions
	Capacitor	G4800-3000	30µF
	Ignitor	G0211-5010	250W (ZRM.6ES)
	Transformer (110-120V)	G3005-0502	Low to High voltage
	Lampholder	E0304-0035	E40
400watt	Ballast	G1151-0400A	220-230-240-254V 50Hz
	Ballast (60Hz)	G9000-0130	220-230-240-254V 60Hz
	Ballast	G1191-0400A	220-230-240-254V 50Hz for 110-120V versions
	Ballast (60Hz)	G1191-1400A	220-230-240-254V 60Hz for 110-120V versions
	Capacitor x 2	G4800-2000	20µF
	Ignitor	G0211-5010	400W (ZRM.6ES)
	Transformer (110-120V)	G3005-0502	Low to High voltage
	Lampholder	E0304-0035	E40
500watt	Lampholder	E0304-0035	E40

MICRONEX/MAXINEX

Wattage	Spare	Partcode	Description
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast (60Hz)	G1251-1070V	220-230-240-254V 60Hz
	Ignitor	G2010-7010	70W (ZRM.2ES)
	Capacitor	G4800-1000	10µF
	Lampholder x 2	E0375-0006	RX7s
150watt	Ballast	G1191-0150A	220-230-240-254V 50Hz
	Ballast (60Hz)	G1191-1150A	220-230-240-254V 60Hz
	Ignitor	G0211-5010	150W (ZRM.6ES)
	Capacitor	G4800-2000	20 µF
	Lampholder	E0304-0035	E40
250watt	Ballast	G1191-0250A	220-230-240-254V 50Hz
	Ballast (60Hz)	G1191-1250A	220-230-240-254V 60Hz
	Ignitor	G0211-5010	250W (ZRM.6ES)
	Capacitor x 2	G4800-1500	15µF
	Lampholder	E0304-0035	E40
400watt	Ballast	G1191-0400A	220-230-240-254V 50Hz
	Ballast (60Hz)	G1191-1400A	220-230-240-254V 60Hz
	Ignitor	G0211-5010	400W (ZRM.6ES)
	Capacitor x 2	G4800-2000	20µF
	Lampholder	E0304-0035	E40

DEXLUX

Please contact technical sales for further information, techsupport@chalmit.com

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Wattage	Spare	Partcode	Description
600watt	Ignitor (S.I.P)	G2200-5000	600W (PXA000)
	Lampholder	E0304-0035	E40
1000watt	Ignitor (S.I.P)	G2200-5000	1000W (PXA000)
	Lampholder	E0304-0035	E40

ECLIPSE II

Wattage	Spare	Partcode	Description
50watt	HS Ballast	G1250-0050V	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W
	Timed Ignitor	G2200-5072	70W
70watt	MS Ballast	G0110-7028	240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W
	Timed Ignitor	G2200-5072	70W
80watt	MV Ballast	G9000-0123	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF
100watt	MS Ballast	G0111-0014	220/240V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-6400	100/400W
	Timed Ignitor	G2200-5401	100/400W
125watt	MV Ballast	G9000-0124	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF
150watt	MS Ballast	G1156-0150A	220/230/240/250V 50Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-6400	150W/250W/400W
	Timed Ignitor	G2200-5401	100/400W
250watt	MS Ballast	G1158-0250A	220/230/240/254V 50Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-6400	150W/250W/400W
	Timed Ignitor	G2200-5401	100/400W
250watt	MV Ballast	G9000-0125	220/230/240V 50Hz
	Capacitor	G4800-2000	20µF
400watt	MS Ballast	G1191-0400A	220/230/240/254V 50Hz
	Capacitor	G4800-2000	20µF
	Ignitor	G2200-6400	150W/250W/400W
	Timed Ignitor	G2200-5401	100/400W
400watt	MV Ballast	G9000-0128	220/230/240V 50Hz
	Capacitor	G4800-1000	10µF

ECLIPSE JUNIOR

Wattage	Spare	Partcode	Description
50watt	Ballast	G0110-5011	220-230-240-254V 50Hz
	Ballast (60Hz)	G0110-5003	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W
	Timed Ignitor	G2200-5072	70W
70watt	Ballast	G0110-7028	220-230-240-254V 50Hz
	Ballast (60Hz)	G1251-1070V	220-230-240-254V 60Hz
	Capacitor	G4800-1000	10µF
	Ignitor	G2200-5070	70W
	Timed Ignitor	G2200-5072	70W
80watt	Ballast	G9000-0123	220-230-240V 50Hz
	Ballast	G0120-8013	220-230-240V 60Hz
	Capacitor	G4800-1000	10µF
125watt	Ballast	G1252-0125V	220-230-240V 50Hz
	Ballast	G0121-2523	220-230-240V 60Hz
	Capacitor	G4800-1000	10µF
1x13watt	Ballast	G1155-0013A	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0012	13W (EFS120)
1x18watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0012	18W (EFS120)
1x26watt	Ballast	G1554-0018	240V 50Hz
	Capacitor	G4800-0400	4µF
	Starter	G5100-0012	26W (EFS120)

CHIEFTAIN II

Wattage	Spare	Partcode	Description
150watt	Ballast	G1191-0150A	220-230-240-254V 50Hz
	Ballast	G1191-1150A	220-230-240-254V 60Hz
	Ignitor	G2200-6400	150W (PAE400255)
	Capacitor	G4800-1500	15µF
250watt	Ballast	G1191-0250A	250W 220-254V 50Hz
	Ballast	G1191-1250A	250W 220-254V 50Hz
	Ignitor	G2200-6400	20W (PAE400255)
	Capacitor	G4800-3000	30µF

UNIVERSAL BOX

Wattage	Spare	Partcode	Description
400watt	Ballast x 2	G1256-0400	220-230-240-254V 50Hz Half Ballast
	Ballast x 2	G1256-1400	220-230-240-254V 60Hz Half Ballast
	Capacitor x 2	G4800-2000	20µF
600watt	Ballast	G1256-0600	220-230-240-254V 50Hz
	Ballast	G1256-1600	220-230-240-254V 60Hz
	Capacitor x 2	G4800-3000	30µF

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Wattage	Spare	Partcode	Description
1000watt (HS)	Ballast x 2	G1191-1000	220-230-240V 50Hz Half Ballast
	Ballast x 2	G1191-1000A	220-230-240V 60Hz Half Ballast
	Capacitor x 5	G4800-2000	20µF
1000W MBI	Ballast	G1511-100	220-230-240V 50Hz
	Ballast	G1511-1001	220-230-240V 60Hz
	Capacitor x 5	G4800-2000	20µF

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Wattage	Spare	Partcode	Description
1 x 7watt PL	Ballast	G1155-0009	240V 50Hz
	Lampholder	E0379-0042	G23
2 x 7watt PL	Ballast	G1155-0013A	240V 50Hz
	Lampholder	E0379-0042	G23

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COMMON LAMP TERMINOLOGY

HID	High Intensity Discharge	MBI	Metal Halide
CFL	Compact Florescent	HQI	Metal Halide
TH	Tungsten Halogen (Single Ended)	MBFU	Mercury Vapour
TL	Tungsten Halogen Linear (Double Ended)	MBTF	Blended Mercury Vapour
HPS	High Pressure Sodium	QL	Induction Lamp
SON-E	High Pressure Sodium (Eliptical)	LED	Light Emitting Diode
SON-T	High Pressure Sodium (Tubular)	GLS	General Lighting Service

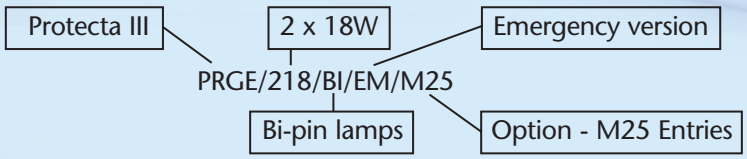
ORDERING INFORMATION

Catalogue Logic

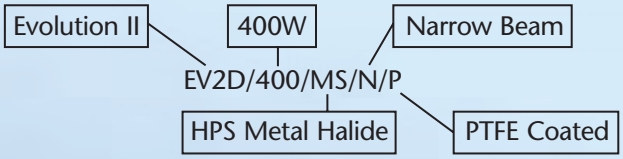
All Chalmit luminaires are identified and ordered using a standard catalogue logic that combines the standard catalogue number (Std Cat No.) and the options which are added as a suffix to the standard number.

Detailed below is an example of the logic and how to use it:

Example one: A Protecta, 2 x 18W, bi-pin emergency with M25 entries would be ordered as follows -



Example two: An Evolution II, 400W, Metal Halide, PTFE coated and narrow beam



For CSA, CEPEL and IEC Ex versions add the following suffix: /CSA, /CEPEL, /IEC

The Chalmit customer service team is trained to help you solve all your hazardous lighting requirements. In addition to progressing your order, Chalmit can assist you with any questions you may have regarding selection, installation and maintenance of Chalmit lighting products.

In order that we may provide you with the best possible service, it is important that the following information accompanies any enquiry or order.

1. **Catalogue number/description**
2. **Number of lamps, type and wattage**
3. **Supply voltage and frequency**
4. **Method of protection or ATEX Category**
5. **T rating and T ambient °C**
6. **Material and any special finish if required**
7. **Mounting arrangement**
8. **Any special requirements i.e. options, packing or delivery details.**
9. **Delivery date required.**
10. **Project name if known.**

Please note, Chalmit luminaires are not supplied with cable glands fitted. Chalmit luminaires are shipped as standard with a travel plug and Ex e blanking plugs if there are additional entries. If cable glands are required these should be ordered in addition to the luminaire, please contact sales for details.

It should be noted that Chalmit Lighting will only proceed with orders once written confirmation has been received. Quotation numbers if applicable should be stated on all orders.

If at any time you wish to progress the status of an order, it is vital that the sales order number is quoted in all correspondence. This can be found on your order acknowledgement which will be despatched to you on acceptance of your order.

Chalmit Lighting Standard Conditions of Sale will always apply. These are available on request and are printed on the rear of the order acknowledgement.

All luminaires shown in this catalogue are available as safe area luminaires for use in non-hazardous areas. These versions are ideal for adverse conditions where luminaires from standard / industrial lighting suppliers will not suffice.

Disclaimer

The technical and commercial information in this catalogue must be used as guidance only, Chalmit Lighting does not accept any liability arising from it's use.

A SELECTED RANGE OF LAMPS SUITABLE FOR USE IN CHALMIT PRODUCTS

In addition to luminaires, Chalmit can supply all lamps as part of an order. Listed below are details of a selection of quality lamps which are available from stock or on short delivery times from Chalmit in Glasgow. The list contains some common lamps and others that are not so easily available from stockists.

Part code	Lamp type	Wattage	Cap/Colour
Fluorescent			
U4496-0018	Fluorescent Bi-pin T8 standard	18	G13 White
U4496-0036	Fluorescent Bi-pin T8 standard	36	G13 White
U4496-0058	Fluorescent Bi-pin T8 standard	58	G13 White
U4684-1018	Fluorescent Mono-pin T8 standard	18	Fa6 Cap White
U4684-1036	Fluorescent Mono-pin T8 standard	36	Fa6 Cap White
FLBI/018/G13/T8/LL/UL	Fluorescent T8 long life (Aura)	18	G13 White
FLBI/036/G13/T8/LL/UL	Fluorescent T8 long life (Aura)	36	G13 White
FLBI/058/G13/T8/LL/UL	Fluorescent T8 long life (Aura)	58	G13 White
High Pressure Sodium			
U6393-0070	SON/T standard	70	E27
U6394-0150	SON/T standard	150	E40
U6394-0250	SON/T standard	250	E40
U6394-0400	SON/T standard	400	E40
U6394-0601	SON/T standard	600	E40
U6993-0070	SON/T Twin arc	70	E27
U6994-0150	SON/T Twin arc	150	E40
U6994-0250	SON/T Twin arc	250	E40
U6994-0400	SON/T Twin arc	400	E40
U6193-0050	SON/E Standard	50	E27
U6193-0070	SON/E Standard	70	E27
U6194-0100	SON/E Standard	100	E40
U6194-0150	SON/E Standard	150	E40
U6194-0250	SON/E Standard	250	E40
U6194-0400	SON/E Standard	400	E40
Metal Halide			
U5494-0070	MBI/T	70	E27
U5494-0100	MBI/T	100	E40
U5494-0150	MBI/T	150	E40
U5494-0250	MBI/T	250	E40
U5494-0400	MBI/T	400	E40
Tungsten-Halogen			
U3095-0500	Double Ended	500	R75
U3095-1000	Double Ended	1000	R75
U3095-0500	Single Ended, Double Ended	500	E40
Mercury Vapour			
U5183-0050	ES MBFU	50	E27
U5183-0080	ES MBFU	80	E27
U5183-0125	ES MBFU	125	E27
U5184-0125	GES MBFU	125	E40
U5184-0250	GES MBFU	250	E40
U5184-0400	GES MBFU	400	E40

The Metal Halide lamps are for use on HPS control gear. For detailed information on the selection of Metal halide lamps refer to the lamp section of the technical introduction.

We are pleased to offer help with the selection of lamps for your Chalmit luminaires. Please contact our sales department.

Chalmit luminaires use the same control gear for MBI and SON-T lamps.

MATRIX OF LAMP TYPES TO USE WITH CHALMIT LUMINAIRES

The matrix below provides an easy cross reference guide to the different lamp types that can be used with individual Chalmit products.

	SON-E (HPS)	SON-T (HPS)	SON-TD (HPS D/Ended)	MBI-E (Metal Halide)	MBI-T (Metal Halide)	MBI-TD (Metal Halide)	T-HAL Single Ended (Tungsten Halogen)	T-HAL Double Ended (Tungsten Halogen)	GLS (General Lighting Service)	MBTF (Mercury Blended Tungsten Filament)	MBFU (Mercury Vapour)	Bi-Pin Fluorescent	Mono-Pin Fluorescent	4-Pin PL (Compact Fluorescent)	QL	LED (light Emitting Diode)
Protecta III												●	●			
Protecta III Stainless Steel												●	●			
Acclaim												●				
Curie Elite												●				
Lomond												●				
Evolution II		●			●		●	●								
Evolution		●			●		●	●								
Evolution Jnr		●			●			●								
Nevis	●			●					●	●	●			●	●	
216	●								●		●			●		
238	●			●					●	●	●				●	
261	●			●					●		●					
261E & 723		●			●	●										
NedLED																●
Sterling II												●				
Sterling II Stainless Steel												●				
Protecta Zone 2												●				
844		●														
854		●			●		●									
864					●											
Micronex			●		●											
Maxinex		●			●											
Nexxus II																●
Nexxus		●			●				●	●	●			●		
Eclipse II	●	●		●	●						●					
Eclipse Jnr	●	●		●	●				●		●			●		
503		●			●		●									

With the impending EU withdrawal of Incandescent (GLS) lamps from sale, users should be aware that by January 2011,GLS lamps will no longer be available in any wattages.

HAWKE – CABLE GLANDS

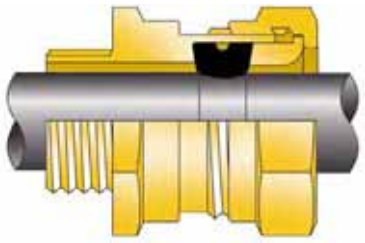
Chalmit Lighting is a division of Hubbell Ltd and part of the Hubbell group of companies. Through its market leading brands, Hubbell can also offer a range of related electrical connection and lighting products.

Most types of hazardous and industrial lighting requires a secure interface between the luminaire and the electrical supply cable. Chalmit Lighting therefore recommends the use of Hawke International cable glands.
The following is a selection from the range of Hawke glands available for further information visit **www.ehawke.com**

501/421

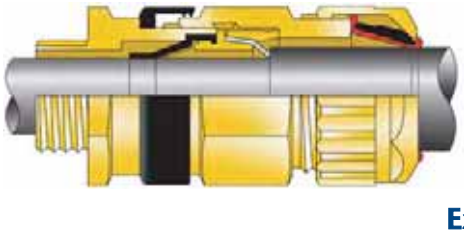
The 501/421 cable gland provides a seal on the outer cable sheath and is intended for use on non-armoured elastomer and plastic insulated cables.

The cable gland is dual certified EExd and EExe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.



Suitable for restricted breathing applications.

501/453/UNIVERSAL

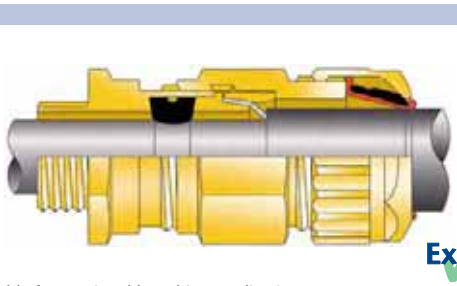


The 501/453/Universal cable gland provides a flameproof seal on the inner cable sheath and an IP seal on the outer sheath. It utilises reversible armour clamp (RAC) technology and can therefore accommodate all types of armoured or braided cables (W, X and Z). An outer deluge boot also helps prevent moisture ingress (DTS-01). The cable gland is particularly suitable for use on 'soft' inner cable sheaths that exhibit "Cold Flow" characteristics as the inner diaphragm seal will not damage the cable bedding. The cable gland is dual certified EExd and EExe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.

501/453/RAC

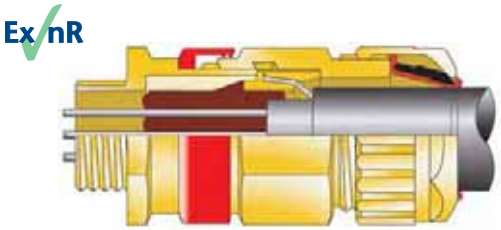
The 501/453/RAC cable gland provides a flameproof seal on the inner cable sheath and an IP seal on the outer sheath. It utilises reversible armour clamp (RAC) technology and can therefore accommodate all types of armoured or braided cables (W, X and Z).

The cable gland is dual certified EExd and EExe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.



Suitable for restricted breathing applications.

ICG 653/UNIVERSAL



Suitable for restricted breathing applications.

The ICG 653/Universal cable gland provides a flameproof barrier seal on the individual insulated cable cores and prevents entry of the products of an explosion into the cable's surrounding environment. It also provides an IP seal on the cable outer sheath. The cable gland is suitable for cables that are not effectively filled and for cables with a 'soft' inner sheath that exhibit "Cold Flow" characteristics.
The cable gland is dual certified EExd and EExe and is suitable for installations in Zone 1 (21) and Zone 2 (22) hazardous areas, where the enclosure is greater than 2 litres in volume and contains an ignition source and requires IIC apparatus.

ATEX

Hawke International ATEX approved connectors are ideal for explosive environments commonly found in Oil and Gas exploration, production and process plants. Their features, however, also offer numerous benefits in explosive dust environments as well as harsh and hostile non-explosive applications where temporary but safe disconnection of power is critical.
Hawke International's Ex range of connectors permit the safe and rapid service, repair and replacement of key plant, provide quick connection to temporary equipment and greatly reduce hook-up time in capital-intensive processes.
The Ex range of connectors cover three main application areas: Instrumentation, control and power.
For a guide as to which Ex connector may be best suited to an individual application the table below outlines the main variables.

SELECTION OVERVIEW

Connector Type	Minimum Number of Pins	Maximum Number of Pins	Minimum Conductor Size	Maximum Conductor Size	Maximum Voltage	Maximum Current (amps)	Live Demate
Instrum Ex	4	8	0.14	2.5	250V	10	✓
Control Ex	3	60	1.5	35	660V	125	✗
Power Ex	1	4	50	630	750V*	780	✗

* Other voltages available on special request.

INSTRUM Ex

This revolutionary design allows the live de-mating of signal and power in hazardous areas safely and quickly. The Instrum Ex connector is available with two insert options: the 4-way option will accept cores ranging between 0.5mm² and 2.5mm² and can operate up to a maximum current of 10A at 250V AC. The 8-way option, designed predominantly for Ethernet applications, will accept cores ranging between 0.14mm² and 0.37mm²
and can carry 1A at 250V. Instrum Ex connectors include an integral Hawke cable gland for easy termination of both armoured and un-armoured cables.

CONTROL Ex

The 3rd generation of Control Ex connectors include many features and refinements as a result of consumer feedback. And are suitable for control and low/medium power applications. The robust stainless steel body can hold up to 60 contacts and will accept conductor sizes ranging between 0.5mm² and 35mm², operating up to 125A and 600V. Further information on recommended cable glands for use with the ControlEx connectors can be found at www.ehawke.com

POWER Ex

The Power Ex range of connectors have been designed specifically for the extremely demanding requirements of higher power applications. Inserts are available with 1 to 4 contacts with a conductor acceptance range of between 50mm² and 630mm² operating up to 125A and 660V.

There are several innovative features common across the range of Hawke ATEX connectors. Despite their highly advanced design and technical features, the range is extremely simple to use and quick to terminate.

Impossible to cross mate

The unique mechanical keying system prevents contact damage and ensures safe use by eliminating the possibility of misconnection of circuits. Machined key and keyway also ensures connector alignment.

High reliability contacts

Each pin and socket is fitted with multilam technology to ensure reliable low resistance connection on each coupling.

Ingress and deluge protected

All Hawke ATEX connectors meet the requirements of IP66 and IP67 to IEC60529.
They are also deluge protected to DTS01 offering long term protection in onerous environments.

Robust design

Designed and constructed for the most demanding environments, Hawke connectors are durable in almost any environment, requiring no routine maintenance to ensure continued performance.

GRP RANGE

Features

The Ultimate in Robust GRP Construction
Designed to withstand impact resistance up to 20Nm.
GRP Construction provides a high degree of resistance to corrosive atmospheres.

Integral Steel Earth Continuity Plate (PL7 Series)
Provides internal/external earth continuity through to the two external mounting feet.

Anti-Static Properties
Removes the risk of ignition sources through static induced sparking.
Insulation Resistance in accordance with
EN 50014 : 1998, which does not exceed 1 G .

External Mounting Feet
Eliminates the need to remove the lid when mounting the enclosure on the wall.

Corrosion Resistant Stainless Steel Lid Fixing Screws with Nylon Retaining Washers
Prevents loss of screws during assembly and maintenance.

One Piece Durable Captive Moulded Silicone Gasket
DTS01 deluge protection witnessed by EECS.
Provides Ingress Protection to IP66.
Optimum performance at low and high temperature extremes.

Stainless Steel Rating Label
Highly durable and corrosion resistant.

STAINLESS STEEL RANGE

Features

Robust Stainless Steel Construction
Enclosure material thickness ranges between 1.2 - 2.0mm with 3mm thick gland plates.
Durable stainless steel rating label.

Electropolished Surface Finish
Provides high levels of corrosion resistance.

Softer Finished Rounded Edges
Safer manual handling of enclosure and gland plates.

Rigid Slotted External Mounting Feet
Allows enclosure to be hung onto the structure.

Corrosion Resistant Stainless Steel Lid Fixing Screws with Nylon Retaining Washers
Prevents loss of screws during assembly and maintenance.

Superior Silicone Sponge Gasket
DTS01 deluge protection witnessed by EECS.
Provides ingress protection to IP66.
Durable with excellent UV stability and chemical resistance.
Good chemical resistance - EMC mesh option.

Extensive Range of Enclosure Sizes Available
Nine enclosure sizes available. Sizes range from 153 x 233 x 130 to 740 x 1000 x 210.
Gland plates offered on two side faces and bottom face of each enclosure.

EZE SERIES STAINLESS STEEL

- Better access for faster installation, easier inspection and on-site modification.
- Solid back plate and base frame with a removable clamshell style lid.
- Seals shielded from the environment.
- Clip-in quick release gland plate.
- Under-wiring possible.
- Superior Silicone Compression Gasket.
- Large Terminal Capacity.

KILLARK®

ELECTRICAL CONSTRUCTION PRODUCTS

Killark is a leading manufacturer of NEC electrical construction products for standard, harsh and hazardous installations, The company has over 85 years of manufacturing experience and is a major participant in the OEM, commercial and industrial construction material markets.

The Killark range encompasses industrial and explosion proof fittings in both iron and aluminium including: HID & fluorescent lighting, emergency lighting, floodlights, enclosures & controls, plugs and receptacles, motor starters and distribution equipment.

Killark became a division of Hubbell in 1985 and since then, increased levels of capital investment have funded major new product initiatives enabling the group to compete worldwide with an extensive electrical construction product range covering, conduit raceway fittings, junction boxes, enclosures, standard and custom control assemblies, lighting fixtures as well as plugs and sockets.

As part of Hubbell, the strengths of Killark and Chalmit Lighting are now combined. This partnership has created the largest, most comprehensive range of lighting products and associated apparatus for hazardous locations available within the global market.

Hubbell and Killark are well represented on Codes and Standards committees in the US, Canada, Mexico and internationally. This affords the most cost competitive solutions to be offered to user requirements on a world wide basis, regardless of locality or installation constraints.

Both companies have reputations for customer specific solutions to complex and challenging hazardous location requirements, utilising proven designs and value added engineering input, and these solutions are enhanced by access to comprehensive laboratory facilities. In house testing laboratories allow product development efforts to continually support new product development and solutions to specific user defined requirements.

With a Total Quality Management programme and ISO 9001:2000 accreditation, Killark and Chalmit Lighting are dedicated to meeting customer needs, with engineering solutions, new product development and on-time delivery in every phase of the project. This underlines an already proven ability to supply lower cost total system solutions and savings over the entire lifetime of a project.

For further information on this NEW expanded range of products or to obtain a dedicated Killark brochure, simply refer to your usual Chalmit Lighting personnel. Photometric data on the Killark range is also available from the Chalmlite™ lighting design software.

A4802 UL REGISTERED FIRM ISO 9001
KILLARK

HUBBELL®

OVERVIEW

The core business of Chalmit centres on hazardous area lighting, both offshore and land based, as well as heavy industry and marine installations. The lighting design techniques for such wide and varied applications differ accordingly and are something which Chalmit has developed expertise in over the past 25 years.

CHAMLITE ™

Chalmit have developed a user friendly programme to allow our customers the freedom of producing their own lighting designs. This package, CHALMLITE™ is free of charge and allows users the ability to design lighting layouts that range from very simple to extremely complex.

CHALMLITE™ utilises a simple Windows-based user interface making it easy to use. The package now includes interior, exterior and aisle lighting quantity estimators allowing luminaire quantities to be determined quickly for budgetary purposes prior to a detailed design being done at a later date.

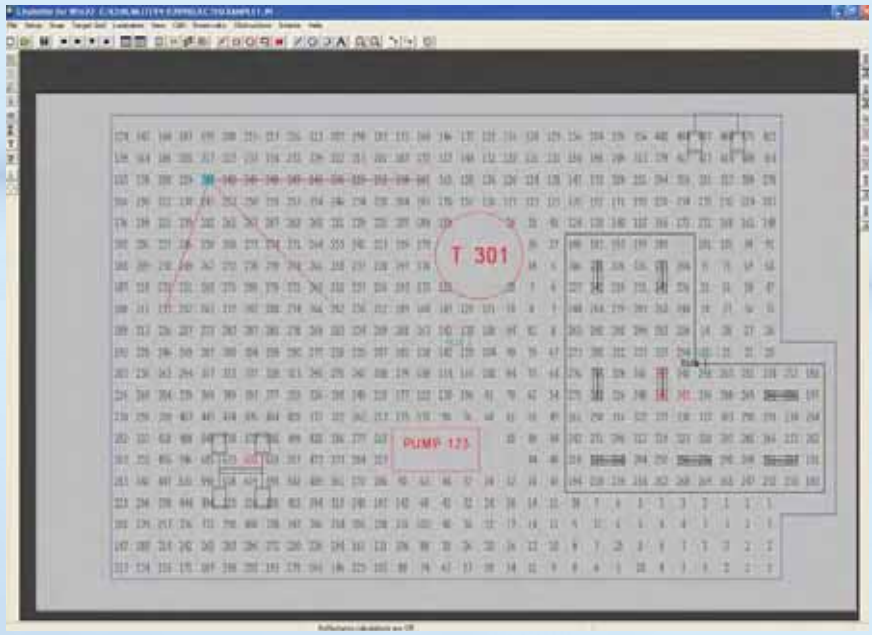
Some key features of CHALMLITE™ include:

- The incorporation of interior and exterior components in a single scheme
- Ability to account for shadowing and effects of reflection
- Shortcut icons for:
  - Turning individual fittings on/off or assess in emergency mode
  - Move, change or delete luminaires easily
  - Identify individual fittings
  - Re-size icons to suite the scale of your project
- Use scrolling wheel mouse to zoom in/out
- Import and export to CAD packages (DXF format)
- Print to a pdf or hardcopy (A0 to A4 sizes)
- Ability to produce Isolux 'footprint'

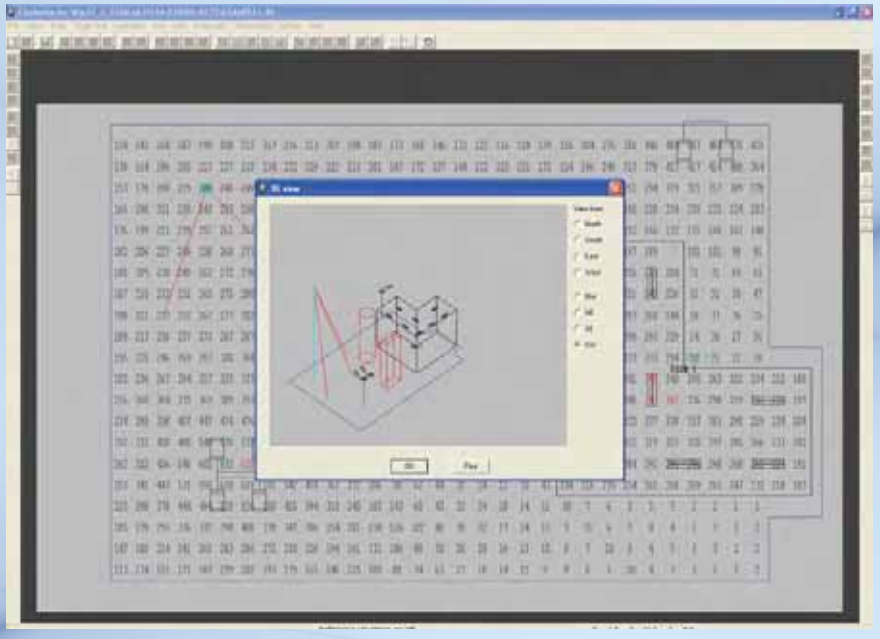
DESIGN

Chalmit also offers a free lighting design service. Designs created can be interfaced with actual installation AutoCAD drawings to build up sophisticated lighting presentations. Customers requiring further details of this service or of the Chalmlite Lighting design software should contact their nearest Chalmit Sales Engineer or Head office Lighting Applications.

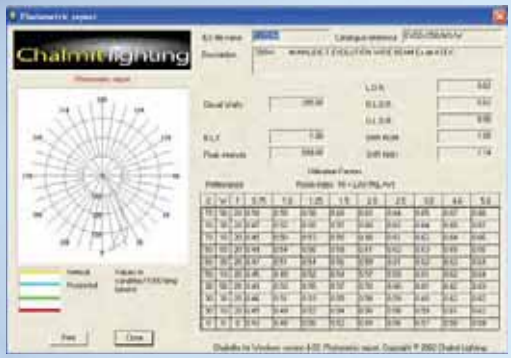
Chalmit Lighting is totally committed to the promotion of good and efficient lighting practices and is an active member of the Lighting Industry Federation who continuously strive to raise the standards of safety, performance and education in lighting.



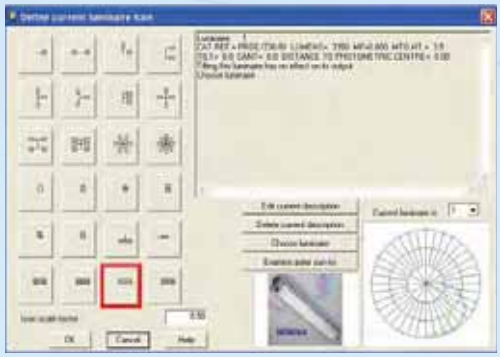
Sample lighting scheme



3D view of scheme



Photometric data



Icon method for selecting luminaires

QUALITY AND APPROVALS

Chalmit Lighting offers both safety and security.

Chalmit luminaires can be specified with complete confidence. The company has been assessed by BSI for many years and is ISO 9001:2008 compliant. Chalmit has also been assessed in accordance with EN 13980 for products manufactured to ATEX.

In addition to certification to British and CENELEC standards Chalmit also holds product approvals to Canadian (CSA), Russian (GOST R), China, Brazilian (CEPEL) and international (IECEx) standards .

Chalmit uses third party assessment for the provision of lighting design and environmental test data.

PRODUCT INNOVATION

Chalmit has attained a position of market pre-eminence through a rigorous programme of continuous product development. This has resulted in products being the first to use a concept which later became the accepted “state of the art”.

The employment of the the latest technology in conjunction with emerging light sources and controls, and using computer aided design allied to the latest in photometric and mechanical test techniques underpins Chalmit’s ability to produce internationally accepted products. Utilising the latest in CNC and manufacturing technology ensures that the quality of Chalmit luminaires is assured every time.

TECHNICAL SUPPORT

From the centre of excellence in Glasgow, Scotland, and our operations around the world, clients can be assured of our extensive technical and after sales support.

This service encompasses application advice, advanced Windows-based lighting design software and informed guidance on the selection, installation and maintenance of luminaires. Chalmit provides the full back up service expected from a major international supplier and the immediately available knowledge covers both hazardous and other applications. This results in a breadth of expertise that can solve both routine and complex problems arising in lighting applications.

techsupport@chalmit.com

THE COMPLETE SOLUTION

Chalmit Lighting offers the complete solution to all your lighting needs. We can claim to be a truly international business and with a network of agents and distributors in over 40 countries world wide we have an enviable reputation for a world class service.

Also based in Glasgow is the Hubbell sister company Transtar. Transtar specialise in the design and manufacture of fluorescent and HID lighting control gear. The company is also BSI certified ISO 9001:2008 with many products carrying the Kitemark. This association gives Chalmit the unique ability to specify ballasts that are tailored to meet the different requirements of individual luminaires. Upon request, Transtar can also offer custom ballast design services.

As well as drawing from our own and other Hubbell Harsh & Hazardous group company resources, we have well established links with other lighting and lamp manufacturers. This position within the lighting industry means that Chalmit can offer a complete package of lighting for end users, large and small projects, and for any application which calls for a diverse range of lighting products.

NOTES

Chalmit Lighting

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Chalmit Lighting A leading supplier of Hazardous Area, Industrial and Marine lighting products.

Your Distributor is;

HUBBELL®

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