

# walsall

MANUFACTURERS OF ELECTRICAL EQUIPMENT FOR  
HAZARDOUS, WET AND DUSTY ENVIRONMENTS

An ISO Approved Company

Walsall Equipment is available Worldwide  
& has offices in;

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MANUFACTURERS OF ELECTRICAL EQUIPMENT FOR  
HAZARDOUS, WET AND DUSTY ENVIRONMENTS



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Short Form Catalogue

ATEX Approved

# CONTENTS

Ex products

## Fluorescent Lighting for Zones 1 & 21



## Lighting for Zones 1, 2, 21 & 22



## Steel Junction Boxes for Zones 1, 2, 21 & 22



## GRP Junction Boxes for Zones 1, 2, 21 & 22



## Cast Iron Junction Boxes for Zones 1 & 21



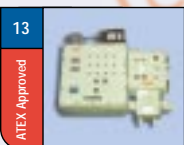
## Control Stations for Zones 1, 2, 21 & 22



## Control Stations for Zones 1 & 21



## Control Systems for Zones 1 & 21



## Plugs & Sockets for Zones 1, 2, 21 & 22



## Sounders & Beacons for Zones 1, 2, 21 & 22



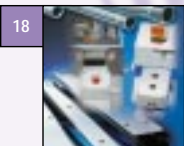
## Flameproof Heaters for Zones 1, 2, 21 & 22



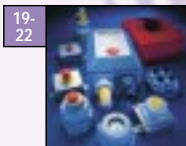
## Glands, Plugs & Adaptors for Zones 1, 2, 21 & 22



## Stainless Steel Cable Management



## Stormproof Equipment



IP Rated Products

## A Company Review

Walsall Ltd is a manufacturer of electrical equipment for use in wet, dusty and hazardous environments. The company was set up in January 2000 to take over the assets of the hazardous area division of Walsall Conduits Ltd, one of the oldest and most respected names in explosion protection.

The objective of the new company is to return the Walsall Hazardous Area brand to the eminent position it once held in the global market for hazardous area electrical equipment.

The company is privately owned and occupies its own purpose built factory based in West Bromwich in the West Midlands.

The core of the business is the Walsall Conduits hazardous division. To this we have added, by acquisition, the EEx d switch and control systems products of All Seasons Martin Limited and the Calstar range of EEx d fluorescent luminaries from Davies Derby Ltd. We have also entered into a strategic alliance with AG Schuch the German manufacturer of EEx e and EEx de lighting fittings.

These acquisitions and alliances together with an aggressive programme of product development means that Walsall has a comprehensive range of approved products covering all electrical engineering applications.

In the last year of operation we invested over £800,000 in new manufacturing equipment and tooling. We have state of the art plastic moulding, laser cutting, sheet metal fabrication, CNC machining and label manufacturing equipment and we are proud that we manufacture in-house most of the products we sell. This in-house capability gives us close control over quality and manufacturing lead times, and we are able to respond quickly to customer needs.

We will continue to enhance our manufacturing capabilities and invest in high technology plant and machinery. We have an ambitious programme of product development and all our products have been or are in the process of being ATEX approved.

We have recently introduced our website [www.walsall-ltd.com](http://www.walsall-ltd.com) which allows easy downloading of individual product data sheets plus an online enquiry service to allow users to build up and send an enquiry at the touch of a button. It will shortly become interactive and allow on-line design and specifications of many of our products.

I hope you like our concept of a fully integrated, broad range, British manufacturer of electrical equipment. If you do, please contact us by telephone, fax, email or visit our website.

We would be delighted to hear from you.

**Robert Whorrod**  
Managing Director.



Purpose built manufacturing facility



Laser Cutting Stainless Steel for Enclosures



CNC Machining of Cast Iron Enclosure



In-house computerised label manufacture - critical for rapid customer response

# Fluorescent Lighting Ranges for Zones 1 & 21

## EEx d IIC Fluorescent Luminaires - Calstar Range

### Features

- EEx d IIB and IIC operation.
- ATEX approved.
- Electronic high frequency control gear as standard.
- 18, 36 & 58w single and twin versions available.
- Emergency version available in 8, 18, 36 & 58w.
- Lighting design software available or calculations performed inhouse.

### Technical Data

#### Ambient Temperatures

-20° to 50°C.

#### Certification

SIRA 00 ATEX 1107.

⊕ II 2 GD.

EEx d II CT 6.

EEx d II BT 6.

#### Cable Entries

2 x M20. Others available.

#### Ingress Protection

IP66 and IP67.

#### Rated Voltage

220 - 254v 50/60Hz.

Other voltages on request.

#### Ballast

Electronic.

#### Temperature Class

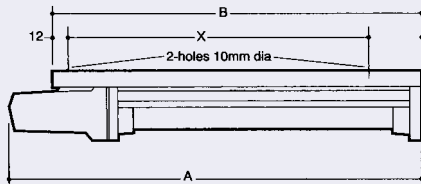
T5 & T6.

### Design Features

- Designed to the latest European Standards.
- Single and twin bi pin lamp versions housed in a 70mm diameter borosilicate glass overtube.
- Constructed from marine grade zinc alloy painted beige with an external white reflector.
- Externally mounted certified battery on emergency versions.
- Emergency luminaires are maintained or non maintained as standard.
- Suitable for cables and conduit systems.
- Easy to replace ballast system.
- Externally mounted ballast for easy replacement & long life advantage



Dimension Information



Tube	Normal Weight	Normal Length	A	B	Fixing CRS
1 x 8w	11Kg	300mm	650	448	391mm
1 x 18w	12Kg	600mm	910	748	661mm
1 x 36w	14Kg	1200mm	1522	1353	1266mm
1 x 58w	16Kg	1500mm	1823	1653	1566mm
2 x 18w	12Kg	600mm	918	748	661mm
2 x 36w	14Kg	1200mm	1522	1353	1266mm
2 x 58w	16Kg	1500mm	1823	1653	1566mm

# Fluorescent Lighting Ranges for Zones 1, 2, 21 & 22

## EEx de Fluorescent - Calstar 'E' Range

### Features

- EEx edq IIC operation.
- ATEX approved.
- Advanced ballast technology gives life expectancy of at least 100,000 hours (approximately 11 years).
- 18, 36 & 58w single and twin versions available.
- Emergency version available in 18, 36 & 58w.
- 1hr & 3hr versions as standard.
- Through wiring facility standard.
- Lighting design software available or calculations performed inhouse.
- Removable battery pack for remote location.

### Technical Data

**Ambient Temperatures:** -20°C to 50°C (Standard)

**Certification:** PTB CIATEX 2113

⊕ II 2G EEx edq IIC T4

EEx ed IIC T4

EEx eq IIC T4

⊕ II 2D T80°C

**Cable Entries:** 2 x M20 - others available.

**Ingress Protection:** IP66

**Rated Voltage:** 220V to 240V AC or DC 50/60Hz

**Ballast:** Electronic (EVG)

**Temperature Class:** T4

**Connection Terminals:** L1 + N + PE, max . 6mm<sup>2</sup>

Available with through wiring systems:

max.: 6 x 2.5 mm<sup>2</sup> + PE or 6 x 4 mm<sup>2</sup> + PE.

Types e 15 221 and e 15 222 are also available for temperature class T6. In this case lamps of 38mm ø have to be inserted and the ambient temperature must not exceed +40°C.

All lighting fittings specified on this catalogue sheet are suitable for connection to non-explosion-proof emergency light power supply units. Such emergency units must be installed outside the explosive atmosphere.

### Design Features

- Fibre glass reinforced polyester body.
- 2 cable glands ( 1 of them is plugged) and 1 blind plug M25 x 1.5.
- Looping the mains cable at one small end of the housing possible.
- Central locking system.
- Hinged prismatic cover made from shock-proof polycarbonate.
- White hinged reflector made from fibre glass reinforced polyester resin.
- Mounting systems via 2 galvanised steel brackets for ceiling mounting or 2 stainless steel hooks for suspension form ceiling.

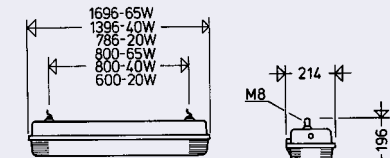
### Zone 1, 21



### Zone 2, 22



Dimension Information



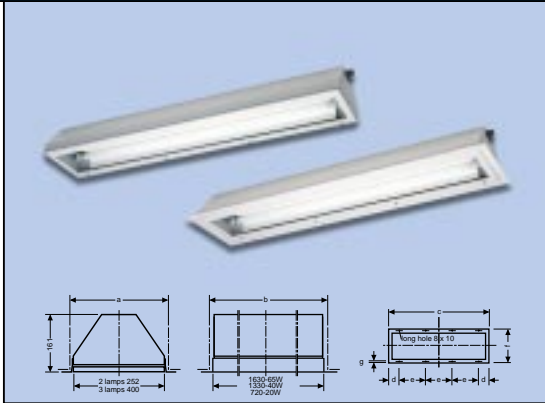
Tube	Normal Weight	Normal Length
1 x 18w	7Kg	600mm
1 x 36w	10Kg	1200mm
1 x 58w	13Kg	1500mm
2 x 18w	8Kg	600mm
2 x 36w	11Kg	1200mm
2 x 58w	14Kg	1500mm

## Lighting Range for Zones 1, 2, 21 & 22

### Recessed Fluorescent - E17 Range

#### Features

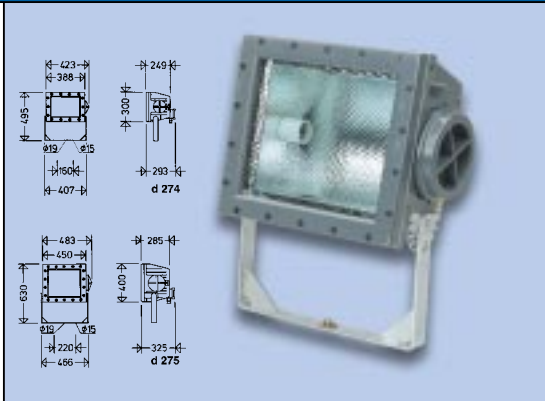
- EEx edq IIC.
- ATEX approved.
- IP65.
- Temperature range T4.
- -20°C to +50°C Standard Ambient.
- Low loss conventional ballast.
- 18, 36 & 58w single and twin & triple versions available.
- Locked by M6 slotted screws.
- 220V to 240V AC or DC.
- 50/60 Hz.
- Mounting: Horizontal.
- Trapezoidal powder coated sheet steel body.



### Flood Light - D27 Range

#### Features

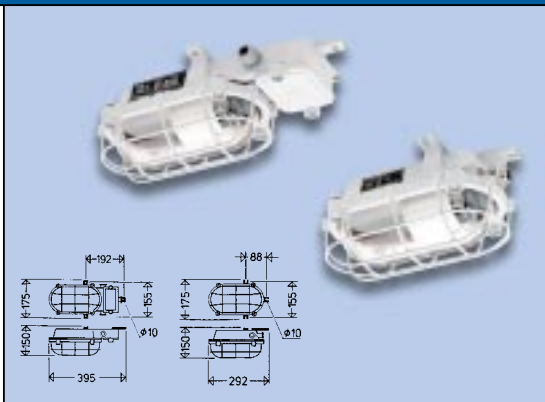
- EEx de IIB.
- IP66/67.
- Temperature range T2-T4.
- Ambient temperature -30°C to +40°C.
- Tungsten / Halogen / Mercury vapour.
- Metal halide.
- High pressure sodium.
- 220V to 240V AC or DC.
- 50/60 Hz.
- Sea water resistant cast aluminium with safety glass.
- Ballasts up to 400W.
- Easy lamp replacement using lateral screw cap.



### Bulk Head - E26 Range

#### Features

- EEx ed IIC.
- IP65.
- Temperature range T1-T3.
- Ambient temperature -20°C to +40°C.
- For use with incandescent lamps up to 100w.
- Temperature proof pressed glass.
- Galvanised wire guard.
- With or without connection box.

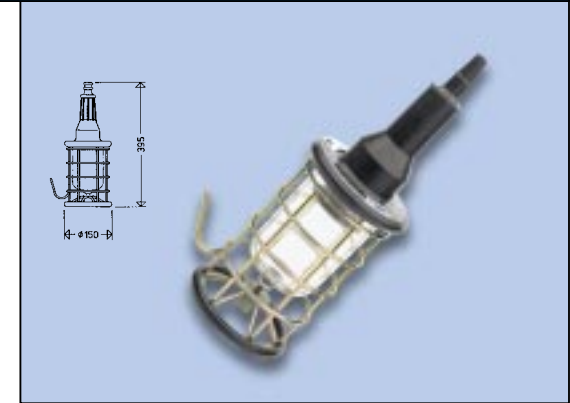


## Lighting Range for Zones 1, 2, 21 & 22

### Hand Lamp - E800 Range

#### Features

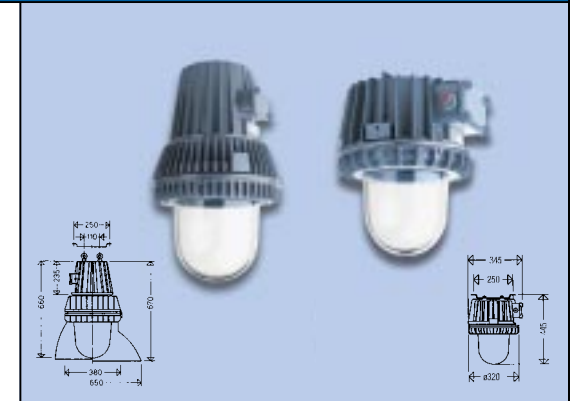
- EEx e IIC.
- IP55.
- Temperature range T2-T4.
- For use with up to 25w to 60w incandescent lamps.
- Explosion proof lamp holder with brake spring for avoiding relievering of the lamp and with cable retainer.
- Galvanised wire guard.
- Rubber cooked suspension hook.



### Pendant Fitting - D600 Range

#### Features

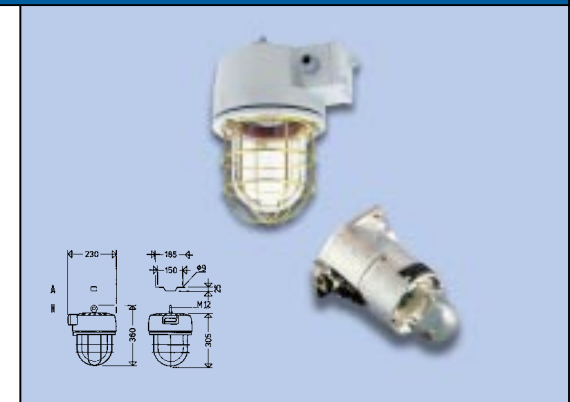
- EEx de IIC.
- IP66/67.
- Temperature range T4-T6.
- Ambient temperature -20°C to +50°C.
- For use with 250w and 400w high pressure mercury and sodium lamps.
- ATEX approved.
- Weather resistant, cast aluminium housing.
- Thermal glass globe.
- Easy lamp replacement by unscrewing bezel.



### Well Glass - D500 Range

#### Features

- EEx de IIC.
- IP66.
- Temperature range T4-T6.
- Ambient temperature -20°C to +50°C.
- For use with up to 125w high pressure mercury, 70w high pressure sodium and 200w incandescent lamps.
- Powder coated galvanised grey cast iron housing.
- Temperature resistant well glasses.



## Junction Boxes for Zones 1 & 2

### EEx e & EEx ia Junction Boxes & Enclosures Manufactured in Sheet Steel - WTB Range

#### WTB & WSTB Range Features

- ATEX approval for EEx e and EEx ia applications.
- IP66/7.
- Special low temperature (-55°C) versions available.
- Fabricated from 316L stainless steel or mild steel using the latest laser technology.
- Three different finishes:
  - Stainless steel - electro polished
  - Mild steel - powder coated
  - zinc spray powder coated



- Unlimited size range.
- Up to four gland plate options on enclosures.
- Good terminal and gland entry capacity.
- Approval for the installation of diodes and resistors.
- **ATEX approved custom assembly service for terminals, glands and other approved components.**

- **High voltage versions now available.**
- **New ATEX certification to supply enclosures of any dimension.**

- High corrosion resistance.
- Featuring standard sizes.

	WTB10	WTB11	WTB12	WTB12A	WTB13	WTB14
Height	229	306	458	480	762	914
Width	152	306	382	480	508	610
Depth	130	150	150	150	150	200

- Deep versions available.



### EEx e, EEx ia & Ex N Junction Boxes & Enclosures Manufactured in G.R.P. - E900 Range

#### Features

- ATEX approval for EEx e and EEx ia applications.
- IP66/7.
- Special low temperature (-55°C) versions available.
- Range of sizes from 122 mm x 120 mm x 90 mm to 400 mm x 405 mm x 120 mm.
- A range of different colours available.
- Good Terminal and gland entry capacity.
- Manufactured from carbon loaded anti-static glass reinforced polyester.
- Choice of pillar, MK and rail mounted terminals.
- **ATEX approved Custom assembly service for terminals, glands and other approved components.**
- High corrosion resistance.
- Light weight.
- Maintenance free.



### EEx d Approved Junction Boxes & Enclosures for Zones 1 & 2 - ASM Range

#### Features

- EEx d IIB and IIC - Flameproof enclosures.
- IP66.
- Wide range of sizes from 115 mm x 115 mm x 72 mm to 560 mm x 560 mm x 240 mm.
- Many sizes available with windows.
- Manufactured in cast iron, not inferior to grade 150 BS1452:1977.
- ASM Types available in cast 316L stainless steel.
- **ATEX approved custom assembly service for terminals, glands and other approved components.**

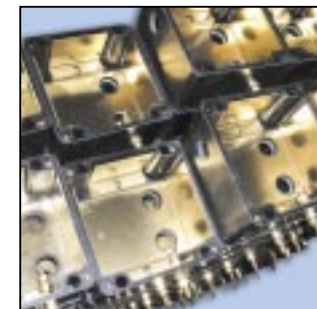
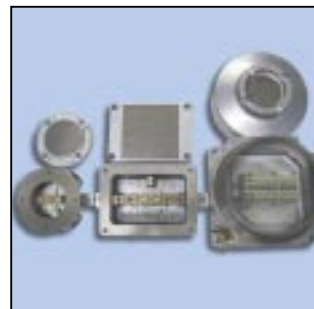


## Junction Boxes for Zones 1 & 2

### Custom Assembly service

#### Features

- The custom assembly service provides assemblies of terminals & boxes.
- Whatever your application, plant or equipment, we can supply a fully assembled unit - complete with accessories. This means that you can commence wiring immediately after delivery, without the need to identify each individual item of the assembly.
- Fully automated machining service for cast iron EEx d enclosures.
- Glands fitted if required.
- Walsall to install components on rail according to customer spec, assemble the enclosure & customize it for customer applications.
- Certified ATEX assemblers.
- Painted in any colour required.
- Software available for terminal box design.



### Custom Gland plates

#### Features

- Design and laser cutting service for gland plates.
- Full (A1) drawing of assemblies can be supplied on request.
- Gland plates can be supplied with or without entries.
- Custom labelling on request.
- Gland fitting service available.



# Control Stations for Zones 1, 2, 21 & 22

EEx e & Ex N Approved Control Stations Manufactured in G.R.P. - **GVU Range**

## Features

- EEx ed.
- IP65.
- T6 - 85°C.
- Ambient temperature range -20°C to +40°C.
- Comprehensive range of single and multifunction control stations including junction boxes, switches, push buttons, meters and pilot lights.
- Single and double pole actions incorporated into switching mechanisms.
- All units designed to link together in a safe and efficient manner to form multi-function control panels.
- Range includes Ex ed and Ex N Break Glass Fire Alarms.
- Zones 1 & 2.
- GRP enclosures.
- Different control units can be assembled in a clear layout.
- These size enclosures can cover a broad range of control device applications.
- Standard & customised units.
- ATEX approved.

Push button



Switch Fuse



Switches



Pilot light - Zone 1



Pilot light - Zone 2



Meter units



Emergency Stop



Break glass



# Control Stations for Zones 1, 2, 21 & 22

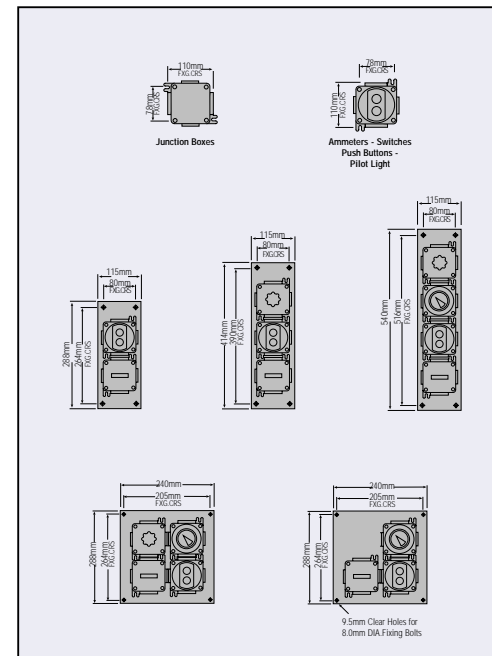
EEx e & Ex N Approved Control Stations - **GVU Range**

## Multiple Assemblies

Any combination of the listed individual units can be joined together in 2, 3 or 4 gang configurations. These assemblies can be mounted either horizontally or vertically.



Multiple assemblies



# Control Stations for Zones 1 & 21

## EEx d Control Stations Manufactured from Cast Iron - Pygmy Range

### Features

- EEx d approved.
- IP65.
- T6/T5 versions.
- Ambient temperature range -40°C to +50°C.
- Comprehensive range of single and multifunction control stations including switches, push buttons, meters, pilot lights, signal lamps, fuse units, isolators, D-O-L starters & Star-Delta.
- All units in the Pygmy Range are designed to link together in a safe and efficient manner to form multi-function control panels.
- All enclosures manufactured from cast iron not inferior to Grade150 BS1452:1977.
- Isolator range 10A, 20A, 32A, 40A, 63A, 80A, 100A, 125A, 150A, 200A.
- ATEX approved.

Isolators 16A-63A



Switch Disconnectors



DOL Starters



Isolators 63A-200A



Pilot light units



Signal Lamp



Push Button



Switch



Double Push Button



Meter Unit



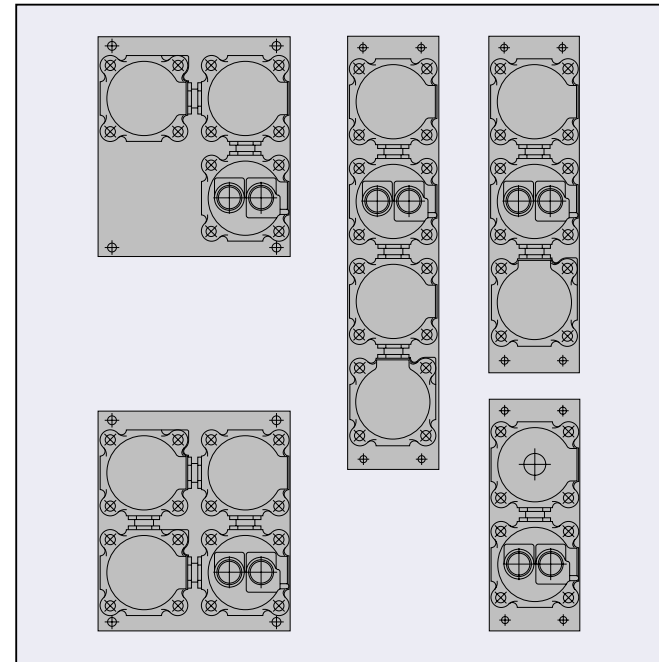
# Control Stations for Zones 1 & 21

## EEx d Control Stations Manufactured from Cast Iron - Pygmy Range

### Multiple Assemblies

Individual units in the range should be fixed through the external fixing strap provided when mounted individually. When two or more units are directly connected together it is a condition of the certification that they are supplied as a factory built assembly on steel back plates as shown below. Any combination of the listed individual units can be joined together in 2, 3 or 4 gang configurations. These assemblies can be mounted either horizontally or vertically.

Combined push button & switch disconnector



Combined DOL Starter & Isolator



## Examples of Custom Built Systems

### Electrical Equipment

Motor Starters:	Direct on Line Star Delta 2 Speed Pole Change Reversing DOL	To 150 Kw To 110 Kw To 110 Kw To 110 Kw
Isolators	Isolating Switch	To 200 amps
Isolator With Circuit Protection	Switch Fuses, 3 Pole + Neutral MCCB'S 3 or 4 Pole Back Mounted RCCB'S 2 or 4 Pole Back Mounted	To 32 amps To 200 amps To 63 amps
Switch Fuses	Direct or Indirect Entry	To 200 amps
Distribution Boards	With Fuse Terminals With Fuse Banks With MCB'S	
Transformers	Single Phase with Suitable Terminals Also with Primary and Secondary Fuses or MCB'S, Output Sockets, Rectifiers	To 3 KVA
Other Electrical Components	Relays Timers Current Transformers Push-buttons Indicator Lamps Meters	Contactors Fuses Terminals Switches Potentiometers

### Electronic Equipment

Controllers for Level, Temperature, Pressure and Flow  
Intrinsically Safe Input Relays  
Intrinsically Safe Trip Amplifiers and Multiples Receivers  
Custom Built IS Circuits  
Programmable Logic Controllers

*Inputs from Exd Sensors in Hazardous Area,*

Simple Apparatus in Hazardous Area  
IS Certified Sensors in Hazardous Area

*Inputs/outputs from/to Exd or IS field components*

Multiplex Transmitters  
Telemetry and Radio Receivers



## Plugs & Sockets - WXN Range

### Features

- II2 G/D DUST T85°C EEX ed IIC T6 LCIE 99 ATEX.
- IP66/67.
- Integral switching device - no extra Ex switch gear required.

### Technical Data

Approved for:

#### Explosive Gases

Zone 1 & 2  
Gases groups IIA, IIB, & IIC

#### Combustible Dusts

Zone 21 & 22

WXN20 Range		
Current Rating	Polarity	Voltage
20A	spne	240v
20A	3pe	400v
20A	3pne	400v
20A	3pne	220v 400Hz

WXN32 Range		
Current Rating	Polarity	Voltage
32A	spne	240v
32A	3pe	400v
32A	3pe+2aux	400v
32A	3pne	400v
32A	3pne+2aux	400v

WXN63 Range		
Current Rating	Polarity	Voltage
63A	spne	240v
63A	3pe	400v
63A	3pe+2aux	400v
63A	3pne	400v
63A	3pne+2aux	400v



## Sounders & Beacons for Zones 1, 2, 21 & 22

### Beacons - WXB Range

#### Features

- ◆ EEx d and EEx de versions.
- ◆ IP66 and IP67.
- ◆ T4 version available.
- ◆ -50°C to +55°C.
- ◆ 5, 10 & 15 joule versions.
- ◆ Automatic synchronised xenon stroke flash.
- ◆ Choice of 6 lens colours.
- ◆ Marine grade LM6 Ex enclosure with glass lens.
- ◆ Powder coated RAL 3000 red.
- ◆ Adjustable stainless steel 'U' bracket.
- ◆ ATEX approved.



### Sounders - WXS Range

#### Features

- ◆ EEx d and EEx de versions.
- ◆ IP66 and IP67.
- ◆ EEx d IIC T4 & EEx de IIC T4 versions available.
- ◆ -50°C to +55°C.
- ◆ Adjustable stainless steel 'U' bracket.
- ◆ Marine grade LM6 Ex enclosure.
- ◆ Powder coated RAL 3000 red.
- ◆ 110dB & 113dB versions available.
- ◆ ATEX approved.



## Heaters for Zones 1, 2, 21 & 22

### Heaters - WXH Range

#### Convactor Heaters

#### Features

- ◆ ATEX Certified EEx e IIC T3.
- ◆ Floor or Wall Mounting.
- ◆ Optional integral room temperature control thermostat.
- ◆ Integral terminal box.
- ◆ Grey gloss, powder coated.
- ◆ Sloped top to prevent object being placed on the grill.



#### Air Warmer

#### Features

- ◆ ATEX Certified EEx e IIC T2, T3 or T4.
- ◆ IP66/67.
- ◆ Suitable for -60° to +60° C.
- ◆ Optional Wall Mounting Kit.
- ◆ 110v, 240v single phase and 415v three phase.
- ◆ Coated in mild steel or lightweight stainless steel.



#### Thermostats

#### Features

- ◆ ATEX Certified EEx d IIC T1-T6.
- ◆ Optional Wall Mounting or immersion types.
- ◆ Suitable for -20° to +60° C.



#### Liquid filled radiators

#### Features

- ◆ ATEX Certified EEx d IIC T6.
- ◆ IP66.
- ◆ Integral control thermostat.
- ◆ Long life incoloy 825 elements.
- ◆ Ambient temperature up to 40° C.
- ◆ Decorative, white powder coated finish.
- ◆ Floor mounting.



# Glands, Stopping Plugs, Reducers & Adapters for Zones 1 & 2

## Glands - WXG Range

### Features

- ◆ Dual certified EEx d/e IIC.
- ◆ Rated IP66/67/68.
- ◆ Temperature Range -30°C to +130°C.
- ◆ ATEX approved.
- ◆ Flameproof gland kits.
- ◆ Accommodates SWA, braided steel tape armour cables.
- ◆ Size range M20 - M63.
- ◆ Reducers & Adaptors available on request.
- ◆ Other sizes available on request.



## Stopping Plugs, Reducers & Adaptors - WXG Range

### Features

- ◆ ATEX approved.
- ◆ Other sizes available on request.
- ◆ Brass dual certified EEx d/e IIC
- ◆ Plastic EEx xe II stopping plugs.

Description
M20 EEx de Dome Head Brass Plug
M25 EEx de Dome Head Brass Plug
M32 EEx de Dome Head Brass Plug
M20 EExe Dome Head Plastic Plug
M25 EExe Dome Head Plastic Plug



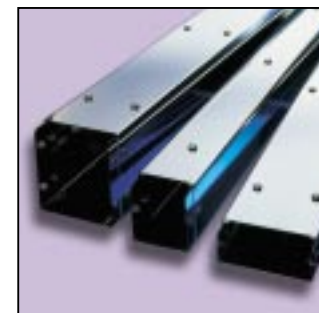
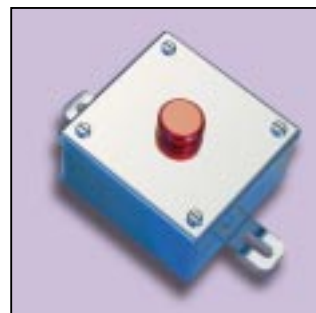
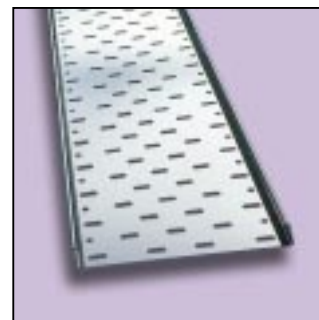
# Stainless Steel Cable Management Systems

### Features

- ◆ A full range of Stainless Steel Cable Management including:
  - Single & Multi Compartment trunking.
  - Cable tray - Including straight edge versions for Food Industries.
  - Conduit & Conduit fittings.
  - Adaptable boxes.
  - Enclosures with IP65.
  - Rotary Switches in Stainless Enclosures.
  - Push Buttons in Stainless Enclosures.
  - Window Enclosures.
- ◆ Competitive prices & discounts.
- ◆ Clear carriage charge pricing.
- ◆ Ex - stock delivery.
- ◆ All manufactured in our factory using the latest laser cutting technology, no burrs, no sharp edges, clean cut.
- ◆ Bespoke manufacturing to individual specifications.

### Typical applications:

- ◆ Pharmaceutical
- ◆ Food
- ◆ Dairy
- ◆ Brewing



# Stormproof Equipment

## GRP Control Stations - WCU Range IP65/66

### Junction Box

List Number	Conductor Size	Max. No. of ways	Entry Positions
WCU151	0.5 - 4.0mm <sup>2</sup>	6 + Internal Earth	M20 A.B.C.D. (2-plugged)
WCU150	0.5 - 6.0mm <sup>2</sup>	4 + Internal Earth	M20 A.B.C.D. (2-plugged)



### Meters

List Number	Function	Entry Positions
WCU090	Ammeter or Voltmeter	M20 A.B. (1-plugged) Meter Details to be specified when ordering

Note - Ammeters up to 30 Amp suitable for direct operation. Higher ratings need to be CT operated.



### Pilot Light - Rated 10W 240V Max. (SBC Lampholder)

List Number	Lens colour	Entry Positions
WCU180	Red	M20 A.B. (1-plugged)
WCU181	Amber	M20 A.B. (1-plugged)
WCU182	Green	M20 A.B. (1-plugged)
WCU183	White	M20 A.B. (1-plugged)



### Switches - Rated 16A 415V

List Number	Function	Entry Positions
WCU170	DP On/Off Switch	M20 A.B. (1-plugged)
WCU174	DP Changeover (2 Way) without Off Switch	M20 A.B. (1-plugged)
WCU176	DP Changeover with Off Switch	M20 A.B. (1-plugged)
WCU172	SP Intermediate Switch	M20 A.B. (1-plugged)
WCU177	TP On/Off Switch	M20 A.B. (1-plugged)
WCU178	4P On/Off Switch	M20 A.B. (1-plugged)



### Push Buttons - Rated 16A 415V 1-N/C & 1-N/O contact per button

Single Button Assemblies	List No.	Function	Entry Positions
	WCU160	Shrouded Green Start	M20 A.B. (1-plugged)
	WCU161	Shrouded Red Stop	M20 A.B. (1-plugged)
	WCU162	Shrouded Red Stop with stayput	M20 A.B. (1-plugged)
	WCU163	Exposed Red Stop	M20 A.B. (1-plugged)
	WCU164	Mushroom Red Stop with stayput (Emergency Stop)	M20 A.B. (1-plugged)

Double Button Assemblies	List No.	Function	Entry Positions
	WCU165	Shrouded Green Start & Red Stop	M20 A.B. (1-plugged)
	WCU166	Shrouded Green Start & Red Stop with stayput	M20 A.B. (1-plugged)
	WCU167	Shrouded Green Start & Exposed Red Stop	M20 A.B. (1-plugged)
	WCU168	Shrouded Green Start & Exposed Red Stop with stayput	M20 A.B. (1-plugged)



# Stormproof Equipment

## Control Stations - WCU Range IP65/66

### Sockets & Plugs

List Numbers	Plug	Entry Positions
WCU300	WCU301	16A 110 - 130V 2P + E M20 A.B. (1-plugged)
WCU302	WCU303	16A 220 - 250V 2P + E M20 A.B. (1-plugged)
WCU304	WCU305	16A 380 - 415V 3P + E M20 A.B. (1-plugged)
WCU306	WCU307	16A 380 - 415V 3P + N + E M20 A.B. (1-plugged)



### Break Glass Fire Alarm - 1-N/O & 1-N/C Contact

List No.	Entry Positions
WCU169	M20 A.B. (1-plugged) End-of-line and series resistors may be provided details to be specified when ordering



### Switchfuse Rated 16A 240V

List No.	Function	Entry Positions
WCU200	SP & N Switchfuse	M20 A.B. (1-plugged)



### Combined Assemblies

Details to be specified when ordering.



Example 1  
Pilot Light & Switch



Example 2  
Pilot Light and Double Push Button

# Stormproof Equipment

## Stainless Steel Control Stations - WSS Range IP65/66

### Junction Box

#### Fitted with Terminals

List Number	Conductor Size	No. of Terminals
WSSU151	0.5 - 4.0mm <sup>2</sup>	8 + Earth
WSSU150	0.5 - 6.0mm <sup>2</sup>	4 + Earth

Larger enclosures for different quantities and sizes of terminals can also be provided on request



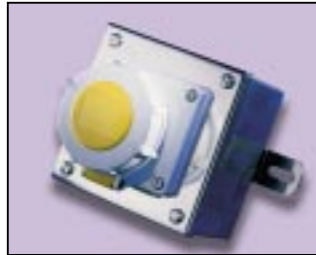
### Switches - Rated 16A 415V

List Number	Function	Entry Positions
WSSU170	DP On/Off	M20 A.B. (1-plugged)
WSSU177	TP On/Off	M20 A.B. (1-plugged)
WSSU178	4P On/Off	M20 A.B. (1-plugged)
WSSU171	DP Changeover (2 Way)	M20 A.B. (1-plugged)
WSSU176	DP Changeover with off position	M20 A.B. (1-plugged)
WSSU172	SP Intermediate	M20 A.B. (1-plugged)



### Sockets & Plugs (BS EN 60309-2/BS4343)

List Numbers	Socket	Plug
WSSU300	WSSU301	16A 110 - 130V 2P + E
WSSU302	WSSU303	16A 220 - 250V 2P + E
WSSU304	WSSU305	16A 380 - 415V 3P + E
WSSU306	WSSU307	16A 380 - 415V 3P + N + E



### Pilot Light - Rated 10W 240V Max.

List Number	Lens colour
WSSU180	Red
WSSU181	Amber
WSSU182	Green
WSSU183	White



### Push Buttons

Single	List No.	Function
	WSSU160	Shrouded Green Start
	WSSU161	Shrouded Red Stop
	WSSU162	Shrouded Red Stop with stayput
	WSSU163	Exposed Red Stop
	WSSU164	Mushroom Red Stop with stayput (Emergency Stop)
Double	List No.	Function
	WSSU165	Shrouded Green Start & Red Stop
	WSSU166	Shrouded Green Start & Red Stop with stayput
	WSSU167	Shrouded Green Start & Exposed Red Stop
	WSSU168	Shrouded Green Start & Exposed Red Stop with stayput



# Stormproof Equipment

## Stainless Steel Control Stations - WSS Range IP65/66

### Adaptable Boxes

List Numbers	Dimensions	List Numbers	Dimensions
WSSU501	100 x 100 x 50	WSSU509	300 x 225 x 75
WSSU502	175 x 100 x 50	WSSU510	300 x 300 x 75
WSSU503	175 x 175 x 50	WSSU511	175 x 175 x 100
WSSU504	100 x 100 x 75	WSSU512	225 x 175 x 100
WSSU505	175 x 100 x 75	WSSU513	225 x 225 x 100
WSSU506	175 x 175 x 75	WSSU514	300 x 225 x 100
WSSU507	225 x 175 x 75	WSSU515	300 x 300 x 100
WSSU508	225 x 225 x 75		



### Quadrok Heavy Duty Switched Sockets and Plugs 16/32/63 Amp 415V Fused & Unfused

List Numbers	Fused	Unfused	Spare Plug	Socket Type
WHF163	WHL163	W22061	16A 2P & E	
WHF164	WHL164	W22062	16A 3P & E	
WHF323	WHL323	W22071	32A 2P & E	
WHF324	WHL324	W22072	32A 3P & E	
WHF633	WHL633	W22081	63A 2P & E	
WHF634	WHL634	W22082	63A 3P & E	



### Quadrok Transformers Single Phase

List Numbers	Power Rating	Primary Voltage	Secondary Voltage	Output Socket Type	Fusing
Unit c/w Plug	Spare Plug				Primary Secondary
WTB0102	W011152	25VA	230V	12V	BS196 13A 3A
WTB0205	W011154	50VA	230V	25V	BS196 13A 3A
WTB0210	W011154	100VA	230V	25V	BS196 13A 5A
WTB0510	W011156	100VA	230V	50V	BS196 13A 3A
WTB1110	W011108	100VA	230V	110V	BS4343 13A 3A
WTB1160	W011108	600VA	230V	110V	BS4343 13A 7A
WTB2166 (Dual Output)	W011154	60VA	230V	25V	BS196 13A 3A
	W011108	600VA	230V	110V	BS4343 13A 7A



## Our Commitment to ATEX

The ATEX directive of the EU started its transition period of implementation in March 1996 and will be mandatory by July 2003. Some of the products in this catalogue have an EC type examination certificate to the ATEX directive and the remainder are in the process of being type approved to the ATEX directive. ATEX covers both electrical and mechanical ignition hazards.

Apparatus is divided into Equipment groups (I for mining and II non-mining) and into Categories 1, 2 and 3. The Categories provide respectively, very high, high and normal levels of protection against ignition. The Categories should be viewed as delivering the level of protection which is obtained by applying the existing protection techniques (Ex 'd', Ex 'e' etc.) together with such new concepts and engineering judgement that will be made by the manufactures in the design and construction of the apparatus and by the 'Notified' (certification) bodies who will, where required, produce EC type examination certificates.

The Categories in practice are equated to suitability for Zones. Apparatus will be marked with the grouping and Category in addition to the marking required by the individual protection standards. The Walsall range of products fall within group II for industrial applications and are suitable for classification in Categories 2 and 3. This means that they are or will generally be suitable for use in Zones 1 and 2 areas as defined by the codes of practice such as BS EN 60079-10 and BS EN 60079-14 etc. These codes of practice provide the user with guidance in selecting apparatus to obtain the degree of safety that is required for the particular 'hazardous area' application.

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

However, Walsall Limited have chosen to obtain type examination for Category 3 equipment also in order to promote customer confidence.

ATEX Categories and Applications				
Category	Degree of Safety	Design Requirements	Application	Expected Zone of Use
1	Very high level of Safety	Two independent means of protection or safe with two separate faults	Where explosive atmospheres are present continuously or for lengthy periods	Zone 0 Zone 20
2	High level of Safety	Safe with frequently occurring disturbances or with an operating fault	Where explosive atmospheres are likely to occur	Zone 1 Zone 21
3	Normal level of Safety	Safe in normal operation	Where explosive atmospheres are likely to occur infrequently and be of short duration	Zone 2 Zone 22