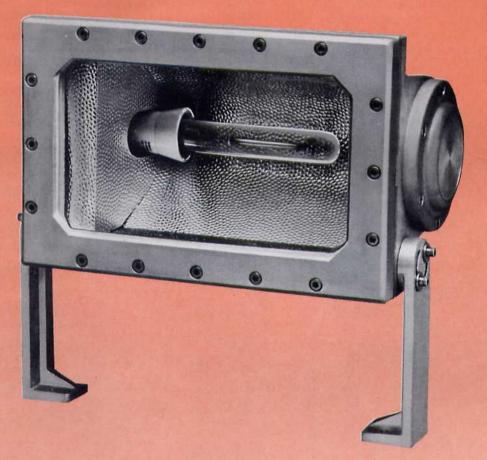


443-447 Hillington Road, Glasgow G52 4QW, Scotland, U.K. Telephone: 041-882 5553 041-882 3318

Telex: 779378 CHALMT G Fax: 041-883 3704

# ZONE 1 HAZARDOUS AREA LIGHTING RANGE

No. 284 600 watt SON/T





No. 206 - 70 watt SON



NEW 261 - 400 watt SON/R



No. 216 - 70 watt SON



Lighting for Zone 1 hazardous areas demands high standards of design and manufacture.

No one reaches higher technical specifications than CHALMIT. Our range of Zone 1 luminaires offers the highest standards of construction in the Industry. No other manufacturer can offer such total reliability and flexibility combined with the ability to operate in extremes of temperature and corrosive environments.

CHALMIT Zone 1 luminaires are operating efficiently throughout the world in some of the most hazardous and arduous environments known to lighting. Our reputation for quality and reliability has led to CHALMIT floodlights being used on over 90% of all North Sea oil and gas platforms.

#### CHALMIT HIGH INTENSITY FLOODLIGHT Mk II (EEx de)



The CHALMIT Mk II High Wattage Floodlight is of superb construction incorporating new design features.

Manufactured from corrosion resistant aluminium alloy LM6, this latest floodlight is fully weatherproof to IP67 and of reduced weight. For High Pressure Sodium the luminaire can be supplied with an integral ignitor. All other control gear is housed in a separate CHALMIT 700 Series Control Gear Box. The integral ignitor allows control gear to be mounted further from the floodlight and also eliminates the requirement for expensive high voltage cable. Having remote control gear eliminates the likelihood of it overheating which can occur in high wattage Zone 1 luminaires with internal control gear. The CHALMIT method of construction results in low maintenance and permits the floodlight to operate in lower temperature classifications in an ambient of up to 40°C.

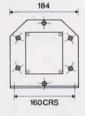
For ease of installation the floodlight is now supplied with Exe entries allowing the use of a wide variety of cable and glands.

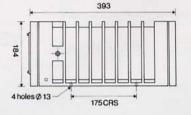


SPECIF	SPECIFICATION—FLOODLIGHT				
TYPE OF PROTECTION	EEx de — Flameproof				
AREA CLASSIFICATION	Zone 1 and 2 Apparatus Groups IIA and IIB				
APPARATUS STANDARD	BS.5501 Part 1, 5 and 6 EN50 014 EN50 018 EN50 019				
CERTIFICATE	BASEEFA No. Ex 88 B 1033				
ENCLOSURE	Aluminium Alloy LM6 or Gun Metal LG2; Heavy duty toughened glass window				
REFLECTOR	High purity anodised aluminium				
ENTRY	Via 2 x 20 mm tapped Exe entries. (1 plugged)				
TERMINATION	Incoming terminal suitable for up to 4 mm <sup>2</sup> cable				
INSTALLATION	Via foot mounting brackets				
CONTROL GEAR	See 700 Series Control Gear Box. Integral Ignitor for H.P.S.				
RELAMPING	Via removable End Cover				
PROTECTION	IP 67				

SPECIFICATION-	CONTROL GEAR BOX 700 SERIES
TYPE OF PROTECTION	EExd — Flameproof
AREA CLASSIFICATION	Zone 1 and 2 Apparatus Groups IIA and IIB
APPARATUS STANDARD	BS.5501 Part 5, (EN50 0018) BS.4683 Part 2
CERTIFICATE	BASEEFA Ex 821225 BASEEFA Ex 82226
ENCLOSURE	Aluminium Alloy LM6 or Gun Metal LG2 (P.T.F.E. coating available)
ENTRY	Direct Entry 3 x 20 mm or 3 x 25 mm (1 Plugged)
TERMINATION	Incoming terminals suitable for looping up to 4 mm <sup>2</sup> cable
BALLAST	Tapped
CAPACITOR	Power Factor Correction to a Maximum of 0.85 LAG
PROTECTION	IP 67
TEMP. CLASSIFICATION	T6, 50°C









		ZONE	1 HIGH INTEN	ISITY FLOODLIG	НТ	ORDE	R REF.
LAMP	WATTS	VOLTAGE	LUMENS	TEMP CLASS	MAX AMB.	FLOODLIGHT	CONTROL GEAR BOX
SON	150	210-250V 50Hz 220-270V 60Hz	13850	T4	40	286/150	701/150
SON	250	210-250V 50Hz 220-270V 60Hz	24800	ТЗ	40	286/250	701/250
SON	400	210-250V 50Hz 220-270V 60Hz	46500	Т3	40	286/400	701/400
SON/T	150	210-250V 50Hz 220-270V 60Hz	14350	T4	40	284/150	701/150
SON/T	250	210-250V 50Hz 220-270V 60Hz	27000	ТЗ	40	284/250	701/250
SON/T	400	210-250V 50Hz 220-270V 60Hz	48000	Т3	40	284/400	701/400
SON/T	600	210-250V 50Hz 220-270V 60Hz	74000	ТЗ	40	284/600	702/600
MBFU	250	210-250V 50Hz 220-270V 60Hz	12000	ТЗ	40	286/250M	700/250
MBFU	400	210-250V 50Hz 220-270V 60Hz	20400	ТЗ	40	286/250M	709/400
T.HAL	500	110/130, 200/240, AC/DC	9500	Т3	40	269/500	Not reqd.
T.HAL	1000	110/130, 200/240, AC/DC	22000	T2	40	269/1000	Not reqd.

Note: For 110/130 volts additional Zone 1 Transformer box required, HPS and MBFU only

Maximum Ambient of 50°C available on request.

#### LIGHT DISTRIBUTION

Two types of reflector can be fitted to the floodlight and with the range of lamp sources available can offer a wide selection of light output and distributions. Photometric Data available on request.

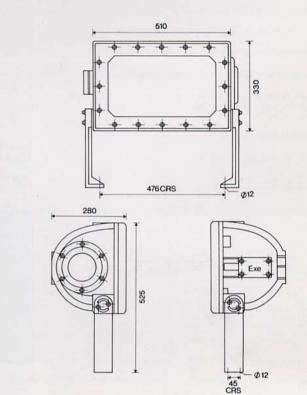
### ACCESSORIES - FLOODLIGHT

- Wire Guard for added protection
- Anti-glare Shield
- P.T.F.E. protective coating
- Pole Mounting Bracket
- Swinging Jib Bracket

### ACCESSORIES – CONTROL GEAR BOX

- P.T.F.E. protective coating
- Cable Glands for direct entry terminations

WEIGHT			
FLOODLIGHT	CONTROL GEAR BOX		
Aluminium 33 Kg	Aluminium 23 Kg		
Gun Metal 101 Kg	Gun Metal 56 Kg		



#### CHALMIT MINI-FLOODLIGHT (EEx de)



Where high levels of lighting are required from low mounting heights the Chalmit Mini-Flood is ideal.

Manufactured from Aluminium Alloy LM6 with a protection rating of IP67 the luminaire will give long maintenance free operation in very hostile environments.

To reduce installation time and costs an increased safety (Exe) terminal chamber is fitted eliminating the requirement for expensive barrier glands.

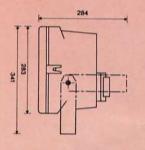
This highly versatile luminaire can also be supplied with a floor stand for Portable/Temporary lighting on a range of a.c. or d.c. voltages from 25-240v.

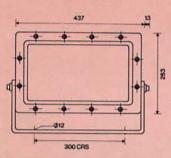
The Mini-Flood offers many advantages over Fluorescent luminaires;

- High lumen efficiency
- Excellent control of light on working areas
- Long lamp life and high lumen maintenance via use of HPS
- Protection IP67
- Compact size, easy to handle and store
- Highly resistant to damage and corrosion
- Looping facility standard
- Wide variety of lamps and light distributions

#### **ACCESSORIES**

- Post Mounting Bracket
- P.T.F.E. protective coating
- Protective Wire Guard
- Floor Stand for use as portable/temporary lighting







	SPECIFICATION
TYPE OF PROTECTION	EEx de Flameproof
AREA CLASSIFICATION	Zone 1 and 2 Apparatus Groups IIA and IIB
APPARATUS STANDARD	BS.5501 Part 1, EN 50 014 Part 5, EN 50 018 Part 6, EN 50 019
CERTIFICATE	BASEEFA EX 86 B 1235
ENCLOSURE	Aluminium Alloy LM6 to BS.1490 or Gun Metal LG2 to BS.1400. (P.T.F.E. Coating is also available). Toughened glass window.
ENTRY	2 x 20mm Metric tapped Exe entries as standard Also available 25mm metric or PG 16 to DN 40430
TERMINATION	Incoming terminals suitable for looping up to 6 mm <sup>2</sup>
INSTALLATION	Stirrup Mounting
CONTROL GEAR	Internal — Easily replaceable
PROTECTION	IP 67
RELAMPING	Via removable front cover Anchor chain fitted to retain cover when relamping
PHOTOMETRIC DATA	Available on request

LAMP	WATTS	VOLTAGE	LAMP- HOLDER	TEMP CLASS	MAX AMB.	ORDER REF.
T/HAL	100	120/240V AC/DC	R7s	13	50	203/100
T/HAL	150	25/120/240V AC/DC	R7s	Т3	50	203/150
T/HAL	200	30/120/240V AC/DC	R7s	ТЗ	50	203/200
T/HAL	250	120/240V AC/DC	R7s	Т3	50	203/250
T/HAL	300	120/240V AC/DC	R7s	тз	40	203/300
T/HAL	300	120/240V AC/DC	E40	тз	50	209
SON/T	70	210-250V 50HZ 220-270V 60HZ	E27	тз	50	204
SON/TD	70	210-250V 50HZ 220-270V 60HZ	RX7s	ТЗ	50	205
SON	70	210-250V 50HZ 220-270V 60HZ	E27	ТЗ	50	206
МВІ	70	210-250V 50HZ 220-270V 60HZ	RX7s	ТЗ	50	205/M

WEIGHT				
ALUMINIUM	LM6	20Kg		
GUN METAL	LG2	51Kg		



Floor Stand for portable/temporary lighting

### CHALMIT 261 HIGH OUTPUT WELLGLASS (EEx de)



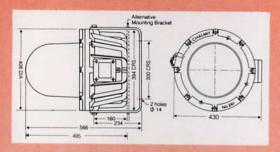
LM6 with an ingress protection of IP67, the 261 is fully weatherproof giving long maintenance free operation in hostile environments such as offshore oil & gas platforms, petrochemical plants etc.

The luminaire is certified to the most recent British and European standards specifying the highest level of safety. Supplied with internal control gear for discharge sources the 261 can operate in any position.

The 261 features an increased safety (Exe) terminal chamber incorporating looping facilities allowing the use of a wide range of cables & glands. This makes installation much easier than is usually found with Exd luminaires.

#### ACCESSORIES

Protective Wire Guard



WEIGHT	ALUMINIUM	GUN METAL
HID	28KG	64KG
GLS	22KG	58KG

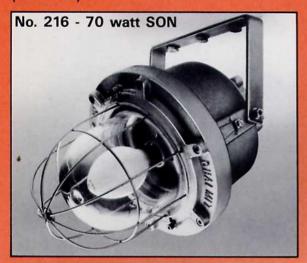


SPECIFICATION				
TYPE OF PROTECTION	EEx de.			
AREA CLASSIFICATION	Zone 1&2 apparatus gas groups IIA & IIB			
APPARATUS STANDARD	B.S. 5501: 1977 Part 1 EN50.014 Part 5 EN50.018 Part 6 EN50.019			
CERTIFICATION	BASEEFA Ex 89B 1008			
ENCLOSURE	Aluminium alloy LM6 to B.S. 1490 or gun metal LG2 to B.S. 1400 PTFE coating available for aluminium on request. Stainless steel 316S fastenings used throughout.			
INTERNAL REFLECTOR	High purity anodised aluminium.			
ENTRY	Two M20 x 1.5 tapped entries as standard.			
GLANDS	Must maintain IP rating of enclosure. Plastic glands & those for MICS should be Exe approved.			
TERMINATION	Suitable for looping up to 2.5 mm <sup>2</sup> as standard. Looping up to 6 mm <sup>2</sup> available as alternative.			
INSTALLATION	Stirrup or optional mounting strap.			
CONTROL GEAR	Internal; easy access & capable of being replaced.			
RELAMPING	Via removable lampglass assembly. Anchor retaining chain fitted as standard.			
GLASS	Toughened Wellglass.			
BURNING POSITION	Universal.			
PROTECTION	IP67 to B.S. 5490			
POWER FACTOR CORRECTION	Incorporated to 0.85 minimum for discharge lamps.			
LAMPHOLDER	E40 Porcelain			
PHOTOMETRIC DATA	Available on request.			

ORDER REF	VOLTAGE	LAMP LUMENS 2000 HRS	TEMP CLASS	MAX AMBIENT TEMPERATURE (MIN -20 C)
261/150 SON	200-250V 50HZ 220-270V 60HZ	13850	T4	40
261/250 SON	200-250V 50HZ 220-270V 60HZ	24800	T4	40
261/400 SON	200-250V 50HZ 220-270V 60HZ	46500	T4	40
261/250 SON/R	200-250V 50HZ 220-270V 60HZ	18400	T4	40
261/400 SON/R	200-250V 50HZ 220-270V 60HZ	33000	T4	40
261/250 MBFU	200-250V 50HZ 220-270V 60HZ	12000	T4	40
261/400 MBFU	200-250V 50HZ 220-270V 60HZ	20400	T4	40
261/250 MBFR	200-250V 50HZ 220-270V 60HZ	11000	T4	40
261/400 MBFR	200-250V 50HZ 220-270V 60HZ	18000	.T4	40
261/250 MBI	200-250V 50HZ 220-270V 60HZ	16000	T4	40
261/400 MBI	200-250V 50HZ 220-270V 60HZ	27000	T4	40
261/300 GLS	110/240 AC/DC	4300	T4	40
261/500 GLS	110/240 AC/DC	7700	T4	40

NOTE: i) Lumens shown are for guidance and may vary between lamps of different

#### CHALMIT 216 LOW WATTAGE WELLGLASS (EEx de)



A robust compact pendant ideal for localised lighting. BASEEFA & EN certified for use with HID and GLS lamps.

The luminaire is manufactured from corrosion resistant Aluminium Alloy LM6 and is protected to IP67 guaranteeing long maintenance free operation in hostile conditions.

To reduce installation time and costs the 216 features an increased safety (Exe) terminal chamber eliminating the requirement for expensive barrier glands.



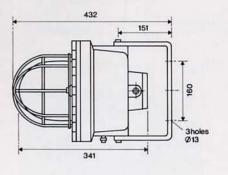
SPECIFICATION				
TYPE OF PROTECTION	EEx de Flameproof			
AREA CLASSIFICATION	Zone 1 & 2 groups IIA IIB			
APPARATUS STANDARD	BS.5501 Part 1, 5 & 6 EN50014,EN50018,EN50019			
CERTIFICATION	BASEEFA Ex 86B1236			
ENCLOSURE	Aluminium Alloy LM6 or Gun Metal LG2.			
INTERNAL REFLECTOR	Anodised Aluminium			
ENTRY	2x20mm Exe entries			
TERMINATION	Incoming terminals suitable for looping up to 6mm2			
INSTALLATION	Stirrup mounting			
CONTROL GEAR	Internal, easily replaced			
RELAMPING	Via removable front cover			
GLASS	Toughened wellglass			
BURNING POSITION	Universal			
PROTECTION	IP67			
PHOTOMETRIC DATA	Available on request			

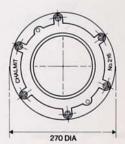
LAMP	WATTS	VOLTAGE	LUMENS	TEMP CLASS	MAX AMB.	ORDER REF.
SON	70	210-250V 50Hz 220-270V 60Hz	5300	T4	40	216/70
SON/R	70	210-250V 50Hz 220-270V 60Hz	4000	Т3	40	216/70R
MBFU	80	210-250V 50Hz 220-270V 60Hz	3800	T4	40	216/80
TUNGSTEN	60-100	24, 110, 250 AC/DC	700-1330	T4	55	216/100
TUNGSTEN	150-200	110, 240 AC/DC	2140-2880	Т3	55	216/200
PAR.38	120-150	24, 110, 250 AC/DC	1800	Т3	55	216/PAR

WEIGHT	ALUMINIUM	GUN METAL
HID	12 Kg	25Kg
GLS	10.5Kg	23.5Kg



- P.T.F.E. coating
- External Reflectors
- Pole Mounting Bracket
- Protective Wire Guard







### CHALMIT MAINS AND EMERGENCY WELLGLASS (EExde) No. 216/PL



mit have increased their range of Exd luminaires to include the use of high efficiency compact fluorescent lamps.

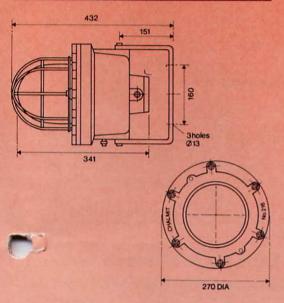
The 216 accommodates PL lamps from 5—13 watts that will operate on a range of AC or DC voltages from 12—240V.

This enables the luminaire to be used for emergency lighting. The PL lamps will operate via a changeover (CO—MFR) relay so that the lamp automatically switches from mains power to central battery power when a local mains failure occurs.

#### ACCESSORIES

- Various lamp colours can be offeredP.T.F.E. Protective Coating
- Protective Wire Guard
   Pole Mounting Bracket

WEIGHT	ALUMINIUM	GUN METAL	
	10.5Kg	23.5Kg	





SPECIFICATION		
TYPE OF PROTECTION	EEx de Flameproof	
AREA CLASSIFICATION	Zone 1 & 2 groups IIA IIB	
APPARATUS STANDARD	BS.5501 Part 1, 5 & 6 EN50014,EN50018,EN50019	
CERTIFICATION	BASEEFA Ex 86B1236	
ENCLOSURE	Aluminium Alloy LM6 or Gun Metal LG2.	
INTERNAL REFLECTOR	Anodised Aluminium	
ENTRY	2x20mm Exe entries	
TERMINATION	Incoming terminals suitable for looping up to 6mm2	
INSTALLATION	Stirrup mounting	
CONTROL GEAR	Electronic ballast	
RELAMPING	Via removable front cover,	
GLASS	Toughened wellglass	
BURNING POSITION	Universal	
PROTECTION	IP67	
PHOTOMETRIC DATA	Available on request	

ORDER REF	VOLTAGE	TEMP CLASS	MAX AMBIENT TEMPERATURE (MIN-5)
216/5PL	12—240 AC/DC	T6	55
216/7PL	12—240 AC/DC	T6	55
216/9PL	12—240 AC/DC	Т6	55
216/10PLC	12—240 AC/DC	Т6	55
216/13PLC	12—240 AC/DC	Т6	55

#### **ADVANTAGES**

- \* OPERATE ON AC OR DC
- \* 5 TIMES THE LIFE OF TUNGSTEN LAMPS
- \* 80% LESS POWER CONSUMPTION COMPARED TO TUNGSTEN LAMPS
- \* REDUCED MAINTENANCE DUE TO INCREASED LAMP CHANGE INTERVALS
- \* HIGH EFFICIENCY ELECTRONIC CONTROL GEAR

#### CHALMIT E.L.U.1 EMERGENCY LIGHT UNIT – INTRINSICALLY SAFE (Exib)

The CHALMIT E.L.U. is designed for use in hazardous or safe areas where a hazard may occur in an emergency situation. When an emergency occurs i.e. a gas leak, certain areas classified safe will become hazardous and all noncertified lighting will be extinguished. Typical areas where this may occur are offshore accommodation modules, i.e. Cabins, Washrooms, Lifts, etc.

In the event of such an emergency, escape lighting must be provided and the CHALMIT E.L.U. is specifically designed for this application. Being intrinsically safe, the unit offers the highest possible protection against potential explosions.

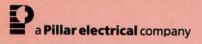
This small compact Emergency Light Unit eliminates the requirement for unattractive bulky Exe fluorescents with emergency packs allowing the use of lower cost, more visually pleasing, standard luminaires within the living areas.

#### **OPERATION**

Through unique design features, the unit offers great versatility. The E.L.U. is a battery operated, low power emergency luminaire which in most applications will be operated in conjunction with the intrinsically safe Mains Tell Tale unit. The MTT acts as a mains failure sensor and when the mains supply is interrupted, will switch on the emergency lighting but only if it is dark. This is achieved by a photocell which overrides the mains failure signal if daylight is present, and conserves the battery life. Where lighting is on constantly, the E.L.U. may be installed on its own without the MTT unit, and will switch on only in the event of light failure.

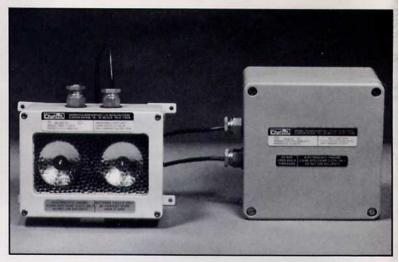
Any reasonable number of E.L.U.'s may be connected to the MTT by use of the looping-in Terminals.

ORDER R	EF. & ACCESSORIES	ORDER REF.
E.L.U.1		XELU1-0001
MTT 1	Charles of the Control of the Contro	XMTT1-0001
Cable	1mm <sup>2</sup> Twin Core PVC Colour Coded BLUE for intrinsically safe	E0414-0006
Glands	Exe plastic gland Size M 16	E0422-0012
	to suit suspended metal ceiling with finishing aperture	SELU1-0001









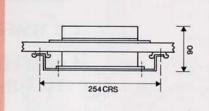
#### INTRINSICALLY SAFE EMERGENCY LIGHT UNIT (E. J.1)

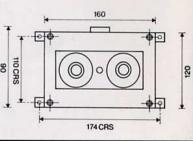
	" - Emerialitation Elain Olin (E. O.	
SPECIFICATION		
ENCLOSURE	Polycarbonate	
PROTECTION	IP 54	
BATTERY	6 Volt Alkaline (4 x 1.5V). Battery replaceable	
BATTERY SHELF LIFE	2 Years	
DURATION	35 hrs (Low warning light comes on after 16 hrs)	
LAMPS	2 x 0.65 = 1.3 watts quartz halogen	
WEIGHT	1.6 Kg	
INSTALLATION	Wall, ceiling or recessed	
CERTIFICATION	BASEEFA EV 85B0160 EEVID IIC TO	

#### INTRINSICALLY SAFE MAINS TELL TALE UNIT (MTT 1)

SPECIFICATION		
ENCLOSURE	Polyester	
PROTECTION	IP 54	
TRANSFORMER	2 VA	
INPUT VOLTAGE	270V 50/60Hz maximum .	
OUTPUT " MAX : OUT ' MAX : OUT	7 volts 780 mA	
WEIGHT	3 Kg	
CERTIFICATION	BASEFA Ex 85271 Exib IIC T3	

#### BRACKETRY TO SUIT SUSPENDED CEILING.







#### **Andrew Chalmers & Mitchell Limited**

443-447 Hillington Road, Glasgow G52 4QW, Scotland, U.K.

Telephone: 041-882 5553 041-882 3318

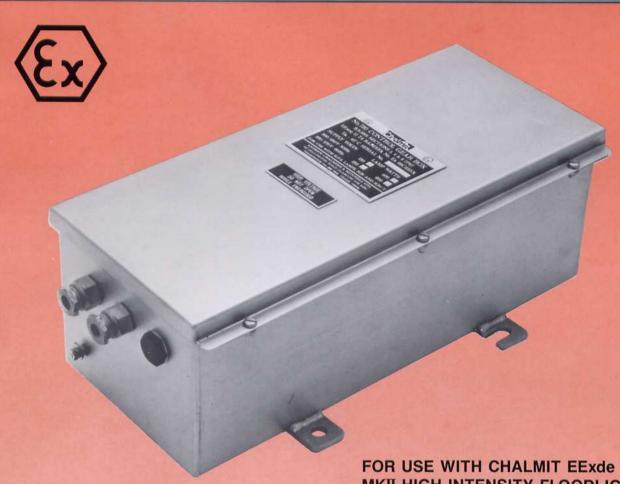
Telex: 779378 CHALMT G Fax: 041-883 3704



443-447 Hillington Road, Glasgow G52 4QW, Scotland, U.K.

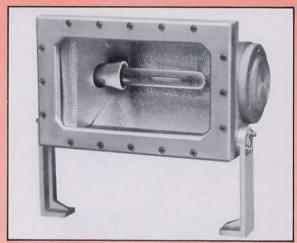
Telex: 779378 CHALMT G Fax: 041-883 3704

## **ZONE 1** NEW 720 SERIES EExe CONTROL GEAR BOX



- STAINLESS STEEL
- LIGHTWEIGHT
- **EASY TO INSTALL & MAINTAIN**
- 150-600w HID

MKII HIGH INTENSITY FLOODLIGHT No. 284/6



B.S. 5750 Pt. 1 Approved Firm ®

### CHALMIT No. 720 SERIES EExe CONTROL GEAR BOX



A unique new range of lightweight Stainless Steel Exe control gear boxes for use as an alternative to the Chalmit No. 700 series Exd control gear boxes.

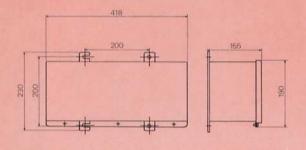
The 720 series is designed for use with the Chalmit MK II High Intensity Floodlight No. 284/6.

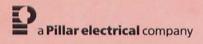
As with all Chalmit Exd luminaires the floodlight incorporates Exe cable entries and now also features an integral ignitor.

The benefit of this arrangement is that it allows the new 720 series Exe control gear box to be mounted at greater distances from the floodlight and also eliminates the requirement for expensive high voltage cable and Exd barrier glands. This makes installation and maintenance much easier and less costly than usually associated with Zone 1 electrical equipment.

#### **ADDITIONAL FEATURES**

- Control Gear Easy access, can be replaced
- Protection IP67
- Remote Gear Increases operating life & performance
- 316 grade stainless steel construction







SPECIFICATION		
TYPE OF PROTECTION	EEx eq II T4.	
AREA CLASSIFICATION	Zone 1 & 2 apparatus gas group II.	
APPARATUS STANDARD	B.S. 5501: 1977 Parts 1, 5 & 6 EN50 014, EN50 017, EN50 019.	
CERTIFICATION	BASEEFA Ex 89C3315X.	
ENCLOSURE	316 Grade stainless steel.	
ENTRY	Three M20 x 1.5 tapped entries.	
TERMINATION	Suitable for looping up to 6mm <sup>2</sup> .	
GLANDS	Must maintain IP rating of enclosure. Plastic glands and those for MICS should be Exe approved.	
INSTALLATION	Easy installation facility (see drawing).	
CONTROL GEAR	Easy access & easily replaced.	
OPERATING POSITION	Cable entries on underside if mounted vertically.	
PROTECTION	IP67 to B.S. 5490.	
POWER FACTOR CORRECTION	Incorporated to 0.85 minimum.	

ORDER REF BOX	ORDER REF FLOOD	LAMP	VOLTAGE	TEMP CLASS	MAX AMBIENT TEMP	WEIGHT Kg
720-250	286-250M	мвги	200-250V 50HZ 220-270V 60HZ	T4	45	10
720-400	286-400M	мвги	200-250V 50HZ 220-270V 60HZ	T4	45	10.9
721-150	284/6-150	HPS	200-250V 50HZ 220-270V 60HZ	T4	45	9.0
721-250	284/6-250	HPS	200-250V 50HZ 220-270V 60HZ	T4	45	10.6
721-400	284/6-400	HPS	200-250V 50HZ 220-270V 60HZ	T4	45	11.2
721-600	284-600	HPS	200-250V 50HZ 220-270V 60HZ	T4	45	15.3
722-250	284-250M	МВІ	200-250V 50HZ 220-270V 60HZ	T4	45	10.6
722-400	284-400M	МВІ	200-250V 50HZ 220-270V 60HZ	S 72	45	11.2



443-447 Hillington Road, Glasgow G52 4QW, Scotland, U.K.

Telephone: 041-882 5553 041-882 3318

Telex: 779378 CHALMT G Fax: 041-883 3704

# FLAMEPROOF PORTABLE AND TEMPORARY LIGHTING K Mk IV



### FLAMEPROOF FLUORESCENT HAND INSPECTION LAMP Exd 11B T6 EX82086X Ex

#### DESCRIPTION

The type K Mk IV is a lightweight, flameproof polycarbonate hand inspection lamp and is approved by BASEEFA to the latest requirements of BS 4683 Part 2 — 1971, for use in Zone 1 areas. BASEEFA approval is Exd 11B T6.

Environmental Protection 1P 65 can be achieved if required.

#### CONSTRUCTION

The handlamp consists of an approved polycarbonate tube, with a plug bearing the hook assembly, screwed and cemented at one end, and a brass ferrule forming the flame path, screwed and cemented at the other end.

A chassis is mounted in the enclosure, with two spring clips which retain the 8w, 300 mm fluorescent tube, fitted with bi-pin connectors.

On the AC version a starter is fitted in the handle cavity, and in the AC/DC and DC versions this is substituted by an invertor .3 core approved cable which is screened and double sheathed is used. The chassis has an earthing point at which both the earth and screening are terminated. A strain resistant cable clamp is fitted.

As the handlamp has direct entry cable, a minimum of 3 metres of cable must be supplied fitted; any length in excess is acceptable.

The polycarbonate tube which is virtually unbreakable is protected from scratching and grazing by a clear PVC sleeve. The handle and top of the lamp are fitted with PVC buffers for added protection.

As the K Mk IV is not factory sealed it can be maintained and repaired by the user. Full product support is provided.

#### TECHNICAL DETAILS

Overall weight	l Kg (excluding cable)	
Overall diameter	50 mm	
Overall length	520 mm	
Voltages	12V DC 24V AC/DC Invertor included in lamp. No separate control b	ox required.
*	24V AC 50V AC Starter included in lamp. Remote control box eith 110V AC Non FLP required. 240V AC	her FLP or
Cable	3 core 1 mm² (32/0.2) PVC insulated, bedded in sheath with Cu. wire screen and PVC oversheath. Minimum 3 metre to be fitted at all times. Westair HP 242.	

<sup>\*</sup> Note: Nominal 24V AC/DC. Range at Ambient (10° to 20°) - 20V to 28V.

#### Q150 FLAMEPROOF SERVICE LAMP

A versatile luminaire which can be used as a flood or spot lamp. Environmental Protection 1P 65.



#### DESCRIPTION

The type Q150 Flameproof Service Lamp has been designed to conform to the requirements of BSS 229 1957, and BSS 889 March 1965. It has been approved in accordance with the terms of the Department of Energy Testing Memorandum No. 4 for use in Division 1 (Zone 1) areas where flammable gases and vapours in Groups II and IIIA of Table 1 of BSS 229 are present.

The enclosure is classified in temperature range 'X' of appendix 'E' BSS 889 (max. Temp. rise 125°C) and is therefore unsuitable for use in cellulose atmospheres.

#### CONSTRUCTION

The lamp body is constructed of aluminium alloy, specification LM6 selected for its physical properties and resistance to corrosion, and is finished in blue stove enamel. The cable enters through an approved type gland. The terminal barrier contains clamping points for cable, strain cord, screening and insulation.

Standard cable type HP 155, is supplied in lengths to meet customers specific requirements, and must be of the approved type.

The lamp may be supported as a fixture, mounted on a portable stand or tripod and is fitted with a carrying handle. A cadmium plated steel wireguard is fitted for additional protection.

#### JX1 FLAMEPROOF HAND INSPECTION LAMP

FLP 5488.



#### DESCRIPTION

A lightweight, flameproof handlamp. The type JX1 portable Flameproof Handlamp has been designed to conform to the requirements of BSS 229 1957, and BSS 889 March 1965. It has been approved in accordance with the terms of the Department of Energy Testing Memorandum No. 4 for use in Division 1 (Zone 1) areas where inflammable gases and vapours in Groups II and IIIA of Table 1 of BSS 229 are present.

The enclosure is classified in temperature range X of appendix 'E' — BSS 889 (maximum temperature rise 125°C) and can be used in any attitude. The standard handlamp is not suitable for use in cellulose atmospheres.

#### CONSTRUCTION

The enclosure comprises a Type A' toughened wellglass, cemented and retained in the LM6 aluminium alloy body. A protective steel cadmium plated guard is screwed to the wellglass retaining ring.

The cable entry is fitted with a compression gland and a PVC sleeve to prevent kinking at this point.

The handle exterior and mounting flange are PVC coated for heat insulation.

Cable of the correct specifications can be fitted as required. A 3-pin earthed plug must be used. Plug and socket must be of an approved Flameproof type when used in hazardous areas.

Replacement main assemblies are available to order

#### TECHNICAL DETAILS

	Q150	JX1
Lamp Length	305 mm (12 in)	216 mm (8½ in)
Lamp diameter	228.6 mm (9 in)	101.6 mm (4 in)
Weight	N/A	1.24 Kg (2¾ lb) (excluding cable)
Lamp type	b type ES.24, 110, 240/250V, Reflector PAR, 38 Saltbeam SBC 12, 24, 110, or 230/250 Spot-Flood. Quartz halogen 12V 55W, and 24V 70W available with conversion kit	
Lamp wattage	150W, 70W and 55W	25, 36 or 40
Cable type	3 core screened, 2.0 mm <sup>3</sup> laid up with 32 Kg (70 lb) Strain Cord. Tinned copper braided, PVC sheathed overall to approved standard Westair HP 155	3 core 0.75 mm² Tinned copper PVC. Insulated. 250V CMA Grade, Laid up with 32 Kg strain cord. Tinned copper braid screened; PVC sheathed overall
Attachments (optional)	Tripod, Extension piece Wishbone bracket Floor stand	Reflector Tripod Securing bracket

Note: To comply with terms of certification Cable as specified above must always be used. Design rating and performance to BSS 889 (March 1965). Flameproof enclosure to BSS 229 (1957). If this luminaire is used as a fixed unit then an external earth is required.



443-447 Hillington Road, Glasgow G52 4QW, Scotland, UK. Telephone 041 882 5553 041 882 3318
Telex 779378 CHALMIT G Fax 041 883 3704

### ZONE 1 MAINS AND EMERGENCY WELLGLASS No. 216

FLAMEPROOF LUMINAIRE USING NEW COMPACT FLUORESCENT LAMPS GIVING AN 80% POWER SAVING OVER TUNGSTEN & 5 TIMES THE LIFE.





VOLTAGE RANGE 12-240V AC/DC

### CHALMIT MAINS AND EMERGENCY WELLGLASS (EExde) No. 216/PL



Chalmit have increased their range of Exd luminaires to include the use of high efficiency compact fluorescent lamps.

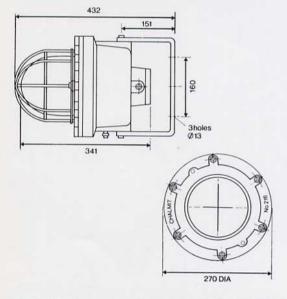
The 216 accommodates PL lamps from 5—13 watts that will operate on a range of AC or DC voltages from 12—240V.

This enables the luminaire to be used for emergency lighting. The PL lamps will operate via a changeover (CO—MFR) relay so that the lamp automatically switches from mains power to central battery power when a local mains failure occurs.

#### **ACCESSORIES**

Various lamp colours can be offered P.T.F.E. Protective Coating Protective Wire Guard Pole Mounting Bracket

WEIGHT	ALUMINIUM	GUN METAL	
	10.5Kg	23.5Kg	



	SPECIFICATION
TYPE OF PROTECTION	EEx de Flameproof
AREA CLASSIFICATION	Zone 1 & 2 groups IIA IIB
APPARATUS STANDARD	BS.5501 Part 1, 5 & 6 EN50014,EN50018,EN50019
CERTIFICATION	BASEEFA Ex 86B1236
ENCLOSURE	Aluminium Alloy LM6 or Gun Metal LG2.
INTERNAL REFLECTOR	Anodised Aluminium
ENTRY	2x20mm Exe entries
TERMINATION	Incoming terminals suitable for looping up to 6mm²
INSTALLATION	Stirrup mounting
CONTROL GEAR	Electronic ballast
RELAMPING	Via removable front cover,
GLASS	Toughened wellglass
BURNING POSITION	Universal
PROTECTION	IP67
PHOTOMETRIC DATA	Available on request

ORDER REF	VOLTAGE	TEMP CLASS	MAX AMBIENT TEMPERATURE (MIN-5)
216/5PL	12-240 AC/DC	Т6	55
216/7PL	12-240 AC/DC	Т6	55
216/9PL	12-240 AC/DC	Т6	55
216/10PLC	12-240 AC/DC	Т6	55
216/13PLC	12-240 AC/DC	Т6	55

#### **ADVANTAGES**

- \* OPERATE ON AC OR DC
- \* 5 TIMES THE LIFE OF TUNGSTEN LAMPS
- \* 80% LESS POWER CONSUMPTION COMPARED TO TUNGSTEN LAMPS
- \* REDUCED MAINTENANCE DUE TO INCREASED LAMP CHANGE INTERVALS
- \* HIGH EFFICIENCY ELECTRONIC CONTROL GEAR





443-447 Hillington Road, Glasgow G52 4QW, Scotland, U.K.

Telephone: 041-882 5553 041-882 3318

Telex: 779378 CHALMT G Fax: 041-883 3704

### 70NF2 HAZARDOUS AREA LIGHTING RANGE



### ExN





# THE NEW CHALMIT 2000 SERIES ZONE 2 FLOODLIGHT (ExN)



#### A new generation of floodlights for Zone 2 (ExN) hazardous areas.

CHALMIT'S unique experience in manufacturing high quality lighting for hazardous areas has resulted in the introduction of the most advanced Zone 2 floodlight available.

No other manufacturer can offer such high levels of performance together with robust construction and ease of maintenance and installation.

Fully certified to the latest BASEEFA standards the 2000 series is now the first choice for Zone 2 floodlighting.

The floodlight is a compact self-contained unit, manufactured from Marine Grade Stainless Steel ensuring it can be used in the worst possible salt laden or chemically polluted atmospheres without rusting or corroding. This combined with an ingress protection of IP 67 makes the New 2000 Series ideal for use on offshore oil and gas drilling and production platforms and onshore petro-chemical and pharmaceutical industries, where there is a remote danger of a hazardous atmosphere occurring.

Through advanced design techniques even at maximum wattage (600 watt), the floodlight can operate in an ambient up to 40°C with a surface temperature classification of T3. This, together with its universal burning position\*, is unique for a product of this type giving great flexibility in operations.

Where a stainless steel high performance floodlight is preferred, but not for Zone 2 areas, a standard weatherproof version is available.

- Certified to the most recent and stringent 1986 British Standard BS.4533 Section 102.51:1986
- Stainless Steel construction, highly corrosion resistant
- Totally Weatherproof to IP 67
- Up to 600 watt SON/T
- Universal operating position\*
- 2 quick release fasteners for ease of relamping and maintenance
- Integral control gear
- Surface temperature T3, Max. Ambient temperature 40°C

SPECIFICATION - FLOODLIGHT				
TYPE OF PROTECTION	ExN			
AREA CLASSIFICATION	Zone 2			
APPARATUS STANDARD	BS.4533 Section 102.51: 1986			
CERTIFICATE	BASEEFA Ex 88Y4074 X			
ENCLOSURE	316 Grade Stainless Steel with toughened glass window			
REFLECTOR	High purity anodised aluminium — plain or patterned			
ENTRY	Via 2 × 20 mm holes			
TERMINATION	Incoming terminals suitable for looping up to 4 mm <sup>2</sup> cable			
INSTALLATION	Stirrup Mounting			
RELAMPING	Via 2 quick release fasteners			
CONTROL GEAR	Integral (can be reversed)			
BURNING POSITION	Universal			
PROTECTION	IP 67			
WEIGHT	24 Kg			
AIMING QUADRANT	For accurate aiming adjustment			

<sup>\*</sup> If lamp axis not horizontal please operate cap down.

			2000 SERIES			
LAMP	WATTS	VOLTAGE	LAMP LUMENS	T. CLASS	t.AMB.	TYPE NO.
SON/T	150	200-250 50Hz 220-270 60Hz	14350	ТЗ	40°C	2484/150
SON/T	250	200-250 50Hz 220-270 60Hz	27000	ТЗ	40°C	2484/250
SON/T	400	200-250 50Hz 220-270 60Hz	48000	ТЗ	40°C	2484/400
SON/T	600	200-250 50Hz 220-270 60Hz	74000	ТЗ	40°C	2484/600
SON	150	200-250 50Hz 220-270 60Hz	13850	ТЗ	40°C	2486/150
SON	250	200-250 50Hz 220-270 60Hz	24800	Т3	40°C	2486/250
SON	400	200-250 50Hz 220-270 60Hz	46500	T3	40°C	2486/400
MBFU	250	200-250 50Hz 220-270 60Hz	12000	Т3	40°C	2486/250M
MBFU	400	200-250 50Hz 220-270 60Hz	20400	ТЗ	40°C	2486/400M
MBIT	250	200-250 50Hz 220-270 60Hz	15500	ТЗ	40°C	2484/250M
MBIT	400	200-250 50Hz 220-270 60Hz	20000	Т3	40°C	2484/400M

#### LIGHT DISTRIBUTION

Two types of reflector can be fitted which, together with the many lamp types available, offer a wide range of light output and distributions.

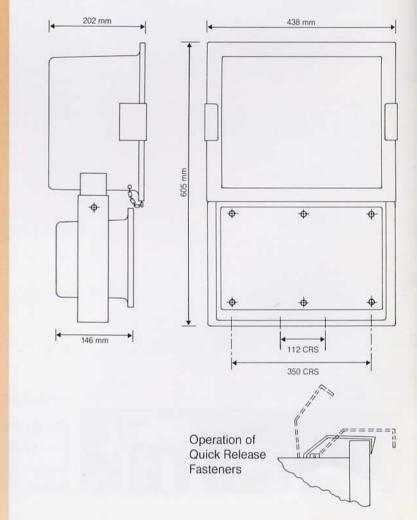
Photometric data available on request.

#### **ACCESSORIES**

- Pole Mounting Bracket
- Anti-Glare Shield
- Protective Wire Guard

WEIGHT NOTE: Lamp Lumens shown are for guidance only and may vary between lamp manufacturers.

FLOODLIGHT 24 Kg



### CHALMIT 400 SERIES – ZONE 2 (ExN) HEAVY DUTY FLOODLIGHTS



Continuing CHALMIT'S tradition of great versatility in hazardous area lighting, the 400 Series is unique in offering Tungsten Halogen and 70 watt High Pressure Sodium floodlighting for Zone 2 areas.

The 70 watt HPS floodlight is an ideal alternative to fluorescent luminaires as it is designed for use at low mounting heights due to the wide angle/low glare concept utilised.

For discharge lighting, control gear is supplied in a separate 500 Series Stainless Steel Control Gear Box, except the 70 watt HPS, which has internal control gear.

High Pressure Sodium luminaires can be supplied with integral ignitors, allowing the gear box to be mounted further from the floodlight and eliminating the requirement for expensive high voltage cable.

The 400 Series, with a track record second to none, is totally weatherproof to IP67 and renowned for its solid construction of corrosion-resistant Aluminium Alloy LM6 or Gun Metal LG2.

#### LIGHT DISTRIBUTION

Several beam distributions are available. Photometric Data available on request.

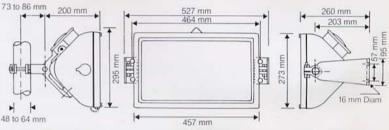
#### **ACCESSORIES**

- Protective PTFE Coating
- Swinging Jib Bracket
- Anti-Glare Shield
- Wire Guard
- Integral Ignitor (HPS)
- Chalmit 4891 Cable
- Lamp Lumens are for guidance only and may vary between lamp manufacturers.

WEIGHT				
ALUMINIUM	GUNMETAL			
10 Kg	30 Kg			
70 watt HPS 14 Kg	34 Kg			

SPEC	CIFICATION - FLOODLIGHT
TYPE OF PROTECTION	ExN
AREA CLASSIFICATION	Zone 2
APPARATUS STANDARD	BS.4533 Part 2 Section 2:1 1976
CERTIFICATE	BASEEFA Ex 78099 X, 70 watt HPS Ex 83010
ENCLOSURE	Marine Grade Aluminium Alloy LM6 or Gun Metal LG2
REFLECTOR	High Purity Anodised Aluminium, plain or patterned
ENTRY	Tapped entry via 20 mm hole. (Looping on 70W SON.)
TERMINATION	Incoming terminal suitable for up to 4 mm <sup>2</sup> cable
INSTALLATION	Pole or foot mounted
RELAMPING	Via removable front cover. Supplied with Anchor chain to retain cover
CONTROL GEAR	ii) 70 watt SON Internal ii) All other discharge lamps see CHALMIT 500 Series ExN Control Gear Box (see over) iii) Floodlight can be supplied with integral ignitor for H.P.S.
BURNING POSITION	Universal
PROTECTION	IP 67

LAMP	WATTS	VOLTS	LAMP * LUMENS (2000 HRS)	T. CLASS	t. AMB.	FLOODLIGHT TYPE NO.	CONTROL GEAR BOX TYPE NO.
SON/T	70	210-250 50Hz 220-270 60Hz	5500	T6	40°C	484/70	Not Reqd.
SON/T	150	210-250 50Hz 220-270 60Hz	14350	ТЗ	40°C	484/150	501/150
SON/T	250	210-250 50Hz 220-270 60Hz	27000	ТЗ	40°C	484/250	501/250
SON/T	400	210-250 50Hz 220-270 60Hz	48000	Т3	40°C	484/400	501/400
SON	70	210-250 50Hz 220-270 60Hz	5300	T6	40°C	486/70	Not Reqd.
SON	150	210-250 50Hz 220-270 60Hz	13850	Т3	40°C	486/150	501/150
SON	250	210-250 50Hz 220-270 60Hz	24800	ТЗ	40°C	486/250	501/250
SON	400	210-250 50Hz 220-270 60Hz	46500	ТЗ	25°C	486/400	501/400
MBFU	250	210-250 50Hz 220-270 60Hz	12000	ТЗ	40°C	486/250M	500/250
MBFU	400	210-250 50Hz 220-270 60Hz	20400	ТЗ	25°C	486/400M	500/400
T/HAL	300	110-125 AC/DC	6000	T3	50°C	469/300	Not Read.
T/HAL	500	110-125 AC/DC 220-240 AC/DC	9500	T3	40°C	469/500	Not Reqd.
T/HAL	1000	110-125 AC/DC 220-240 AC/DC	22000	T2	40°C	469/1000	Not Reqd.



POLE MOUNTING Base M

Base Mounting Version FOOT MOUNTING available for 70 watt HPS.

# CHALMIT 503 HIGH WATTAGE FLOODLIGHT (ExN)



A unique luminaire from CHALMIT enabling very high wattage lamps to be used in Zone 2 classified areas.

The floodlight is fully weatherproof to IP 67 and combines solid construction with very high light output in a housing of minimum weight and attractive appearance.

Through advanced design and construction techniques, even at maximum wattage, surface temperatures remain relatively low. An integral ignitor can be incorporated for H.P.S., allowing the control gear to be mounted further from the floodlight eliminating the requirement for expensive high voltage cable.

Using the CHALMIT 503 will give extremely high levels of illumination from a small number of fittings, greatly reducing installation and maintenance costs.

#### LIGHT DISTRIBUTION

Two types of reflector can be fitted to the floodlight offering various light distributions. Photometric data available on request.

#### **ACCESSORIES**

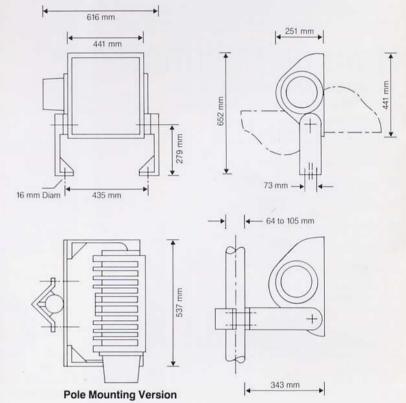
- Protective PTFE Coating
- Integral Ignitor (HPS)
- Swinging Jib Bracket
- Pole Mounting Bracket
- Anti-Glare Shield
- Wire Guard
- Chalmit 4891 Cable

SPEC	SPECIFICATION – FLOODLIGHT				
TYPE OF PROTECTION	ExN				
AREA CLASSIFICATION	Zone 2				
APPARATUS STANDARD	BS.4533 Section 2:1 1976				
CERTIFICATE	BASEEFA Ex 81267 X				
ENCLOSURE	Pressure Die Cast Aluminium LM6M or Gunmetal LG2 with heat resistant toughened glass window				
REFLECTOR	High Purity Anodised Aluminium, plain or patterned				
ENTRY	Tapped entry via 20 mm hole				
TERMINATION	Incoming terminal suitable for up to 4 mm <sup>2</sup> cable				
INSTALLATION	Foot Mounting				
RELAMPING	Via removable end cover				
CONTROL GEAR	See CHALMIT 500 Series (ExN) Control Gear Box     Floodlight available with integral ignitor				
BURNING POSITION	Universal				
PROTECTION	IP 67				

LAMP	WATTS	VOLTAGE	LAMP * LUMENS (2000 HRS)	T. CLASS	t. AMB.	FLOODLIGHT TYPE NO.	CONTROL GEAR BOX TYPE NO.
SON/T	1000	210-250 50Hz 220-270 60Hz	129000	ТЗ	40°C	503/1000	502/1000
MBFU	700	210-250 50Hz 220-270 60Hz	38100	ТЗ	40°C	503/700	501/700
T/HAL	2000	220-240 AC/DC	44000	T2	40°C	503/2000	Not Reqd.

WEIGHT				
ALUMINIUM	GUNMETAL			
25 Kg	73 Kg			

 Lamp Lumens are for guidance only and may vary between lamp manufacturers.



# CHALMIT 500 SERIES (ExN) STAINLESS STEEL CONTROL GEAR BOXES



Manufactured for indoor or outdoor locations where rugged construction, non-corrosive material and extreme reliability are essential operating requirements.

Fully weatherproof against moisture and dust to IP 67, these units eliminate the corrosion maintenance problems experienced in the Offshore Oil Industry, Petro-chemical Works and other industries where corrosion is a problem.

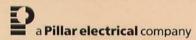
Available in three basic sizes, they can accommodate Control Gear for use with discharge lamps from 70 to 1000 watts.

They are supplied with gear and wired up for immediate use with each box being vacuum tested for gas-tightness before despatch. It is then labelled, serial numbered and recorded to ensure the utmost reliability.

#### **ACCESSORIES**

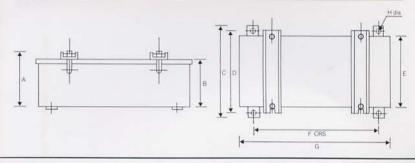
- Pole Spigot Attachment
- Chalmit 4891 Cable

Туре	No.	Α	В	С	D	E	F	G	Н
500	mm	171	152	229	203	159	381	457	14
501	mm	171	152	305	279	235	381	502	14
502	mm	191	171	381	343	283	476	559	17



SPECIFICATION -	CONTROL GEAR BOXES 500 SERIES
TYPE OF PROTECTION	ExN
AREA CLASSIFICATION	Zone 2
APPARATUS STANDARD	BS.4683 Part 3: 1972
CERTIFICATE	BASEEFA Ex 81265 X
ENCLOSURE	316 Marine Grade Stainless Steel
ENTRY	Via $3 \times 20$ mm diameter holes. (Tapped M20 Hole available)
TERMINATION	Incoming terminals suitable for up to 4 mm <sup>2</sup> cable
INSTALLATION	Via 2 Mounting Straps
CABLE	For high pressure sodium CHALMIT 4891 cable must be used between floodlight and control gear box to comply with certificate Note: This does not apply if floodlight has integral ignitor
BALLAST	Tapped for 210-250V 50Hz, 220-270V 60Hz in 10 volt steps
CAPACITOR	Power factor corrected to a minimum of 0.85 lag
IGNITOR	Electronic (HPS only)
PROTECTION	IP 67
TEMPERATURE CLASSIFICATION	T4, Max. Ambient 40°C (except 502/1000 T4, Ta 35°C)

BOX TYPE NO./WATTS	LAMP TYPE	WEIGHT KG
500/80	MBFU	7
500/125	MBFU	8
500/250	MBFU	10
500/400	MBFU	14
501/700	MBFU	18
501/70	HPS	10
501/150	HPS	14
501/250	HPS	15
501/400	HPS	17
502/1000	HPS	32
	so be used to house auto trans	
500 Series Boxes can al	so be used to house auto trans	
500 Series Boxes can a 110/115/120V 50/60 H	so be used to house auto trans	formers for use on
500 Series Boxes can al 110/115/120V 50/60 Hz BOX TYPE NO.	so be used to house auto trans z.  TRANSFORMER V.A.	formers for use on WEIGHT KG





#### **Andrew Chalmers & Mitchell Limited**

443-447 Hillington Road, Glasgow G52 4QW, Scotland, U.K.

Telephone: 041-882 5553 041-882 3318

Telex: 779378 CHALMT G Fax: 041-883 3704