Chalmit®   HAWKE International

DISTILLERY
INDUSTRY

A Dedicated Range of Products for Drinks Distilleries

www.chalmit.com | www.ehawke.com
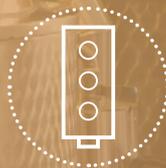
HUBBELL
Harsh & Hazardous

Using a combined total of 160 years of experience supplying industrial and hazardous markets, Hawke and Chalmit have developed a range of products perfectly suited for the growing Distillery market.

Combining cutting edge designs with easy installation, low maintenance and long lifetimes, the range has been created to meet the demands of the exciting Distillery market.

Whether you require a solution for a hazardous area or an industrial one, look no further than Hubbell for your needs. We deliver lighting, cable glands, junction boxes and control stations – a true **One Hubbell** package.

Our expert team are on hand to help you discover more about the range of products we can supply.

To find out more email
info@chalmit.com or **sales@ehawke.com**

Our Products in the Industry

Chalmit have been specified on a number of distillery projects, and boast collaboration with some of the biggest market players in the UK. Our project list includes **Diageo**, **MacCallan**, **Chivas** and **William Grant & Sons**.

In 2018, we supplied our popular Sterling fitting and NexLED emergency lighting to **Sweetdram** Distillery's bright and modern facilities in Edinburgh, providing a comfortable, clear light.

Sterling and NexLED Emergency lighting in action in Sweetdram Distillery.

A One Hubbell Solution from Chalmit and Hawke

Lighting

Chalmit's range of high-performing luminaires with low-maintenance designs, long lifetimes and various options for colour temperature are ideal for industrial and hazardous area applications. Whether it's crisp, white lighting for rooms and offices or a softer, warm illumination for bar areas, warehouses or tasting rooms, our wide colour temperature range means we can provide customers with the perfect lighting solution for their application.

Cable Glands

Hawke offers a wide range of cable glands for industrial and hazardous applications, ensuring all safety standards are upheld in any situation. Our recently updated Cable Gland range ensures cutting edge design, quality and safety whilst boasting an extensive array of accessories to improve the lifespan of machinery and equipment. Our heavy duty cable glands are ideal for industrial as well as Zone 1 and 2 areas.

Control Stations

HazCon Control Stations are designed to be easily customised for any application. All our Control Stations have IP66 ingress protection, impact resistant 316 stainless steel or Glass Reinforced Anti-Static Polymer enclosures, and are easy to access for maintenance and installation.

PROTECTA X
LED Linear - Industrial

The next generation in LED linear luminaires, the Protecta X's revolutionary design puts LED at the centre to provide the performance of a 4ft linear in a lightweight and slimline package. Offering a robust enclosure, excellent IP and a variety of features to make installation and maintenance effortless, the Protecta X is ideal for industrial environments. Expected useful life to 70% of the initial lumens (L70) is >200,000 hours at 25℃, with an incredible 90,000 maintenance free hours at 60℃. For a luminaire with the longest life, the highest output and market-leading efficacy, choose the **Protecta X**.

Mounting Options
Ceiling. Wall. Suspended. Pole. Handrail.

MADE IN BRITAIN

CE
International Approvals

Standard Specification

Protecta X LED Linear

Enclosure	Marine grade aluminium body with polycarbonate diffuser. Driver enclosure with epoxy powder finish (RAL 9005)
Geartray	Aluminium
Entry	4 x M20 cable entries - 2 at each end [3 cable entries on Emergency with battery stick]
Termination	3 core 4mm² max conductor [4 core on Emergency] with looping one end and 16A rating through wiring
Installation	2 x M8 mounting points located on the rear of the body
Control Gear	Electronic Driver
Optical Distribution	Wide beam
Colour Temperature (CCT)	5000K (Cool White)
Colour Rendering Index (Ra)	>70
Maintenance	Front access panel with Torx screws
LED Lifetime @ 60℃ Ambient	L70 > 200,000hrs
System Life @ Ambient	120,000hrs @ 25℃; 90,000hrs @ 60℃ [excluding battery]
Battery	Hot-Swappable Ni-MH (6V) battery stick - externally accessed [/EM version only]
Emergency Duration	90 mins (25% output)
Ingress Protection	IP66/67 to EN 60529
Surge Protection	4kV
Electrical Supply	110-277V AC, 50/60Hz 127-250V DC

Features

- Highly **Energy Efficient** >135lm/W
- **Screwless** mains terminals
- **Multiple beam** distributions available
- **Front access cover** for easy termination
- **>90,000 maintenance free hours** at 60℃
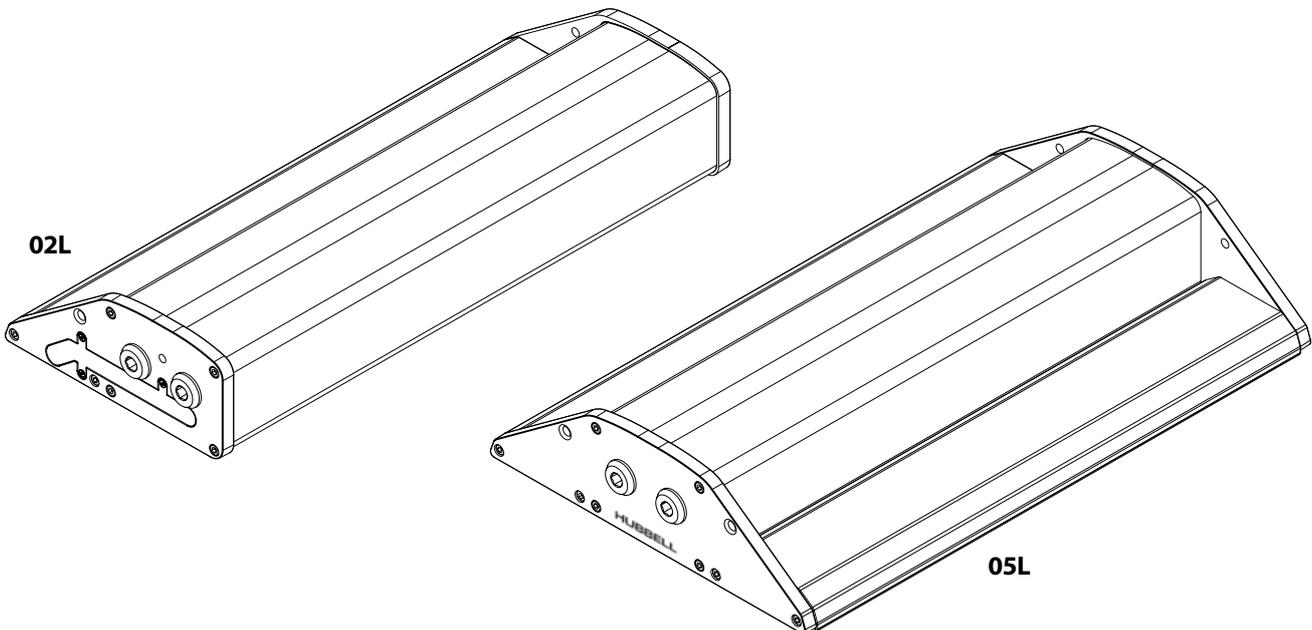- **Externally accessible battery stick** for ease of maintenance

Std. Cat No.	Delivered Output	Power Consumption	Ambient °C	Weight
PRXI/02L/LE	2200 lm	16W	-40 to +60	6.8kg
PRXI/05L/LE	5200 lm	36W	-40 to +60	8.8kg
PRXI/02L/LE/EM	2200 lm	18.5W	-25 to +60	7.3kg
PRXI/05L/LE/EM	5200 lm	38.5W	-25 to +60	9.3kg

Options - Suffix to Catalogue No.

/M25	M25 cable entries	/3H	3 hour battery duration (12.5% output)
/LBE	Looping both sides [Non Emergency only]	/4K	4000K (Neutral White) LED Strips
/EL	Extra live termination facility (to match emergency circuit)	/SC	Screwed connection terminal block (up to 6mm² conductors)
/EMI	Internal battery pack [replace /EM with /EMI]	/BNI	Batteries not included [Emergency version only]
/NST	Non Self Test [Emergency version only]	/DM	DALI Dimmable driver
/ASL	Asymmetric along length optic	/M	Medium beam optic
/ASW	Asymmetric along width optic [05L version only]	/BP	Nickel plated brass plugs

Accessories *order separately*

	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
Flush mounted wall bracket assembly	SPRO4-0006
Ceiling bracket assembly	SPRO4-0002
Standard wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0008
Eyebolt mounting assembly	SPRO5-0005
Protecta 4ft adaptor bracket	SPRO5-0006

02L

05L

Dimensioned Drawings

PROTECTA X - 05L
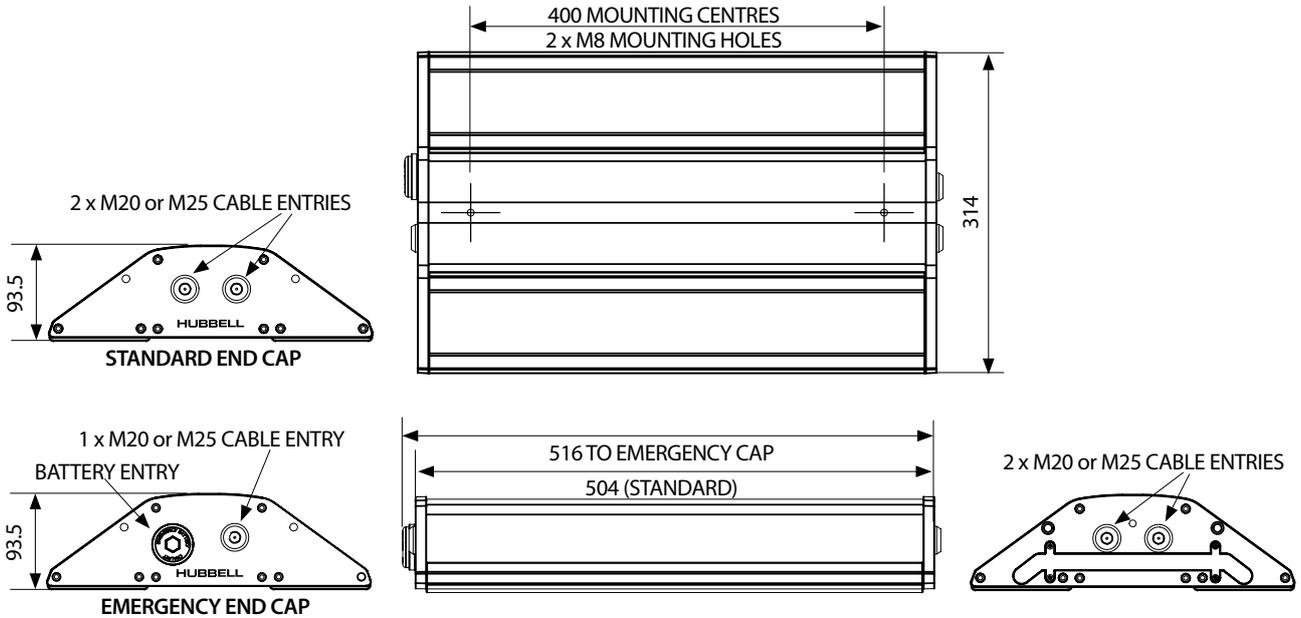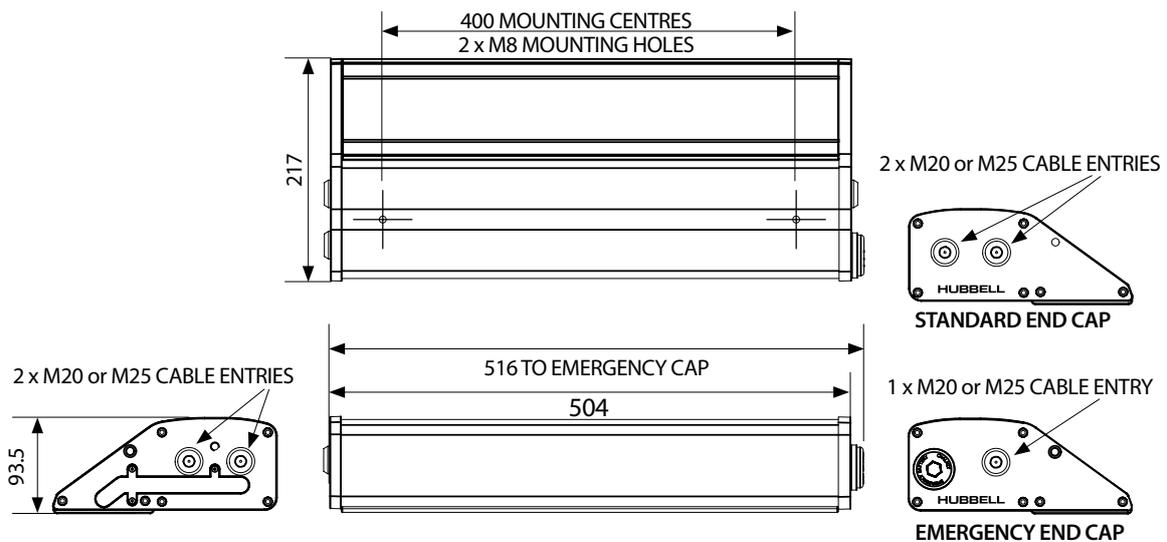
400 MOUNTING CENTRES
2 x M8 MOUNTING HOLES

314

2 x M20 or M25 CABLE ENTRIES

93.5

HUBBELL

STANDARD END CAP

1 x M20 or M25 CABLE ENTRY

BATTERY ENTRY

93.5

HUBBELL

EMERGENCY END CAP

516 TO EMERGENCY CAP
504 (STANDARD)

2 x M20 or M25 CABLE ENTRIES

PROTECTA X - 02L

400 MOUNTING CENTRES
2 x M8 MOUNTING HOLES

217

2 x M20 or M25 CABLE ENTRIES

HUBBELL

STANDARD END CAP

2 x M20 or M25 CABLE ENTRIES

93.5

516 TO EMERGENCY CAP
504

1 x M20 or M25 CABLE ENTRY

HUBBELL

EMERGENCY END CAP

PROTECTA III

LED Linear - Industrial

The Industrial **Protecta III** is a high quality LED linear delivering unparalleled performance and all the recognised benefits of the existing Protecta range; a proven robust enclosure, excellent IP and low maintenance features which are key to heavy industrial and harsh marine environments.

Expected useful life to 70% of the initial lumens (L70) is a market leading 155,000 hours at 45℃ and, combined with a lightweight geartray design utilising fully replaceable LED strips and driver, we can deliver a unique product with effective long term maintenance capabilities.

MADE IN BRITAIN

CE
International Approvals

Mounting Options
Ceiling. Wall. Suspended. Pole/Stanchion.

Standard Specification

Protecta III LED Linear

Enclosure	GRP body with polycarbonate cover
Geartray	White coated zintec
Entry	4 x M20 cable entries - 2 at each end
Termination	3 core 4mm² max conductor with looping and 16A rating through wiring [4 core on Emergency]
Installation	2 x M8 moulded-in stainless steel bushes located on the rear of the body
Control Gear	Electronic Driver
Colour Temperature (CCT)	4000K (Neutral White)
Colour Rendering Index (Ra)	≥70
Maintenance	Quick release diffuser clamp and hinged cover
LED Lifetime @ 45℃ Ambient	L70 ≥ 155,000hrs
Maintenance Free Lifetime	120,000hrs @ 25℃
Battery	Internal Ni-Cd (6V) [Emergency version only]
Emergency Duration	3 Hours (02L version = 33% output, 04L version = 23% output , 07L version = 12% output)
Ingress Protection	IP66/67 to EN 60529
Surge Protection	02L = 1kV; 04L/07L = 4kV (line to line)
Electrical Supply	120-277V AC, 50/60Hz 127-300V DC 220-240V AC, 50/60Hz [Emergency version only]

Features

◈ Highly **Energy Efficient**

◈ **Screwless** mains terminals

◈ **DTS-01** deluge tested

◈ **Battery monitoring** and **automatic self test**

◈ **155,000 maintenance free hours** at 45℃

◈ **Simple rugged construction**

Std. Cat No.	Delivered Output	Power Consumption	Ambient °C	Weight
PR3I/02L/LE	2296 lm	16W	-25 to +45	4.8kg
PR3I/04L/LE	3526 lm	24W	-25 to +45	4.9kg
PR3I/07L/LE	6690 lm	44W	-25 to +45	8.2kg
PR3I/02L/LE/EM	2296 lm	20W	-25 to +45	5.8kg
PR3I/04L/LE/EM	3526 lm	26W	-25 to +45	5.9kg
PR3I/07L/LE/EM	6690 lm	48W	-25 to +45	9.2kg

Options - Suffix to Catalogue No.			
/M25	M25 cable entries	/5K	5000K (Cool White) LED Strips
/LBE	Looping both sides	/DM	DALI Dimmable driver (04L and 07L only)
/BP	Zinc plated brass plugs (x3)	/NST	Non self test inverter (EM only)
/EL	Extra live termination facility (to match emergency circuit)	/SC	Screwed connection terminal block (up to 6mm² conductors)
/OD	Internal Opal diffusers (approx. 20% reduction in output)		

Accessories *Accessories should be ordered separately*

	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
Flush mounted wall bracket assembly	SPRO4-0006
Ceiling bracket assembly	SPRO4-0002
Wall mounting outreach bracket	NPRO4-0007
Standard 2ft wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0008
Standard 4ft wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0012
Eyebolt mounting assembly	SPRO5-0005
Internal Opal Diffuser Strips (02L & 04L)	S3004-100005
Internal Opal Diffuser Strips (07L)	S3004-100006
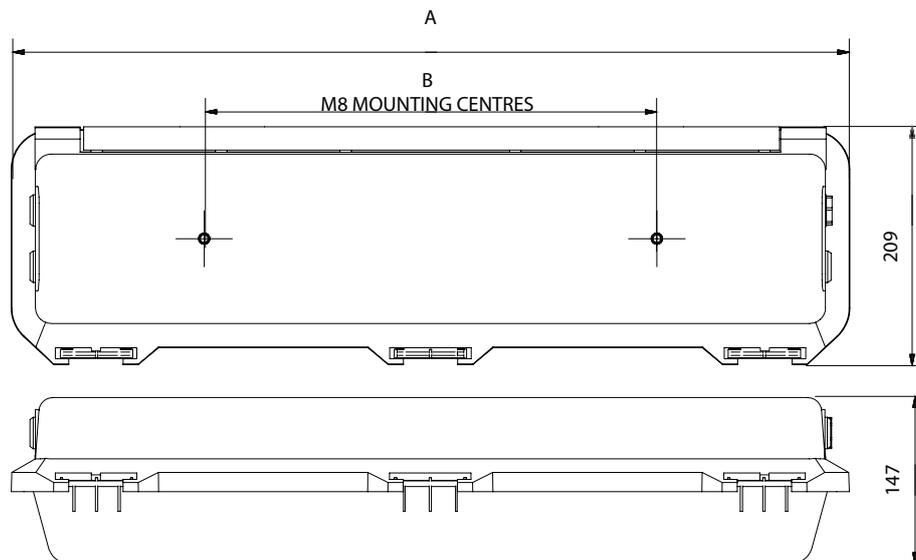
DIM	02L/04L	07L
DIM A	742	1352
DIM B	400	700

STERLING III

LED Linear - Industrial

The **Sterling III** LED is a high quality, cost effective linear which realises further power savings over the Sterling II family, without impacting on the luminaire performance.

Featuring a lightweight, single geartray design allows for ease of installation and maintenance, and is available with or without internal opal diffusers to suit any industrial application.

Mounting Options
Ceiling. Wall. Suspended. Pole.

MADE IN BRITAIN

CE
International Approvals

Standard Specification

Sterling III LED Linear

Enclosure	GRP with prismatic polycarbonate diffuser and stainless steel retaining clips
Geartray	White coated zintec
Entry	2 x 20mm diameter clearance 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	Electronic Driver
Colour Temperature (CCT)	4000K (Neutral White)
Colour Rendering Index (Ra)	≥70
Maintenance	Access via diffuser secured by quick release stainless steel clips
Battery	Internal Ni-Cd (6V) (Emergency version only)
Emergency Duration	3 Hours (03L = 26%; 06L = 14%; 09L = 10%)
Ingress Protection	IP65 to EN 60529
Surge Protection	4kV line to line, 6kV line to earth
Electrical Supply	120-277V AC, 50/60Hz 127-300V DC 220-240V AC, 50/60Hz (Emergency version only)

Features

◈ Highly **Energy Efficient**

◈ Lightweight and **slimline construction**

◈ **Battery management** and automatic self test

◈ **155,000 maintenance free hours** at 45℃ (L70)

Std. Cat No.	Delivered Output	Power Consumption	Ambient °C	Weight
ST3I/03L/LE	3594 lm	24W	-20 to +55	2.8kg
ST3I/06L/LE	6244 lm	44W	-20 to +50	4.4kg
ST3I/09L/LE	8801 lm	64W	-20 to +45	5.0kg
ST3I/03L/LE/EM	3594 lm	26W	-20 to +45	3.8kg
ST3I/06L/LE/EM	6244 lm	48W	-20 to +45	5.2kg
ST3I/09L/LE/EM	8801 lm	68W	-20 to +45	5.8kg

Options - Suffix to Catalogue No.

/OD	Internal Opal diffusers (approx. 20% reduction in output)	/NST	Non self test inverter (EM only)
/DM	DALI Dimmable driver	/5K	5000K (Cool White) LED Strips
/5FT	5ft body (09L model only)		

Accessories *Accessories should be ordered separately*

	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 wall mounting bracket assembly (30° luminaire rotation)	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
Internal Opal Diffuser Strips (03L)	S3004-100005
Internal Opal Diffuser Strips (06L & 09L)	S3004-100006

2x 8.2mm

2x 20mm Cable entry clearance holes 1x each end

DIM	03L	06L / 09L	09L (5FT)
A	702	1312	1612
B	500	800	1100
C	172	172	172
D	106	106	106

STERLING III
Ex ec LED Linear - Zone 2

The **Sterling III** LED is a high quality, cost effective linear which realises further improvements over the Sterling II family, and features a lightweight, single geartray design for ease of installation and maintenance.

The luminaire also features electronic control gear, with optional 3hr battery back up, and is available with or without internal opal diffusers to suit any Industrial application.

MADE IN BRITAIN

International Approvals

Mounting Options
Ceiling. Wall. Suspended. Pole.

Standard Specification

Sterling III Ex ec LED Linear

Type of Protection	Ex ec (Increased Safety)
Protection Standards	EN/IEC 60079-0, EN/IEC 60079-7, EN/IEC 60079-31
ATEX Classification	Group II Category 3 GD
Area Classification	Zone 2 and Zone 22 areas to EN/IEC 60079-10-1 and EN/IEC 60079-10-2

Certificate	Type Examination Certificate
	  CML16ATEX4101X
	IECEx Certificate of Conformity
	  IECEx CML16.0044X

Coding	Ex ec IIC T4 Gc Ex tc IIIC T76°C Dc
Enclosure	GRP with prismatic polycarbonate diffuser and stainless steel retaining clips
Geartray	White coated zintec
Entry	2 x 20mm diameter clearance 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	Electronic Driver
Colour Temperature (CCT)	4000K (Neutral White)
Colour Rendering Index (Ra)	≥70
Maintenance	Access via diffuser secured by quick release stainless steel clips
Battery	Internal Ni-Cd (6V) (Emergency version only)
Emergency Duration	3 Hours (03L = 26%; 06L = 14%; 09L = 10%)
Ingress Protection	IP65 to EN 60529
Surge Protection	4kV line to line, 6kV line to earth
Electrical Supply	120-277V AC, 50/60Hz 127-300V DC 220-240V AC, 50/60Hz (Emergency version only)

Features

◈ Highly **Energy Efficient**

◈ Lightweight and **slimline construction**

◈ **Battery management** and automatic self test

◈ **155,000 maintenance free hours** at 45°C (L70)

Std. Cat No.	Delivered Output	Power Consumption	Tclass	T °C (Dust)	Ambient °C	Weight
ST3N/03L/LE	3592 lm	24W	T4	76	-20 to +55	2.8kg
ST3N/06L/LE	6241 lm	44W	T4	76	-20 to +50	4.4kg
ST3N/09L/LE	8798 lm	64W	T4	76	-20 to +45	5.0kg
ST3N/03L/LE/EM	3592 lm	26W	T4	76	-20 to +45	3.8kg
ST3N/06L/LE/EM	6241 lm	48W	T4	76	-20 to +45	5.2kg
ST3N/09L/LE/EM	8798 lm	68W	T4	76	-20 to +45	5.8kg

Options - Suffix to Catalogue No.			
/OD	Internal Opal diffusers (approx. 20% reduction in output)	/NST	Non self test inverter (EM only)
/DM	DALI Dimmable driver	/5K	5000K (Cool White) LED Strips
/5FT	5ft body (09L model only)		

Accessories *Accessories should be ordered separately*

	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 wall mounting bracket assembly (30° luminaire rotation)	S3004-100004
18W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0008
36W wall mounting outreach bracket (use with SPOL4-100004)	NPRO4-0012
Internal Opal Diffuser Strips (03L)	S3004-100005
Internal Opal Diffuser Strips (06L & 09L)	S3004-100006

2x 8.2mm

2x 20mm Cable entry clearance holes 1x each end

DIM	03L	06L / 09L	09L (5FT)
A	702	1312	1612
B	500	800	1100
C	172	172	172
D	106	106	106

NexLED
LED Bulkhead - Industrial

The **NexLED** delivers an instant bright white light. Designed for low profile applications, the bulkhead can be mounted on walls, handrails and ceilings making it ideal for walkways or restricted height areas.

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

Mounting Options
Ceiling. Wall. Recessed. Pole/Stanchion. Bulkhead.

MADE IN BRITAIN

CE
International Approvals

Standard Specification

NexLED LED Bulkhead

Enclosure	Aluminium LM6 body, RAL-9005 black epoxy polyester paint finish with toughened glass and silicone gasket
Reflector	Brushed aluminium
Entry	3 x M20 cable entries
Termination	3 core 4mm^2 max conductor with looping (4 core on Emergency)
Installation	Surface mounted, 4 mounting holes located outside of seal
Control Gear	Electronic Driver
Colour Temperature (CCT)	4100K (Neutral White)
Maintenance	M6 Slotted Screws
Battery	Internal NiMH (201-6V, 801-10.8V) (Emergency only)
Emergency Light Duration	3 Hours (100% output)
Ingress Protection	IP66/67 to EN 60529
Surge Protection	4kV
Electrical Supply	120-240V AC 50/60HZ 220-254V AC 50/60Hz (Emergency only)

Features

◈ Highly **Energy Efficient**
◈ Highly visible, **instant light**
◈ **Easy to install** and maintain
◈ Very low **power consumption**

◈ **100% output in emergency mode** (up to 3 hours)
◈ **Ultra long life** no re-lamping required
◈ Over **60,000 hours*** continuous operation

  * 60,000 hours expected at 40°C ambient (L70/B10)

Std. Cat No.	Delivered Output	Power Consumption	Ambient °C	Weight
NELI/201/LE	168 lm	7W	-20 to +45	3.5kg
NELI/801/LE	671 lm	16W	-20 to +45	3.5kg
NELI/201/LE/EM	168 lm	8W	-20 to +45	4.1kg
NELI/801/LE/EM	671 lm	17W	-20 to +45	4.1kg

Options - Suffix to Catalogue No.	
/GDE	Green LED's (should not be used in combination with Exit sign)

Accessories *Accessories should be ordered separately*

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

* Other signage options available upon request, please contact Chalmit® sales.

193

168

M20 Cable Entries

300

92

205

4 x Ø7 Mounting Holes
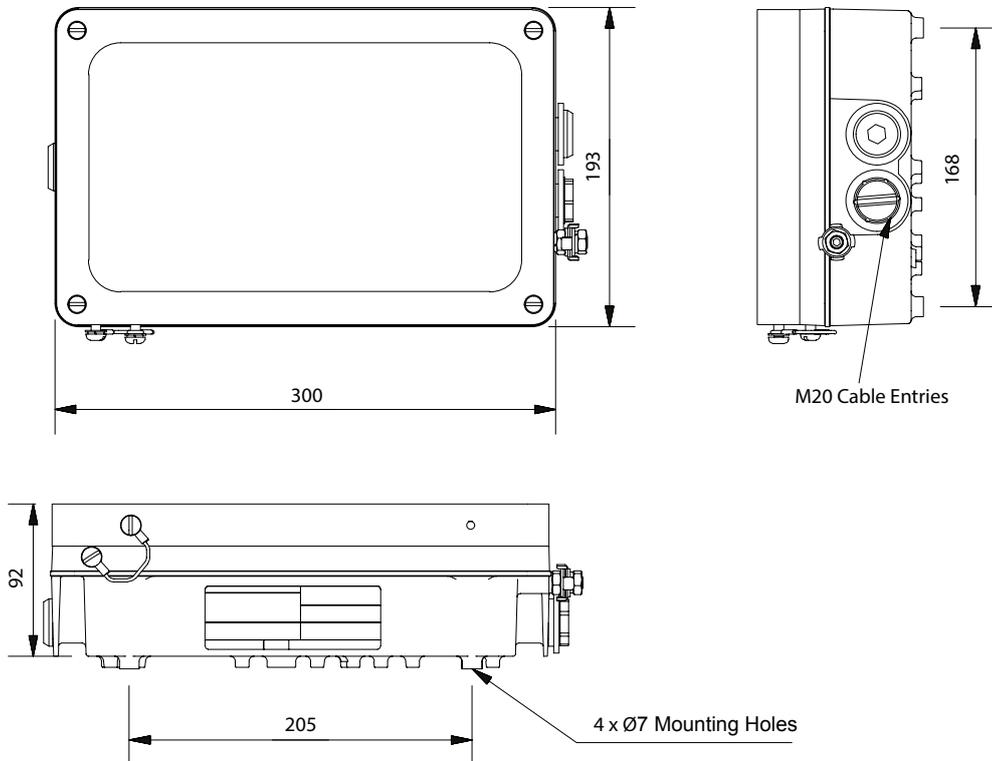
NexLED
Ex e LED Bulkhead - Zone 1

The **NexLED** luminaire delivers an instant bright white light. Designed for low profile applications, the bulkhead can be mounted on walls, handrails and ceilings making it ideal for walkways or restricted height areas. Its excellent temperature range of -45°C to +55°C makes it a global lighting solution providing high quality lighting at extreme temperatures. Green LED option is also available.

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

Mounting Options
Ceiling. Wall. Recessed. Pole/Stanchion. Bulkhead.

MADE IN BRITAIN

International Approvals

Standard Specification

NexLED Ex e LED Bulkhead

Type of Protection	Ex e mb (Increased Safety, Encapsulation)
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	EU Type Examination Certificate
	  - Baseefa04ATEX0245
	IECEx Certificate of Conformity
	  - IEC Ex BAS09.0062

Coding	Ex e ib mb IIC T4 Ex e mb IIC Ex e tb IIIC T95°C Db IP6X Ex de IIC T4 (24V version - ATEX only)**
Enclosure	Aluminium LM6 body, RAL-9005 black epoxy polyester paint finish with toughened glass, silicone gasket
Reflector	Brushed aluminium
Entry	3 x M20 cable entries
Termination	3 core 4mm² max conductor with looping (4 core on Emergency)
Installation	Surface mounted, 4 mounting holes located outside seal
Control Gear	Electronic Driver
Colour Temperature (CCT)	4100K (Neutral White)
Maintenance	M6 Slotted Screws
Battery	Internal Ni-Cd (4.2V) (Emergency only)
Emergency Duration	801 version = 90 mins, 201 version = 3 hours (100% output)
Ingress Protection	IP66/67 to EN 60529
Surge Protection	4kV
Electrical Supply	110-254V AC/DC 50/60HZ

Features

- Highly **Energy Efficient**
- **Very low** power consumption
- **Easy** to install and maintain
- Highly visible, **instant light**
- Installation to gas groups **IIA, IIB and IIC**
- **Ultra long life** no re-lamping required
- Over **60,000 hours*** continuous operation
- *60,000 hours expected at 40°C ambient (L70/B10)*

Std. Cat No.	Delivered Output	Power Consumption	TClass	T°C (Dust)	Ambient °C	Weight
NELE/201/LE	123 lm	5W	T4	95	-45 to +55	4.0kg
NELE/401/LE/24**	247 lm	8W	T4	95	-45 to +55	4.1kg
NELE/801/LE	464 lm	10W	T4	95	-45 to +55	4.1kg
NELE/201/LE/EM	123 lm	7W	T4	95	-20 to +55	4.7kg
NELE/801/LE/EM	464 lm	12W	T4	95	-20 to +55	4.7kg

Note: ** 24V Supply is for ATEX only

| Options - Suffix to Catalogue No.			
/GDE	Green LED's (should not be used in combination with Exit sign)	**/GIS**	Geartray isolation switch (Gas coding becomes - Ex d e mb IIC)
/LT	Low temperature to -45° (Emergency)		

Accessories *Accessories should be ordered separately*

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

* Other signage options available upon request, please contact Chalmit® sales.

M20 Cable Entries

193

300

168

92

205

4 x Ø7 Mounting Holes
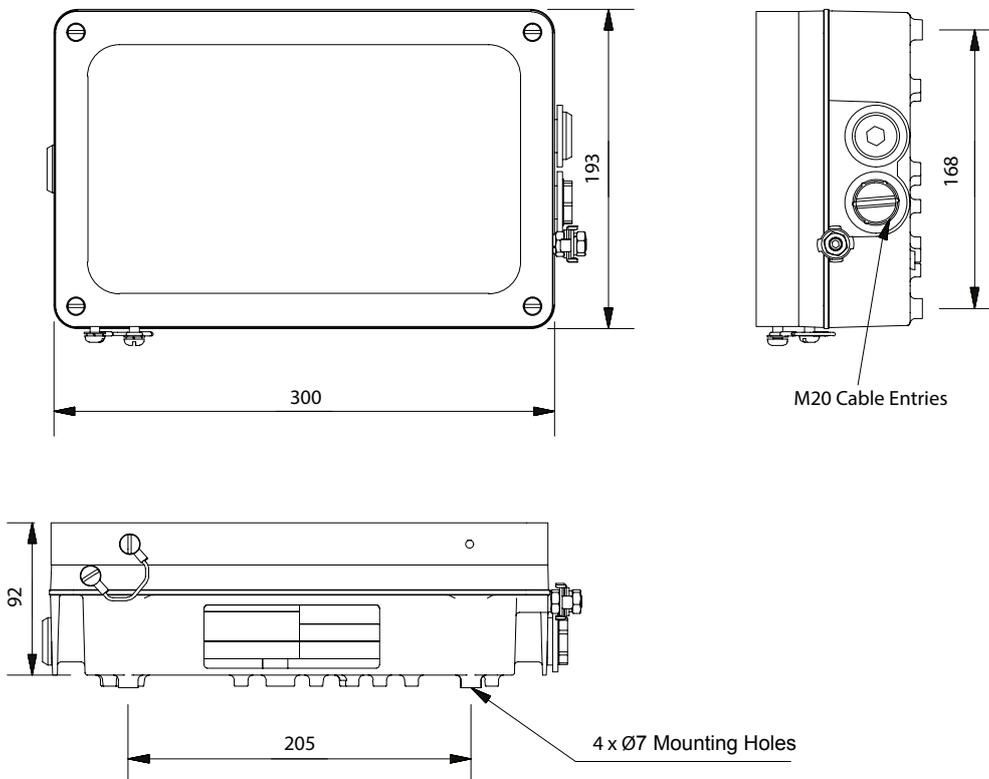
ARRAN
LED Floodlight

Sleek and highly efficient, this reliable compact luminaire delivers a uniform photometric distribution and powerful performance of 130,000 maintenance free hours at 25°C.

An excellent temperature range of -50°C to +55°C makes the **Arran** a global lighting solution providing high output lighting at extreme temperatures.

The great versatility of this luminaire allows a variety of mounting options from pendant to stanchion covering a wide range of Industrial installations.

MADE IN BRITAIN

CE
International Approvals

Mounting Options
Floodlight. Pendant. Pole/Column. High Bay.

Standard Specification

Arran LED Floodlight

Enclosure	Aluminium alloy with epoxy powder finish
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting bracket
Control Gear	Electronic Driver
Colour Temperature (CCT)	5000K (Cool White)
Maintenance	M5 Slotted Screws
Ingress Protection	IP66
Surge Protection	4kV line to line, 6kV line to earth
Electrical Supply	120-277V AC 50/60Hz 127-250V DC

Features

◈ Highly **Energy Efficient**

◈ **Instant on** crisp white light output

◈ **Lower power consumption** than HID lamps

◈ **Low temperature applications** to -50°C
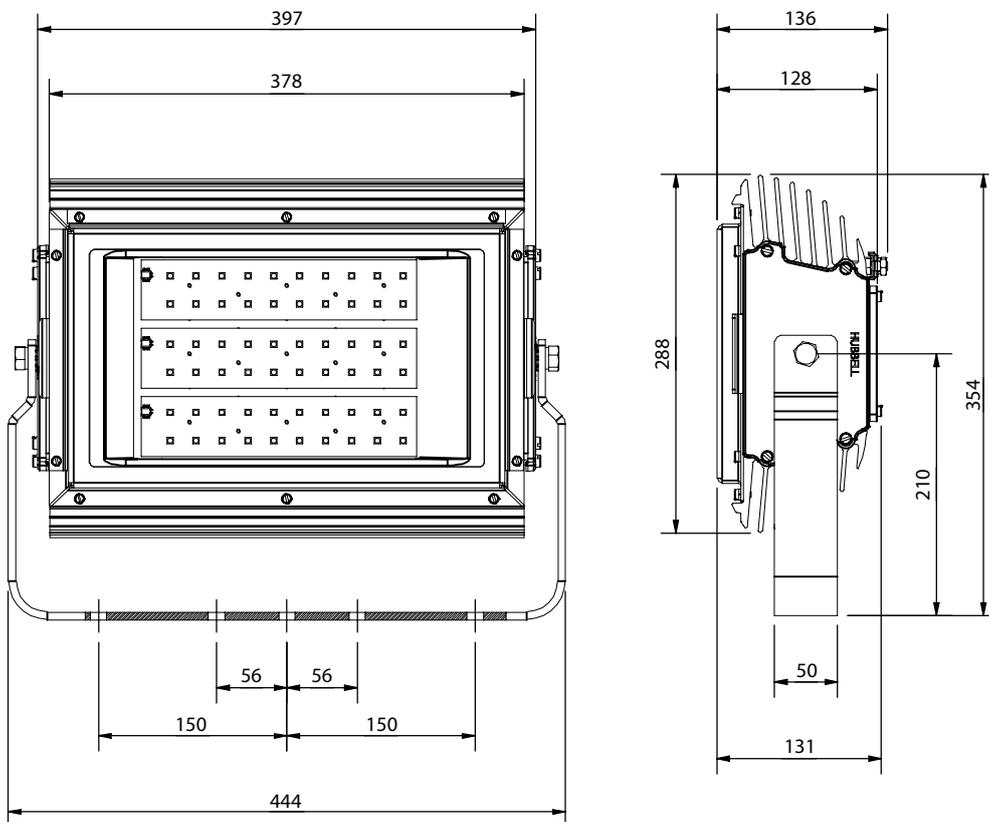
◈ **130,000 maintenance free hours** at 25°C

Std. Cat No.	Delivered Output	Power Consumption	Ambient °C	Weight
ARRI/06L/LE	5885 lm	55W	-50 to +55	13kg
ARRI/10L/LE	10489 lm	74W	-50 to +55	13kg
ARRI/11L/LE	11976 lm	88W	-50 to +55	13kg
ARRI/15L/LE	16880 lm	130W	-50 to +55	13kg

Options - Suffix to Catalogue No.			
/M25	M25 Cable entries	/DM	DALI Dimmable Driver (15L T rating reduces to T5)

Accessories *Accessories should be ordered separately*

	Order Code
Wire Guard	**SARR1-0001**
Anti Glare Shield	**SARR1-0002**
Pole Mounting Bracket Assembly	**S2400-0002**

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ARRAN

Ex n LED Floodlight

Sleek and highly efficient this reliable compact luminaire delivers a uniform photometric distribution and powerful performance of 130,000 maintenance free hours at 25°C .

Its excellent temperature range of -50°C to +55°C makes it a global lighting solution providing high output lighting at extreme temperatures. Offering an easily maintainable driver and LED strip, the **Arran** provides all the advantages of an LED luminaire with the benefit of extending its serviceable life.

Mounting Options
Floodlight. Pendant. Pole/Column. High Bay.

International Approvals

Standard Specification

Arran Ex n LED Floodlight

Type of Protection	Ex nA (Non Sparking) Ex tb (Dust Protected Enclosure)
ATEX Classification	Group II Category 3 GD Group II Category 2 D
Area Classification	Zone 2 and Zone 22 areas to EN 60079-10-1 and EN 60079-10-2 with installation to EN60079-14

Certificate	Type Examination Certificates
	   CML 14ATEX4106 (Zone 2/22)
	EU Type Examination Certificates
	   CML 14ATEX3107 (Zone 21)
	IECEx Certificate of Conformity
	   IECEx CML 14.0044

Coding	Ex nA IIC Gc Ex tc IIIC Dc Ex tb IIIC Db IP6X Refer to table for T Rating and Ambient
Enclosure	Aluminium alloy with epoxy powder finish
Entry	2 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Stirrup mounting bracket
Control Gear	Electronic Driver
Colour Temperature (CCT)	5000K (Cool White)
Maintenance	M5 Slotted Screws
Ingress Protection	IP66
Surge Protection	4kV line to line, 6kV line to earth
Electrical Supply	120-277V AC 50/60Hz 127-250V DC

Features

◈ Highly **Energy Efficient**

◈ **Instant on** crisp white light output

◈ **Lower power consumption** than HID lamps

◈ Low temperature applications **to -50°C**

◈ **130,000 maintenance free hours** at 25°C

Std. Cat No.	Delivered Output	Power Consumption	TClass	T°C (Dust)	Ambient °C	Weight
ARRN/06L/LE	5885 lm	55W	T6 T5	160	-50 to +40 -50 to +55	13kg
ARRN/10L/LE	10489 lm	74W	T6 T5	160	-50 to +40 -50 to +55	13kg
ARRN/11L/LE	11976 lm	88W	T6 T5	160	-50 to +40 -50 to +55	13kg
ARRN/15L/LE	16880 lm	130W	T6 T5	160	-50 to +40 -50 to +55	13kg

Options - Suffix to Catalogue No.

/M25	M25 Cable entries	/DM	DALI Dimmable Driver (15L T rating reduces to T5 at +40°C)

Accessories *Accessories should be ordered separately*

	Order Code
Wire Guard	**SARR1-0001**
Anti Glare Shield	**SARR1-0002**
Pole Mounting Bracket Assembly	**S2400-0002**
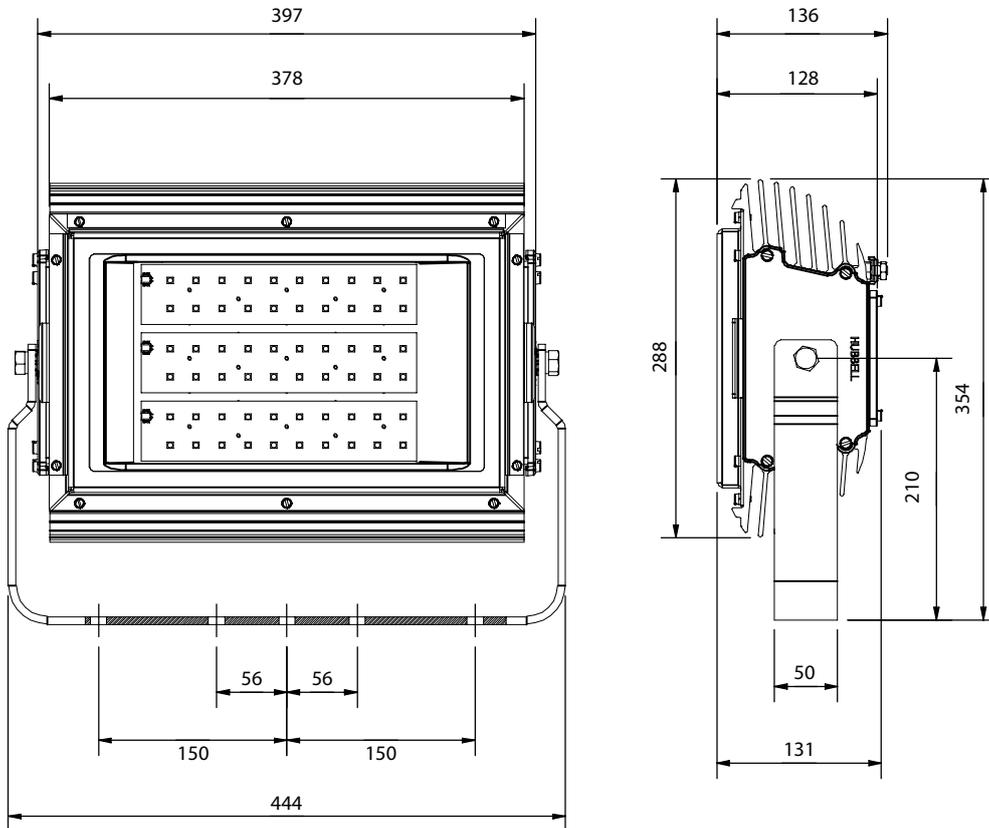
ECLIPSE II

Ex n LED Highbay

The **Eclipse II** LED 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.

Mounting Options
Floodlight. Pendant. Pole/Column. Medium Bay. Low Bay.

MADE IN BRITAIN

International Approvals

Standard Specification

Eclipse II Ex n LED Highbay

Type of Protection	Ex nA (Non Sparking) Ex tc (Dust Protected Enclosure)
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 EN60079-14

Certificate	Type Examination Certificates
	   BAS04 ATEX 0393X
	IECEx Certificate of Conformity
	   IECEx BAS 05.0053X

Coding	Ex nA IIC Gc Ex tc IIIC Dc Refer to table for T Rating and Ambient
Enclosure	Painted aluminium body with glass globe
Entry	Up to 4 x M20 cable entries
Termination	3 core 6mm² max. conductor with looping
Installation	Surface mounted
Control Gear	Electronic Driver
Colour Temperature (CCT)	5000K (Cool White)
Maintenance	Barrel nut fastener
Ingress Protection	IP66
Surge Protection	4kV line to line, 6kV line to earth
Electrical Supply	120-254V AC 50/60Hz

Features

◈ Highly **Energy Efficient**

◈ **Instant on** crisp white light output

◈ **Lower power consumption** than HID lamps

◈ Low temperature applications **to -40°C**

◈ **120,000 maintenance free hours** at 25℃

Std. Cat No.	Delivered Output	Power Consumption	TClass	T°C (Dust)	Ambient °C	Weight
EC2N/06L/LE	5842 lm	55W	T4	90	-40 to +55	11.5kg
EC2N/09L/LE	8525 lm	80W	T4	90	-40 to +55	12.0kg
EC2N/12L/LE*	12220 lm	100W	T4	90	-40 to +55	12.0kg
EC2N/16L/LE	15630 lm	140W	T4	90	-40 to +40	12.0kg

Options - Suffix to Catalogue No.			
/M25	M25 Cable entries	**/SRG**	Surge protection (20kA and 10kV)*
/WM	Wall mounted version	**/ST**	Stanchion mounted version
/PE	Pendant mounted version	**/ER**	Sealed spun reflector
/D	Zone 22 dust applications		

When using additional surge protection with EC2N/12L/LE please note that the maximum ambient reduces to +40ºC.

Accessories   *Accessories should be ordered separately*

	Order Code
Wire guard for low wattage glass globe	**E0850-0042**
Wire guard for enclosed reflector	**E0850-0043**
Dome reflector	**SEC2O-0001**
30° angled reflector	**SEC2O-0002**

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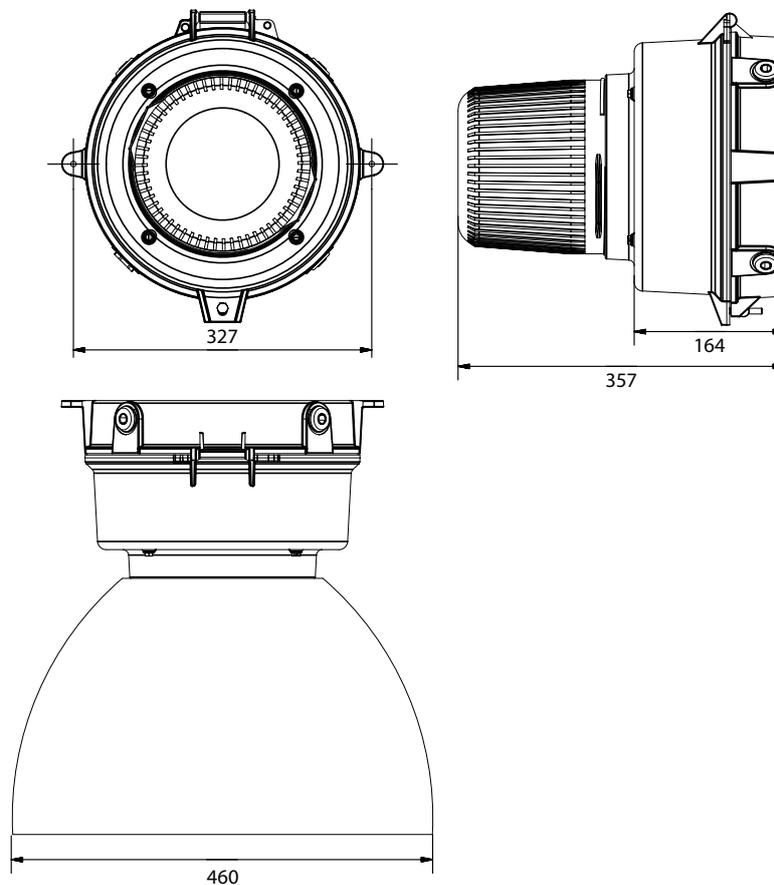
BARRIER Upgrade Kits

One gland – two applications

The **501/453/UNIVERSAL** gland has been a market leading Ex cable gland for 2 decades, but the latest version truly lives up to its **UNIVERSAL** name.

The **501/453/UNIVERSAL** gland still utilises the industry leading internal diaphragm seal to meet the explosion requirements of Exd whilst also helping to prevent cold flow in cables. The **501/453/UNIVERSAL** offers installers the unique opportunity to upgrade the diaphragm seal, meant for use on effectively filled cable inner sheath's, to a barrier type gland, whereby a seal is formed around each individual cable core.

The upgrade kits are available in both **QSP** and **Ex**Press versions and come with everything needed to turn the 501/453/UNIVERSAL into the ICG/653/UNIVERSAL gland. This offers the user the ability to purchase just one Exd gland for both their standard, and barrier gland requirements.

This flexibility is unrivalled and offers unparalleled cost saving and peace of mind.

QSP 2-part hand mix putty - simple to use with a cure time from 30 minutes. Particularly useful where termination space is limited or cables are running horizontally to the installation area. Can be inspected and repaired if necessary, allowing for the very highest level of safety

ExPress **barrier resin** - a globally certified, liquid injectable and fast curing resin, allowing for faster installation time than traditional 2-part compounds. Utilising a unique clear compound chamber allowing full visibility of the flameproof seal during installation and inspection.
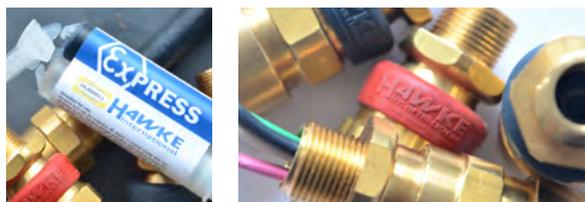
Ordering Information

Format for ordering is as follows:

Product type	Resin type	Size*	Material**
Conversion pack	QSP	A	NP (Nickel Plate)
Conversion pack	**Ex**Press Resin	A	Brass

Ordering Example: Conversion Pack/ ExPress / A / NP

* To match the size of the 501/453/UNIV you want to convert to a ICG653/UNIV
** To match the material of the 501/453/UNIV you want to convert to a ICG653/UNIV

Alternative Reversible Armour Clamping Ring Size Selection

Size Ref	Steel Wire Armour / Braid / Tape	
	Orientation 1	Orientation 2
B	0.9 - 1.25	0.5 - 0.9
C	1.2 - 1.6	0.6 - 1.2
C2	1.2 - 1.6	0.6 - 1.2
D	1.45 - 1.8	1.0 - 1.45
E	1.45 - 1.8	1.0 - 1.45
F	1.45 - 1.8	1.0 - 1.45

HAWKE CABLE GLANDS
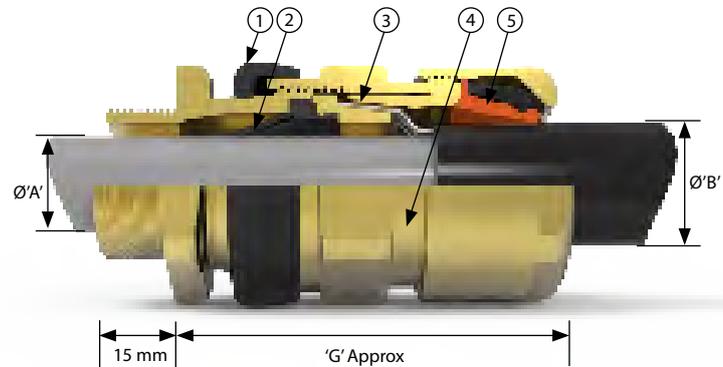
501/453/UNIV

Flameproof, Increased Safety, Dust Protection & Restricted Breathing
Class - Zones
Certified ATEX / IECEx / c CSA us

MADE IN BRITAIN

■ **1** Inspectable Deluge Seal
- Offering IP66, IP67, IP68 & IP69 Ingress Protection

■ **2** Passive diaphragm seal
- Suitable for cables exhibiting 'Cold Flow.' Fully inspectable

■ **3** Reversible Armour Clamp - For all types of armour and braid

■ **4** Patented Cable Gland Tightening Guide
- Helps prevent damage caused by over tightening

■ **5** Unique Rear Seal - Offering ultimate sealing over an
extremely wide cable acceptance range.

International Approvals

The 501/453 Universal Cable Gland is dual certified Exe/Exd, robust and for use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables. For particular use with cables that exhibit 'Cold Flow' characteristics. This cable gland is the first and only cable gland capable of being upgraded to a barrier type solution in the field, see across the page for more details . See technical section for installation rules and regulations.

Cable Gland Selection Table

Size Ref.	Entry Thread Size		Cable Acceptance Details						'G'	Hexagon Dimensions	
	Metric	NPT* Standard or Option	Inner Sheath '0A'		Outer Sheath 'B'		Armour / Braid 'C'			Across Flats	Across Corners
			Min.	Max.	Min.	Max.	Orientation 1	Orientation 2			
Os	M20²	½"	3.5	8.1	5.5	12.0	0.8 / 1.25	0.0 / 0.8	58.4	24.0	26.5
O	M20²	½"	6.5	11.4	9.5	16.0	0.8/1.25	0.0 / 0.8	58.4	24.0	26.5
A	M20	¾" or ½"	8.4	14.3	12.5	20.5	0.8 / 1.25	0.0 / 0.8	59.6	30.0	32.5
B	M25	1" or ¾"	11.1	19.7	16.9	26.0	1.25 / 1.6	0.0 / 0.7	66.4	36.0	39.5
C	M32	1¼" or 1"	17.6	26.5	22.0	33.0	1.6 / 2.0	0.0 / 0.7	71.2	46.0	50.5
C2	M40	1½" or 1¼"	23.1	32.5	28.0	41.0	1.6 / 2.0	0.0 / 0.7	75.2	55.0	60.6
D	M50	2" or 1½"	28.9	44.4 / 42.3¹	36.0	52.6	1.8 / 2.5	0.0 / 1.0	98.0	65.0	70.8
E	M63	2½" or 2"	39.9	56.3 / 54.3¹	46.0	65.3	1.8 / 2.5	0.0 / 1.0	94.4	80.0	88.0
F	M75	3" or 2½"	50.5	68.2 / 65.3¹	57.0	78.0	1.8 / 2.5	0.0 / 1.0	102.0	95.0	104.0
G	M80	3½"	67.0	73.0	75.0	89.5	2.0 / 3.5	0.0 / 1.0	90.6	106.4	115.0
H	M90	3½"	67.0	77.6	75.0	89.5	2.0 / 3.5	0.0 / 1.0	90.6	115.0	130.0
J	M100	4"	75.0	91.6	88.0	104.5	2.5 / 4.0	0.0 / 1.0	90.6	127.0	142.0

Os-F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread only (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering. G size and above are available in the 501/453/RAC design style.
All dimensions in millimetres (except * where dimensions are in inches).

¹ Smaller value is applicable when selecting reduced NPT entry option.
² Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm
For alternative Armour Clamping Ring see table on Page 10

Technical Data

ATEX/IECEx

Type of Protection	Flameproof Exdb IIC Gb, Increased Safety Exeb IIC Gb, Dust Extb IIIC Db Ex II 2 GD
ATEX Classification	CML 19ATEX1268X CML
Area Classification	Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22
Construction & Test Standards	IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7, IEC/EN 60079-1 and IEC/EN 60079-31
Ingress Protection	IP66, IP67, IP68* (30 metres for 7 days) IP69 to IEC/EN 6052 (when installed with a Hawke IP washer)
Deluge Protection	Deluge Protection to DTS01
Operating Temperature	-60°C to +80°C

c CSA us

c CSA us Classification	Certificate No's: CSA1015065
Area Classification	Class I, Zone I, Aex eb IIC Gb. Zone 21, AEXtb IIIC Db. Class I, Div.2 Groups ABCD; Class II Div.2, Groups EFG; Class III cCSA CI D2 ABCD CII D2 EFG CIII Exdb Exeb IIC Gb CSAus AEx eb IIC Gb AExtb IIIC Db CI Zn1 Zn21
Construction & Test Standards	UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Suitable for use in C1D2 applications where permitted by the NEC

Ordering Information

Format for ordering is as follows: Alternative Clamping Ring (AR), add suffix AR to ordering information

Cable Gland Type	Size	Thread	Material	(Optional)
501/453/UNIV	C	M32	Brass	AR
501/453/UNIV	C	1¼" NPT	NP Brass	AR

Example Code: 501/453/UNIV C M32 Stainless

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501/421

Flameproof, Increased Safety, Dust Protection
Class - Zones
Certified ATEX / IECEx / c CSA us

MADE IN BRITAIN

International Approvals

1 Elastomeric Exd flameproof and Exe Increased Safety seal on cable outer sheath

2 Rounded Cable entry to prevent cable damage

Entry Thread

Ø'B'

15 mm   'G' Approx

The 501/421 dual certified Exe/Exd cable gland is intended for use on non-armoured elastomer and plastic insulated cables. This cable gland may be used with braided cables where the braid and outer sheath pass into the enclosure. For Exd application the cable must be suitable inline with 60079-14. The braid must then be suitably terminated inside the enclosure. See technical section for installation rules and regulations

Cable Gland Selection Table

Size Ref.	Entry Thread Size		Cable Acceptance Details				'G'	Hexagon Dimensions	
	Metric	NPT* Standard	Outer Sheath 'B'					Across Flats	Across Corners
			Standard Seal		Alterntative Seal (S)				
			Min.	Max.	Min.	Max.			
2K	M16	–	3.2	8.0	–	–	23.5	19.0	21.2
Os	M20²	½"	3.2	8.0	–	–	23.8	24.0	26.5
O	M20²	½"	6.5	11.9	–	–	23.8	24.0	26.5
A	M20	¾" or ½"	10.0	14.3	9.0	13.4	24.8	30.0	32.5
B	M25	1" or ¾"	13.0	20.2	9.5	15.4	25.8	36.0	39.5
C	M32	1¼" or 1"	19.5	26.5	15.5	21.2	29.2	46.0	50.5
C2	M40	1½" or 1¼"	25.0	32.5	22.0	28.0	30.5	55.0	60.6
D	M50	2" or 1½"	31.5	44.4 / 42.3¹	27.5	34.8	40.4	65.0	70.8
E	M63	2½" or 2"	42.5	56.3 / 54.3¹	39.0	46.5	38.2	80.0	88.0
F	M75	3" or 2½"	54.5	68.2 / 65.3¹	49.5	58.3	40.5	95.0	104.0
G	M80	3½"	67.0	73.0	–	–	41.0	106.4	115.0
H	M90	3½"	67.0	77.6	–	–	41.0	115.0	130.0
J	M100	4"	75.0	91.6	–	–	41.0	127.0	142.0

2K to F size meric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering. All dimensions in millimetres (except * where dimensions are in inches).

1 Smaller value is applicable when selecting reduced NPT entry option.
2 Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm

Technical Data

ATEX/IECEx

Type of Protection	Flameproof Ex db IIC Gb, Increased Safety Ex eb IIC Gb and Dust Extb IIIC Db Ex II 2GD
ATEX Classification	Certificate No's: CML 19ATEX1167X CML 19.0045X
Area Classification	Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22
Construction & Test Standards	IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31
Ingress Protection	IP66, IP67 and IP68 (30 metres for 7 days, special conditions may apply) to IEC/EN 60529 (when installed with a Hawke IP washer)
Deluge Protection	Deluge Protection to DTS01
Operating Temperature	-60°C to +100°C

c CSA us

Type of Protection	Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21
c CSA us Classification	Certificate No's: CSA1015065
Area Classification	Class I, Zone I, Aex eb IIC Gb. Zone 21, AEXtb IIIC Db. Class I, Div.2 Groups ABCD; Class II Div.2, Groups EFG; Class III cCSA CI D2 ABCD CII D2 EFG CIII Exdb Exeb IIC Gb CSAus AEx eb IIC Gb AExtb IIIC Db CI Zn1 Zn21
Construction & Test Standards	UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Suitable for use in C1D2 applications where permitted by the NEC

Ordering Information

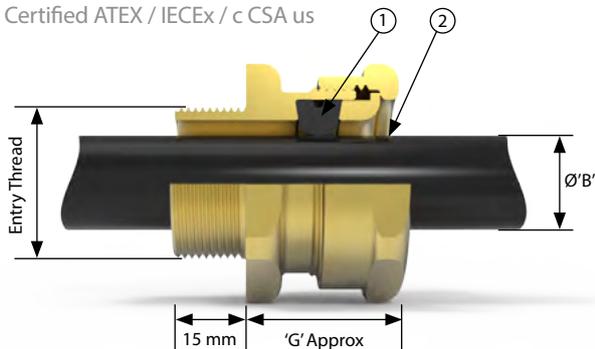Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information

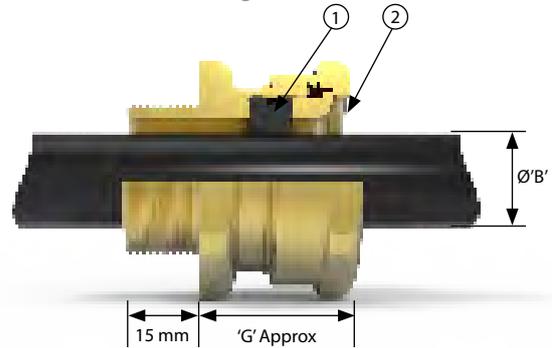| Cable Gland Type	Size	Thread	Material	(Optional)
501/421	C	M32	Brass	S
501/421	C	1¼" NPT	Brass	S

Order Example: 501/421 C M32 Brass S

121

Industrial gland for indoor or outdoor use

MADE IN BRITAIN

■ 1 Elastomeric seal on cable inner sheath

■ 2 Rounded Cable entry to prevent cable damage

Ø'B'

15 mm   'G' Approx

The 121 industrial cable gland is intended for use on non-armoured elastomer and plastic insulated cables in indoor and outdoor applications. This cable gland may be used with braided cables where the braid and outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure. See technical section for installation rules and regulations.

Cable Gland Selection Table

Size Ref.	Entry Thread Size		Cable Acceptance Details				' G'	Hexagon Dimensions	
	Metric	NPT* Standard	Outer Sheath 'B'					Across Flats	Across Corners
			Standard Seal		Alternative Seal (S)				
			Min	Max	Min	Max			
2K	M16	–	3.2	8.0	–	–	23.5	19.0	21.2
Os	M20[2]	½"	3.2	8.0	–	–	23.8	24.0	26.5
O	M20[2]	½"	6.5	11.9	–	–	23.8	24.0	26.5
A	M20	¾" or ½"	10.0	14.3	9.0	13.4	24.8	30.0	32.5
B	M25	1" or ¾"	13.0	20.2	9.5	15.4	25.8	36.0	39.5
C	M32	1¼" or 1"	19.5	26.5	15.5	21.2	28.2	46.0	50.5
C2	M40	1½" or 1¼"	25.0	32.5	22.0	28.0	29.5	55.0	60.6
D	M50	2" or 1½"	31.5	44.4 / 42.3[1]	27.5	34.8	40.4	65.0	70.8
E	M63	2½" or 2"	42.5	56.3 / 54.3[1]	39.0	46.5	38.2	80.0	88.0
F	M75	3" or 2½"	54.5	68.2 / 65.3[1]	49.5	58.3	40.5	95.0	104.0
G	M80	3½"	67.0	73.0	–	–	41.0	106.4	115.0
H	M90	3½"	67.0	77.6	–	–	41.0	115.0	130.0
J	M100	4"	75.0	91.6	–	–	41.0	127.0	142.0

All dimensions in millimetres (except * where dimensions are in inches). 2K-F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.

Technical Data

|	
Construction & Test Standards	BS EN 62444:2013, BS 6121: Part 1 Type A2
Ingress Protection	IP66 and IP67 to IEC/EN 60529 (when installed with a Hawke IP washer)
Deluge Protection	Deluge Protection to DTS01
Operating Temperature	-60°C to +100°C
Assembly Instruction	AI 392

Ordering Information

Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information

Cable Gland Type	Size	Thread	(Optional)
121	C	M32	S
121	C	1¼" NPT	S

Order Example: 121 C M32 S

153 UNIVERSAL

Industrial gland for indoor or outdoor use
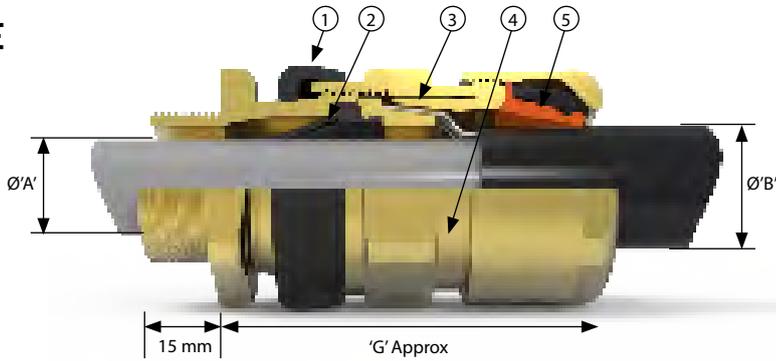
MADE IN BRITAIN

CE

1 Inspectable Deluge Seal
- Offering IP66, IP67, IP68 & IP69 Ingress Protection

2 Passive diaphragm seal
- Suitable for cables exhibiting 'Cold Flow.' Fully inspectable

3 Reversible Armour Clamp - For all types of armour and braid.

4 Patented Cable Gland Tightening Guide
- Helps prevent damage caused by over tightening

5 Unique Rear Seal - Offering ultimate sealing over an extremely wide cable acceptance range.

The industrial 153/Universal Cable Gland is robust and for use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables. For particular use with cables that exhibit 'Cold Flow' characteristics. See technical section for installation rules and regulations

Cable Gland Selection Table

Size Ref.	Entry Thread Size		Cable Acceptance Details						'G'	Hexagon Dimensions	
	Metric	NPT* Standard	Inner Sheath '0A'		Outer Sheath 'B'		Armour Braid 'C'			Across Flats	Across Corners
			Min	Max	Min	Max	Orientation 1	Orientation 2			
Os	M20[2]	½"	3.5	8.1	5.5	12.0	0.8/1.25	0.0/0.8	58.4	24.0	26.5
O	M20[2]	½"	6.5	11.4	9.5	16.0	0.8/1.25	0.0/0.8	58.4	24.0	26.5
A	M20	¾" or ½"	8.4	14.3	12.5	20.5	0.8/1.25	0.0/0.8	59.6	30.0	32.5
B	M25	1" or ¾"	11.1	19.7	16.9	26.0	1.25/1.6	0.0/0.7	66.4	36.0	39.5
C	M32	1¼" or 1"	17.6	26.5	22.0	33.0	1.6/2.0	0.0/0.7	71.2	46.0	50.5
C2	M40	1½" or 1¼"	23.1	32.5	28.0	41.0	1.6/2.0	0.0/0.7	75.2	55.0	60.6
D	M50	2" or 1½"	28.9	44.4/42.3[1]	36.0	52.6	1.8/2.5	0.0/1.0	98.0	65.0	70.8
E	M63	2½" or 2"	39.9	56.3/54.3[1]	46.0	65.3	1.8/2.5	0.0/1.0	94.4	80.0	88.0
F	M75	3" or 2½"	50.5	68.2/65.3[1]	57.0	78.0	1.8/2.5	0.0/1.0	102.0	95.0	104.0
G	M80	3½"	67.0	73.0	75.0	89.5	2.0/3.5	0.0/1.0	90.6	106.4	115.0
H	M90	3½"	67.0	77.6	75.0	89.5	2.0/3.5	0.0/1.0	90.6	115.0	130.0
J	M100	4"	75.0	91.6	88.0	104.5	2.5/4.0	0.0/1.0	90.6	127.0	142.0

All dimensions in millimetres (except * where dimensions are in inches). Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering. G size and above are available in the 153/RAC design style.

Technical Data

Construction & Test Standards	BS EN 62444:2013, BS 6121: Part 1 Type E1W, E1X, E1Y and E1Z
Ingress Protection	IP66, IP67, IP68 (30 metres for 7 days, special conditions apply) and IP69 to IEC/EN 60529 (when fitted with a Hawke washer)
Deluge Protection	to DTS01
Operating Temperature	-60°C to +80°C

Alternative Reversible Armour Clamping Ring Size Selection

Size Ref	Steel Wire Armour / Braid / Tape	
	Orientation 1	Orientation 2
B	0.9 - 1.25	0.5 - 0.9
C	1.2 - 1.6	0.6 - 1.2
C2	1.2 - 1.6	0.6 - 1.2
D	1.45 - 1.8	1.0 - 1.45
E	1.45 - 1.8	1.0 - 1.45
F	1.45 - 1.8	1.0 - 1.45

Ordering Information

Format for ordering is as follows: Alternative Clamping Ring (AR), add suffix AR to ordering information

Cable Gland Type	Size	Thread	Material	(Optional)
153/UNIV	C	M32	Brass	AR
153/UNIV	C	1¼" NPT	NP Brass	AR

Example Code: 153/UNIV C M32 Stainless

153/RAC

Industrial gland for indoor or outdoor use

MADE IN BRITAIN

C E

■ **1** Elastomeric seal on cable inner sheath

■ **2** Fully Inspectable Armour Clamp

■ **3** Patented Cable Gland Tightening Guide - Helps prevent damage caused by over tightening

■ **4** Unique Rear Seal - Offering ultimate sealing over an extremely wide cable acceptance range.

Ø'A'   Ø'B'   15 mm   'G' Approx
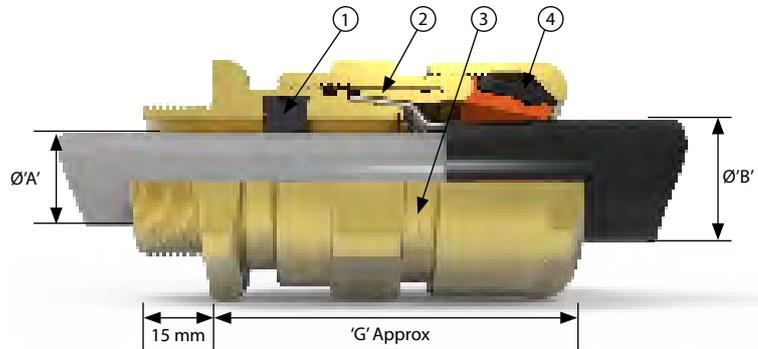
The 153/RAC Cable Gland is an industrial gland for indoor or outdoor use, robust and for use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables. The gland provides an elastomeric seal on the cable inner sheath, and a low smoke, zero halogen IP and retention seal onto the cable outer sheath. See technical section for installation rules and regulations

Cable Gland Selection Table

Size Ref.	Entry Thread Size		Cable Acceptance Details								'G'	Hexagon Dimensions	
	Metric	NPT* Standard	Inner Sheath 'ØA'				Outer Sheath 'B'		Armour Braid 'C'			Across Flats	Across Corners
			Std Seal		Alt Seal (S)		Min	Max	Orientation 1	Orientation 2			
Os	M20[2]	½"	3.2	8.0	-	-	5.5	12.0	0.8/1.25	0.0/0.8	52.0	24.0	26.5
O	M20[2]	½"	6.5	11.9	-	-	9.5	16.0	0.8/1.25	0.0/0.8	52.0	24.0	26.5
A	M20	¾" or ½"	10.0	14.3	9.0	14.3	12.5	20.5	0.8/1.25	0.0/0.8	53.0	30.0	32.5
B	M25	1" or ¾"	13.0	20.2	9.5	15.4	16.9	26.0	1.25/1.6	0.0/0.7	69.5	36.0	39.5
C	M32	1¼" or 1"	19.5	26.5	15.5	21.2	22.0	33.0	1.6/2.0	0.0/0.7	64.0	46.0	50.5
C2	M40	1½" or 1¼"	25.0	32.5	22.0	28.0	28.0	41.0	1.6/2.0	0.0/0.7	68.3	55.0	60.6
D	M50	2" or 1½"	31.5	44.4/42.3[1]	27.5	34.8	36.0	52.6	1.8/2.5	0.0/1.0	79.0	65.0	70.8
E	M63	2½" or 2"	42.5	56.3/54.3[1]	39.0	46.5	46.0	65.3	1.8/2.5	0.0/1.0	78.9	80.0	88.0
F	M75	3" or 2½"	54.5	68.2/65.3[1]	49.5	58.3	57.0	78.0	1.8/2.5	0.0/1.0	83.7	95.0	104.0
G	M80	3½"	67.0	73.0	-	-	75.0	89.5	2.0/3.5	0.0/1.0	95.6	106.4	115.0
H	M90	3½"	67.0	77.6	-	-	75.0	89.5	2.0/3.5	0.0/1.0	95.6	115.0	130.0
J	M100	4"	75.0	91.6	-	-	88.0	104.5	2.5/4.0	0.0/1.0	95.6	127.0	142.0

All dimensions in millimetres (except * where dimensions are in inches). Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.

Technical Data

Construction & Test Standards	BS EN 62444:2013, BS 6121: Part 1 Type E1W, E1X, E1Y and E1Z
Ingress Protection	IP66, IP67 and IP68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X (when installed with a Hawke IP washer)
Operating Temperature	-60°C to +80°C

Alternative Reversible Armour Clamping Ring Size Selection

| Size Ref | Steel Wire Armour / Braid / Tape | |
	Orientation 1	Orientation 2
B	0.9 - 1.25	0.5 - 0.9
C	1.2 - 1.6	0.6 - 1.2
C2	1.2 - 1.6	0.6 - 1.2
D	1.45 - 1.8	1.0 - 1.45
E	1.45 - 1.8	1.0 - 1.45
F	1.45 - 1.8	1.0 - 1.45

Ordering Information

Format for ordering is as follows: Alternative Seal (S), Alternative Clamping Ring (AR), add suffix S and/or AR to ordering information

Cable Gland Type	Size	Thread	Material	(Optional)
153/RAC	C	M32	Brass	AR
153/RAC	C	1¼" NPT	Brass	S

Example Code: 153/RAC C M32 BRASS AR

HAZCON CONTROL STATIONS
GRP and Stainless Steel

MADE IN BRITAIN

Developed to exceed customer expectations, the Control Station range is for use wherever potential explosion hazards exist (Zone 1/21 & 2/22) and boasts a huge selection of pushbuttons, ammeters and selector switches.

Available in both high impact GRP (Glass Reinforced Antistatic Polymer) and 316L Stainless Steel and certified to ATEX/IECEx and UL, the range can also be marked cULus, EAC and Inmetro – a true globally certified range.

• IP66 Ingress protection

• 5 enclosure size offerings

• High switch contact blocks

• AC/DC compatible LED's

• External mounting feet

• Add another bullet point

Project **List**

Our project list has increased steadily since 2017 within the growing drinks distillery market. With new products being launched regularly from Chalmit and Hawke, we anticipate continued growth and collaboration with more and more distilleries seeing the benefits of our products in their facilities.

YEAR	PROJECT NAME
2017	Glenlivet Distillery *E2 New Build - Chivas*
2017	MacAllan Distillery
2018	Sweetdram Distillery
2018	MacAllan Distillery
2018	Miltonduff Distillery
2018	MacAllan Distillery
2019	Bruichladdich Distillery Warehouse
2019	Cameron Bridge Distillery

Hubbell Harsh & Hazardous

Extreme environments demand superior performance, which is why you will find Hubbell products and systems installed in some of the most arduous and safety critical locations worldwide.

The Hubbell Harsh & Hazardous group combines dedicated, market leading brands within the Hubbell portfolio to provide a complete package for companies operating in some of the toughest environments on the planet.

We are committed to providing quality products and services that will meet and exceed your expectations. Our principal activities include the design and manufacture of rugged and hard wearing products. These include telephones and communication products, lighting, control gear and electrical connection products, all designed to operate primarily in extreme outdoor, hazardous and corrosive areas.

Our Brands

All of our brands are long established and well respected businesses within each of their industries. Our primary industry sectors include: Oil & Gas, Petrochemical, Industrial, Marine, Military, Transport and Commercial.

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