"YOUR PARTNER FOR SAFETY"
COMPANY PROFILE

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Since 1961, **FEAM** designs and manufactures explosion proof electrical equipment mainly used in chemical, petrochemical and oil&gas markets.

Over the years, as part of **TOP GROUP** first and recently as part of **BARTEC** Group, the company has established itself in the industrial plant security market where work is carried out in potentially hazardous and explosive areas with inflammable materials. The commitment to protect people and environment leads the company to offer the most suitable and safe solution which fits at best with customers’ needs. Since its foundation, the company has heavily invested in Research and Development in compliance with the main international Standards such as **ATEX, IECEx, TR CU, KC, INMETRO, NEC 500/505**.

As a result of its efforts, **FEAM** has been immediately introduced in the approved vendor list of the major international companies and was able to increase its yearly turnover growing up to a leading position in explosion proof market.

**FEAM**s products are developed with the most advanced technologies. The company uses the most modern machinery with robotic and automated process timetabled by the most cutting-edge software such as cad-cam for the costs / commitment calculation aimed to manage the different phases and workloads. All production processes like product design, moulds building, foundry, machining, assembly and electrical wiring are carried out internally in order to guarantee the best quality of the final product.
FEAM founded

Quality System certification according to ISO-9001:2000

ATEX 94/9/CE notification

All products certified according to ATEX standards

All products certified according to GOST standards

Inauguration of new production unit in Moraro, Italy

First certification according to NEMA Standard (UL Listed)

the EBJ enclosure becomes IIC with the EJC™

IECEx certification for all of the products in process

Cooperation with the engineering University of Milano (Politecnico) for the development of a LED explosion proof lighting fixtures

BARTEC acquires FEAM

All products certified according to TR CU standard

ATEX 2014/34/EU notification

1961
1993
2000
2004
2005
2006
2009
2010
2011
2012
2014
2015
2016
When one’s work is aimed at guaranteeing other people’s safety, it is essential to operate always according to a logic of excellence. This is the goal that drives processes and behaviors within FEAM and the whole Group.

Quality becomes even more tangible and objective when it is recognized through the award of significant certifications: such as ISO9001:2008.

The company has also been certified by a notified body in compliance with ATEX Directive 2014/34/EU.

**Inspection and testing**

Inspection and tests are carried out to guarantee the conformity to reference standards and QA/QC procedures. Prototypes and serial equipment are regularly tested for a constant improvement. Our Quality department looks after third part inspection by main International recognized Companies.
- Lighting and receptacle socket outlet panel boards
- Motor starters panel boards
- Control system earthing panel boards
- Marshalling, pulling and junction boxes in GRP, aluminium and stainless steel
- Instruments housings
- Control stations in GRP, aluminium and stainless steel enclosures
- Circuit breakers, on-load switch and selector switches
- Receptacle socket outlets in resin or aluminium with junction box
- Incandescent, fluorescent, discharge and LED lighting fixtures
- Emergency lighting fixtures
- Traffic lights
- Obstruction lights
- Warning lights
- Horns, bells and sirens
- Cable glands
- Sealing fittings
- Junction and pulling boxes
- Accessories for Ex zone as reducers, adaptors, elbows, flexibles etc.

**HIGH QUALITY RAW MATERIALS**

- Aluminium Alloy G-AlSi 13 UNI 1706:2009
- Aluminium Alloy G-AlSi 10 UNI 1706:2009
- Cast Iron
- Stainless Steel AISI 316L
- Stainless Steel AISI 304
- Polycarbonate UL 94V0
- Glass Fibre Reinforced Polyester Resin
ENCLOSURES - EJB SERIES

This enclosure is used as panel board or terminal box to install electrical components (switches, signals, circuit breakers, on-load switches, transformers, etc.). The cover may be equipped with a transparent window in order to display the components assembled inside.

MATERIAL: aluminium, stainless steel AISI 316L or cast iron. Hardware in stainless steel, AISI 316 standard.

Epoxy coating grey (RAL 9006). Other colours on request.

ENCLOSURES - GUB SERIES

This enclosure is used as panel board or terminal box to install electrical components (switches, signals, circuit breakers, on-load switches, transformers, etc.). The cover may be equipped with a transparent window in order to display the components assembled inside.

MATERIAL: aluminium, stainless steel AISI 316L or cast iron. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

ENCLOSURES - EJC™ SERIES

This enclosure is used as panel board or terminal box to install electrical components (switches, signals, circuit breakers, on-load switches, transformers, etc.). The cover may be equipped with a transparent window in order to display the components assembled inside.

MATERIAL: aluminium. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

JUNCTION BOXES - GWR SERIES

This enclosure is used as terminal box to install Ex e certified terminals or bus-bars. These boxes are modular and can be jointed together through special designed flanges granting the IP protection.

MATERIAL: GRP (glass reinforced polyester) resin. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

JUCTION BOXES - GWR SERIES

This enclosure is used as terminal box to install Ex e certified terminals or bus-bars. These boxes are modular and can be jointed together through special designed flanges granting the IP protection.

MATERIAL: GRP (glass reinforced polyester) resin. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Company Profile
JUNCTION BOXES - ESX SERIES

This enclosure is used as terminal box to install Ex e certified terminals or bus-bars. These modular boxes can be joined together through sealing gaskets granting the IP protection. This enclosure can be supplied also with removable flanges on each side.

MATERIAL: stainless steel AISI 316L.
Hardware in stainless steel AISI 316L standard.

(JI I2 GD) Ex e** IIB or IIC T6 or T5 or T4 or T3 Gb
Ex tb IIC T85°C or T100°C or T135°C or T200°C Db
IP 65/66
ZONE 1-2-21-22

** The marking code Ex is completed by the indication of the type of protection of the component installed inside the enclosure.

JUNCTION BOXES - ESA SERIES

This enclosure is used as terminal box to install Ex e certified terminals or bus-bars.

MATERIAL: copper-free aluminium alloy. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

(JI I2 GD) Ex e** IIB or IIC T6 or T5 or T4 or T3 Gb
Ex tb IIC T85°C or T100°C or T135°C or T200°C Db
IP 65/66
ZONE 1-2-21-22

** The marking code Ex is completed by the indication of the type of protection of the component installed inside the enclosure.

ENCLOSURES FOR CONTROL STATIONS - GWRCS SERIES

This enclosure can be fitted with push buttons, pilot lights, emergency push buttons with cover protection, mushroom push buttons with key and stayput, selector switches, analog or digital components.

MATERIAL: GRP (Glass Reinforced Polyester) resin.
Hardware in stainless steel, AISI 304 standard, AISI 316L on request.

(JI I2 GD) Ex e** IIC T6 or T5 Gb
Ex tb IIC T85°C or T100°C Db
IP 65/66
ZONE 1-2-21-22

** The marking code Ex is completed by the indication of the type of protection of the component installed inside the enclosure.

ENCLOSURES FOR CONTROL STATIONS - ESACS/ESXCS SERIES

This enclosure can be fitted with push buttons, pilot lights, emergency push button with cover protection, mushroom with key and stayput, selector switches and analog or digital components.

MATERIAL: copper-free aluminium alloy epoxy coated or in stainless steel AISI 316L.
Hardware in stainless AISI 316 standard.

(JI I2 GD) Ex e** IIB or IIC T6 or T5 or T4 or T3 Gb
Ex tb IIC T85°C or T100°C or T135°C or T200°C Db
IP 65/66
ZONE 1-2-21-22

** The marking code Ex is completed by the indication of the type of protection of the component installed inside the enclosure.
LED WELLGLASS LIGHTING FIXTURES - EVAC LED SERIES

This lighting fixture is supplied with LED lamps. For indoor and outdoor applications of those areas where a concentrated, diffused or ambient light is required.

**MATERIAL:** copper-free aluminium alloy.
Borosilicate glass window
Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

**ZONE:** 1-2-21-22

**WATTAGE:** up to 96 W LED

(II 2 GD)
Ex d IIC T6 or T5 or T4 Gb
Ex tb IIIC T85°C or T105°C Db
IP 66
ZONE 1-2-21-22

LED FLOOFLIGHTS SFDE LED SERIES

This floodlight is supplied with LED lamps. For indoor and outdoor applications.

**MATERIAL:** copper-free aluminium alloy.
Borosilicate glass window.
Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

**ZONE:** 1-2-21-22

**WATTAGE:** up to 240 W LED

(II 2 GD)
Ex d/de IIB + H, T6 or T5 or T4 Gb
Ex tb IIIC T85°C or T100°C or T135°C Db
IP 66
ZONE 1-2-21-22

LED FLOODLIGHTS - RCDE LED SERIES

This floodlight is supplied with LED lamps. For indoor and outdoor applications.

**MATERIAL:** copper-free aluminium alloy.
Borosilicate glass window, hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

**ZONE:** 1-2-21-22

**WATTAGE:** up to 192W LED

(II 2 GD)
Ex d IIC T6 or T5 Gb
Ex tb IIIC T85°C or 100°C Db
IP 66
ZONE 1-2-21-22

LED AND FLUORESCENT LIGHTING FIXTURES - EVF SERIES

This lighting fixture is provided with bi-pin fluorescent tubes or LED lamps. Available also as emergency version. Specially indicated for highly corrosive environments and marine applications.

**MATERIAL:** copper-free aluminium alloy.
Borosilicate glass tube. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

**ZONE:** 1-2-21-22

**WATTAGE:** up to 36 W / 20 W LED

(II 2 GD)
Ex d IIC T6 Gb
Ex tb IIIC T85°C Db
IP 66
ZONE 1-2-21-22
**LED AND FLUORESCENT LIGHTING FIXTURES - EVFG SERIES**

This lighting fixture is provided with bi-pin fluorescent tubes or LED lamps. Available also as emergency version. Specially indicated for highly corrosive environments and marine applications.

**MATERIAL:** copper-free aluminium alloy. Borosilicate glass tube. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

**LED AND FLUORESCENT EXIT LIGHTING FIXTURES - EXL SERIES**

This compact model has been designed as emergency light source. A customized sign board to be sticked on is available on request. It is supplied with fluorescent or LED lamps.

**MATERIAL:** copper-free aluminium alloy or cast iron. Borosilicate glass window. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

**BULKHEAD LIGHTING FIXTURES - EVT SERIES**

This lighting fixture can be supplied with incandescent, LED or halogen lamps. It is normally used to illuminate places like tunnels and walking passages where a small and flat shape light is required.

**MATERIAL:** copper-free aluminium alloy. Borosilicate glass globe. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

**TANK PORTHOLE LIGHTING FIXTURES - EVO SERIES**

This compact model has been designed as emergency light source. A customized sign board to be sticked on is available on request. It is supplied with fluorescent or LED lamps.

**MATERIAL:** copper-free aluminium alloy or cast iron. Borosilicate glass window. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.
PRODUCTS OVERVIEW

WELLGLASS LIGHTING FIXTURES - EVAC SERIES

This floodlight is supplied with incandescent and discharge lamps such as metal halide, high pressure sodium and mercury lamps. For indoor and outdoor applications where a wide beam light is required.

MATERIAL: copper-free aluminium alloy.
Borosilicate glass window. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

FLOODLIGHTS SFD - SFDE SERIES

This floodlight is supplied with incandescent and discharge lamps such as metal halide, high pressure sodium and mercury lamps. For indoor and outdoor applications where a wide beam light is required.

MATERIAL: copper-free aluminium alloy.
Borosilicate glass window. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

FLUORESCENT LIGHTING FIXTURES - AVC SERIES

This lighting fixture is provided with bi-pin fluorescent tubes. Available also as emergency version. It comes with lamps and mounting Ø-shape brackets.

MATERIAL: body in GRP (glass reinforced polyester) resin. Transparent diffuser in antistatic polycarbonate. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

COLOUR: black as a standard.

FLUORESCENT LIGHTING FIXTURES - EVSN SERIES

This lighting fixture is provided with bi-pin fluorescent tubes. Available also as emergency version.


(II 2 GD)
Ex d IIC T6...T2 Gb
Ex tb IIIC T85°C...T225°C Db
IP 66
ZONE 1-2-21-22
WATTAGE: up to 2x36 W

(II 3 GD)
Ex nA IIC T6 or T5 or T4 Gc
Ex tc IIC T85°C or T100°C or T135°C Dc
IP 65
ZONE 2-22
WATTAGE: up to 2x58 W
FLOODLIGHTS - SFDN SERIES
This floodlight is supplied with discharge lamps such as metal halide, high pressure sodium vapour and mercury vapour. For indoor and outdoor applications where a concentrated, diffused or ambient light is required.

MATERIAL: copper-free aluminium alloy.
Tempered glass cover with closing clips in stainless steel. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

(WATTAGE: up to 400 W)

WELLGLASS LIGHTING FIXTURES - EWN SERIES
This lighting fixture is supplied with discharge lamps, such as metal halide, high pressure sodium vapour and mercury vapour. For indoor and outdoor applications where a concentrated light is required.

MATERIAL: copper-free aluminium alloy.
Borosilicate glass globe. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

(WATTAGE: up to 500 W)

FLOODLIGHTS - RCDE SERIES
This floodlight is supplied with halogen or xenoflash lamps. It is normally installed on towers or high buildings as obstruction signal.

MATERIAL: copper-free aluminium alloy.
Borosilicate glass globe. Adjunctive FRESNEL globe in polycarbonate. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

(WATTAGE: up to 100 W)

OBSTRUCTION LIGHTING FIXTURES
This lighting fixture is supplied with halogen or xenoflash lamps. It is normally installed on towers or high buildings as obstruction signal.

MATERIAL: copper-free aluminium alloy.
Borosilicate glass globe. Adjunctive FRESNEL globe in polycarbonate. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.
Epoxy coating grey (RAL 9006). Other colours on request.

(WATTAGE: up to 100 W)
PRODUCTS OVERVIEW

WARNING LIGHTING FIXTURES
This lighting fixture is supplied with rotating or flashing lamps. It is normally installed in combination with acoustic equipment.

MATERIAL: copper-free aluminium alloy.
Borosilicate glass globe. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

INSTRUMENT HOUSING
EMH9 SERIES
This enclosure to house instruments as ammeters, voltmeters, photo/electric lighting control, cameras and twilight switches.

MATERIAL: copper-free aluminium alloy.
Hardware in stainless steel. Borosilicate glass window.

Epoxy coating grey (RAL 9006). Other colours on request.

ENCLOSURES FOR CONTROL STATIONS - EFDC SERIES
This customizable system can be fitted with push buttons, pilot lights, instruments, selector switches. Two or three tumblers design available.

MATERIAL: copper-free aluminium alloy.
Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

ENCLOSURES FOR CIRCUIT BREAKER - EFSC218 SERIES
This enclosure can be fitted with thermomagnetic circuit breaker in order to control and protect three-phase motors. The circuit breaker has an adjustable thermomagnetic protection and an external control.

MATERIAL: copper-free aluminium alloy.
Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.
ENCLOSURES FOR SWITCHES AND SELECTORS - EFSC SERIES

This enclosure can be fitted with rotary type, change-over and 2-way switches.

**MATERIAL:** copper-free aluminium alloy.
Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

(II 2 GD)
Ex d IIC T6 or T5 Gb
Ex tb IIIIC T85°C or T100°C Db
IP 66
ZONE 1-2-21-22

INTERLOCKED PLUGS AND SOCKETS

This socket and plug series is provided with an on-load switch. Available with 3 or 4 poles up to 25 A.

**MATERIAL:** copper-free aluminium alloy.
Hardware in stainless steel.

Epoxy coating grey (RAL 9006). Other colours on request.

(II 2 GD)
Ex d IIC T6 Gb
Ex tD A21 T85°C Db
IP 66/67
ZONE 1-2-21-22

INTERLOCKED PLUGS AND SOCKETS

This socket and plug series is provided with an on-load switch. Available with 3 or 4 poles up to 63 A - 125 A.

**MATERIAL:** copper-free aluminium alloy.
Hardware in stainless steel.

Epoxy coating grey (RAL 9006). Other colours on request.

(II 2 GD)
Ex d IIC T6 Gb
Ex tD A21 T85°C Db
IP 66/67
ZONE 1-2-21-22

INTERLOCKED PLUG AND SOCKET PANEL - CPSC-P / FSQC-P SERIES

This plug and socket panel is provided with an on-load switch. Available with 3 or 4 poles up to 25 A – 125 A.

**MATERIAL:** copper-free aluminium alloy.
Hardware in stainless steel.

Epoxy coating grey (RAL 9006). Other colours on request.

(II 2 GD)
Ex d IIC T6 Gb
Ex tD A21 T85°C Db
IP 66
ZONE 1-2-21-22
### Products Overview

#### Electronic Sirens - EFST Series

This siren is available with sounds with different intensity and frequency in order to cover the main warning regulations in hazardous areas. It is normally installed in combination with visual equipment.

**Material:** Copper-free aluminium alloy. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

#### Acoustic Signallers ETH9 Series

This acoustic signaller is available with sounds with different intensity and frequency in order to cover the main warning regulations inside hazardous areas. It is normally installed in combination with visual equipment.

**Material:** Copper-free aluminium alloy. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

#### Earthing Detection System SM2021 Series

This system is designed to detect the truck earthing status in order to allow safe loading/unloading operation. EJB or EJC enclosures according to the flammable liquid type.

**Material:** Aluminium or stainless steel AISI 316L. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating grey (RAL 9006). Other colours on request.

#### Junction and Pulling Boxes - GUA Series

These enclosures are used as terminal or pulling boxes. Their round shape along with a large combinations of entries satisfy all the installation requirements of a conduit system.

**Material:** Copper-free aluminium alloy. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating on request.
CABLE GLANDS - PNA-PNAF SERIES

These cable glands are used to connect Ex equipment using unarmoured cables. A mechanical protection to the cable with a rigid or flexible conduit and a special threaded entry are provided on request into the external termination of the cable gland (model PNAF).

**MATERIAL:** nickel plated brass - brass - stainless steel.

**STANDARD THREADS:** NPT - ISO 228 - ISO 7.1 METRIC.

Other type of threads on request.

(II 2 GD)
Ex d IIC Gb
Ex e IIC Gb
Ex ia IIC Gb
Ex tb IIIC Db
IP 66/68
ZONE 1-2-21-22

CABLE GLANDS - PA/PAP SERIES

These cable glands are used to connect Ex equipment using armoured cables.

Available with single and double sealing system.

**MATERIAL:** nickel plated brass - brass - stainless steel.

**STANDARD THREADS:** NPT - ISO 228 - ISO 7.1 METRIC.

Other type of threads on request.

(II 2 GD)
Ex d IIC Gb
Ex e IIC Gb
Ex ia IIC Gb
Ex tb IIIC Db
IP 66/68
ZONE 1-2-21-22

CABLE GLANDS - PCE SERIES

These cable glands are used to connect Ex equipment installed in GRP or stainless steel enclosures using unarmoured cables.

Available in black (Ex-e) and blue (Ex-i) colour.

**MATERIAL:** polyamid.

**STANDARD THREADS:** ISO (pitch 1,5) - PG 40430.

(II 2 GD)
Ex d IIC Gb
Ex e IIC Gb
Ex ia IIC Gb
Ex tb IIIC Db
IP 65/67
ZONE 1-2-21-22

SEALING FITTINGS

Sealing fittings to prevent the passage of gas, vapours or flames through the conduit system from one side to the other of the electrical installation. The sealing fittings are supplied together with the bi-component resin.

**MATERIAL:** copper-free aluminium alloy.

Epoxy coating on request.

(II 2 GD)
Ex d IIC
Ex 1D A21
IP 66
ZONE 1-2-21-22
OPEN ELBOWS

These components are used as pulling boxes in a combination of different radius in order to cover all the installation requirements of a complete conduit system.

MATERIAL: copper-free aluminium alloy. Hardware in stainless steel, AISI 304 standard, AISI 316 on request.

Epoxy coating on request.

FLEXIBLE PIPES AND RIGID CONDUITS

These flexible conduits are used to connect vibrating equipment, such as electric motors. The rigid ones are used to connect not subjected to vibration equipment. Both conduit systems are available with a wide range of accessories such as saddles, clamps, u-bolts, bushings, couplings and locknuts.

MATERIAL: galvanized steel - stainless steel.

STANDARD THREADS: NPT - ISO 7.1 METRIC.

Other type of threads on request.

CONDUIT FITTINGS

These fittings are used the conduit installations to connect different types of equipment. Three pieces unions, reducers, adaptors and nipples in a complete range of combinations of male/female connection provide the solution to any problem given by this complicated system.

MATERIAL: galvanized steel or stainless steel. Epoxy coating grey (RAL 9006). Other colours on request.

STANDARD THREADS: NPT - ISO 7.1 METRIC.

Other type of threads on request.

CUSTOM DESIGNED CONTROL PANEL

FEAM designs and manufactures explosion proof switch-racks according to its own diagram or according to customer’s specification in full compliance with the International Standards. Custom designed switchracks and panel boards are mechanically assembled on robust supportino frames with different fixing solutions (floor mounting self standing type, wall/structure mounting) electrically wired up on purpose.
SALES AND SERVICE NETWORK

As part of BARTEC Group, FEAM can count on more than 60 sales locations and over 50 specialist representatives all over the world.

This is how the Group ensures that all customers can have a BARTEC partner they can contact in person, anywhere, anytime.