

INDUSTRIAL & Ex PLUGS & SOCKETS,
DECONTACTOR™, CONNECTORS, BOXES,
LIGHTING, PANELS & CONTROL STATIONS



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 **MARECHAL**
AUSTRALIA
 **Technor®**

Marechal®

MARECHAL ELECTRIC GROUP

MARECHAL ELECTRIC GROUP (MEG) has been a major actor, over the past 60 years, for industrial electrical connections adapted to suit all areas of the industry: general manufacturing and process industry, premises and set-ups for the general service industry, all infrastructures as well as the specific oil and gas industry or those premises presenting a risk of explosion, referred-to as hazardous areas. The Group's know-how and technology permanently optimise the performance and life expectancy of MARECHAL® plugs and sockets. The certification of our product ranges complies with the existing requirements and standards in the different markets and enables the Group to position itself as a leading supplier for any type of industry activity throughout the world. MEG pioneered the use of DECONTACTOR™, including two features (plug + integrated switching device) in a compact, easy handling and safe product.

In addition to the silver-nickel butt style contacts in its electrical solutions, MARECHAL® provides high and reliable performance in demanding environments. They are available for applications from simple compact multipin to heavy-duty 700 A connections. An effective alternative to both hard-wired equipment and pin/sleeve type contacts, the DECONTACTOR™ is a highly flexible method of connecting and disconnecting electrical equipment safely. MARECHAL® brought the DECONTACTOR™, the high performance industrial connector with integral AC-23 switch, to the electrical market.

The Ex-approved explosion-proof plugs and distribution boxes are intended for use in explosive atmospheres in compliance with the ATEX 94/9/EC Directive and as per the IEC for use in zones 1 and 2 (Gas) and zones 21 and 22 (Dust).

The MARECHAL® technology is used across a range of activities such as marine, oil & gas, power utilities, heavy industry, infrastructure and food/drink sectors.

5% of the turnover is ploughed back into R&D every year to imagine, design, develop and adapt industrial electrical DECONTACTOR™ and distribution boxes to suit the needs of our customers all around the globe. The MEG product portfolio reflects the needs of its customers: combination of safety and reliability, broad package of technical solutions in compliance with the world's different market requirements and regulations. The breakdown of the product portfolio articulates around the fields of industry and activity and per power and current ranges. This breakdown matches the multiple and variable configurations to be found in electrical installations, industrial automation, power or information distribution for production and maintenance operations for both new and renovated equipment.

MARECHAL ELECTRIC GROUP has reinforced its commitment to the Ex market through the acquisition of TECHNOR, a leader in the design and manufacture of luminaires, enclosures and electrical panels for potentially explosive atmospheres. These include offshore oil installations, refineries, petrochemical plants, ships and FPSOs, chemical, pharmaceutical and food industries, and as well as other industries in which explosible dusts might represent a hazard, such as foodstuffs manufacture grain silos and textile. The products satisfy ATEX regulations and IECEx requirements. TECHNOR's product range and geographic locations nicely complement those of the MEG providing significant product and distribution channel synergies.

MARECHAL ELECTRIC PRESENT ON 5 CONTINENTS

► **4 production sites**

France, Germany, Australia and the United States

► **Daily commercial presence in more than 20 countries**

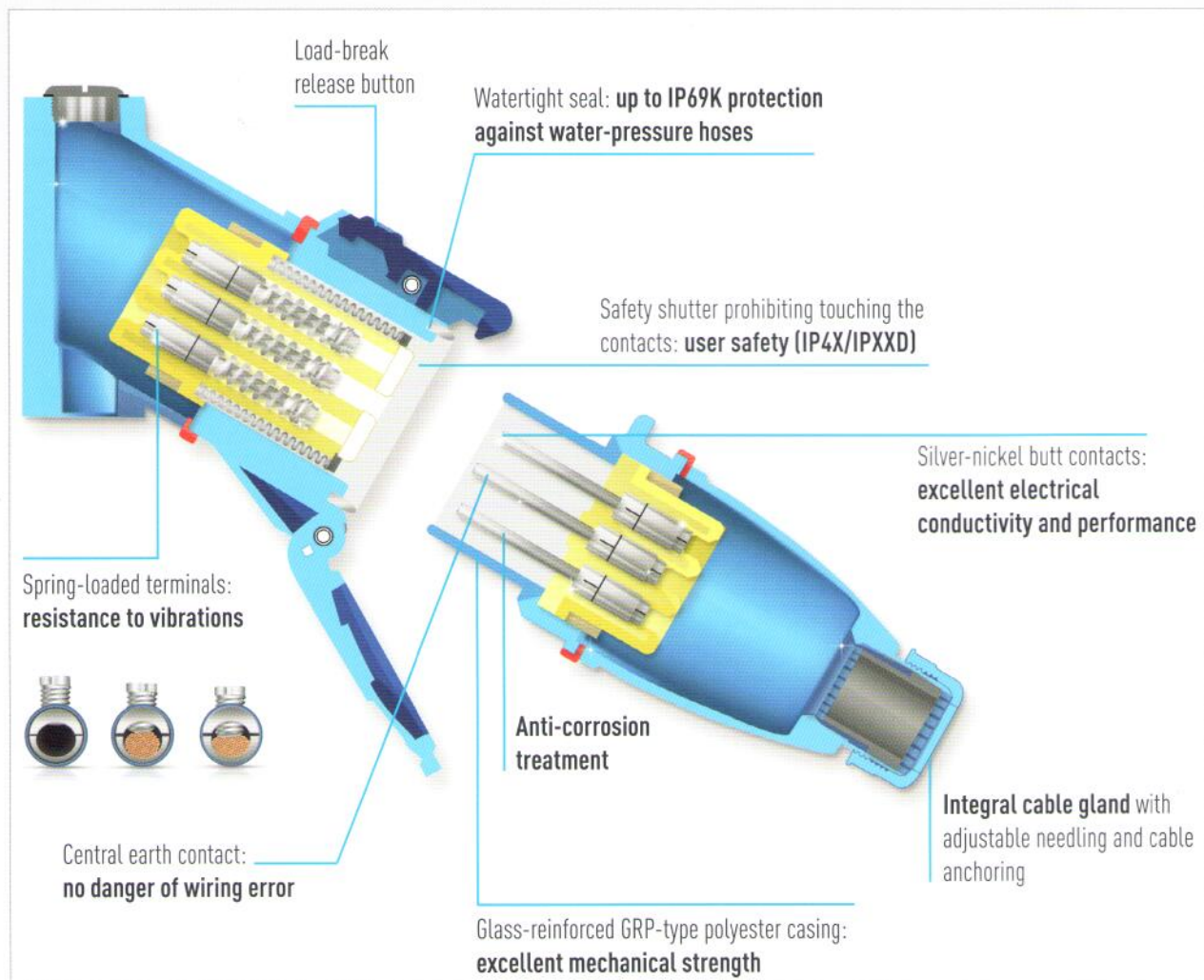
A network of subsidiaries and Exclusive partnerships all around the globe

► **5% of our turnover is invested in R&D every year**



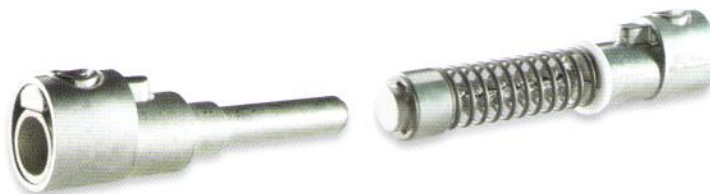
DECONTACTOR™ TECHNOLOGY

MARECHAL® DECONTACTOR™ feature a quick-release button and integral load switch which allow any authorised employee to quickly and safely connect or disconnect equipment, even under load, without the need for a qualified electrician. Easy to install, as well as watertight and resistant to chemicals, MARECHAL® DECONTACTOR™ allow equipment to be safely isolated from the electrical supply in seconds. As an alternative to hard-wired equipment, MARECHAL® DECONTACTOR™ minimise down-time, increase productivity and provide greater operational flexibility for static and mobile equipment.



Butt-contacts: high-quality connection under all circumstances

MARECHAL® products are manufactured with high-quality materials adapted to suit harsh environments. They are fitted with spring-loaded butt contacts guaranteeing a **permanent and long-lasting connection**. Silver-nickel tips, at the end of each contact, ensure **high-quality electrical performance** and **excellent resistance to humid and corrosive environments**, even after years of use.

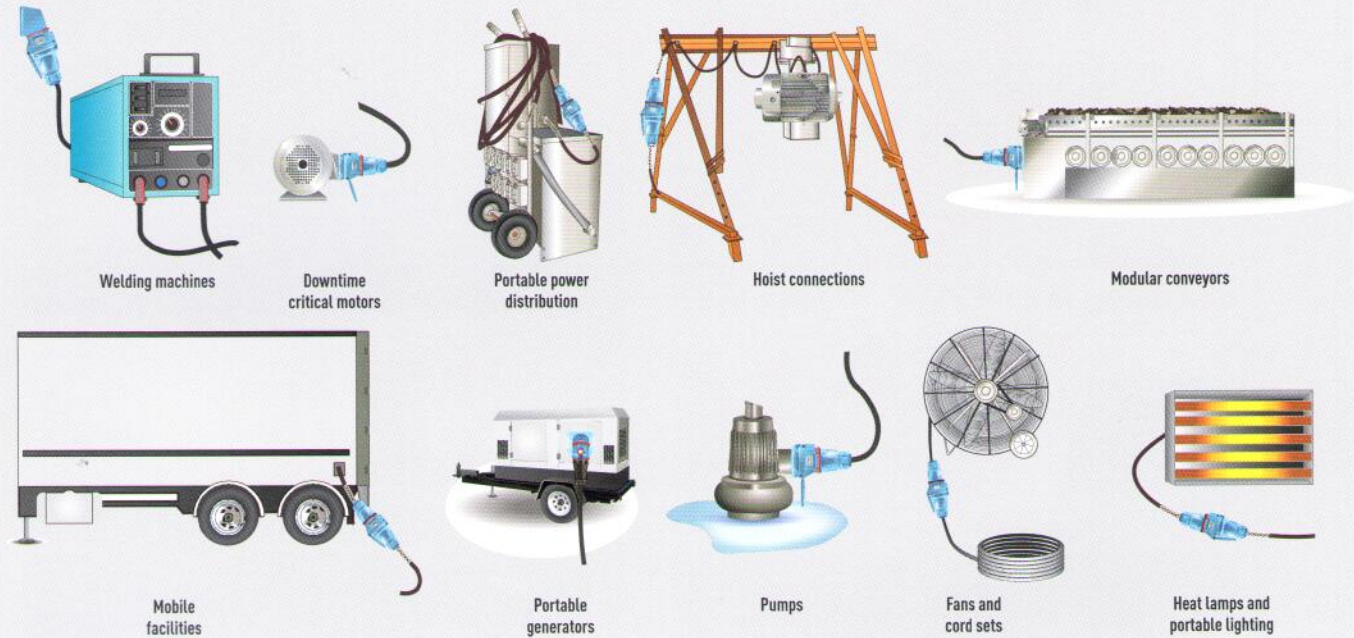


FASTER. SAFER. EASIER.

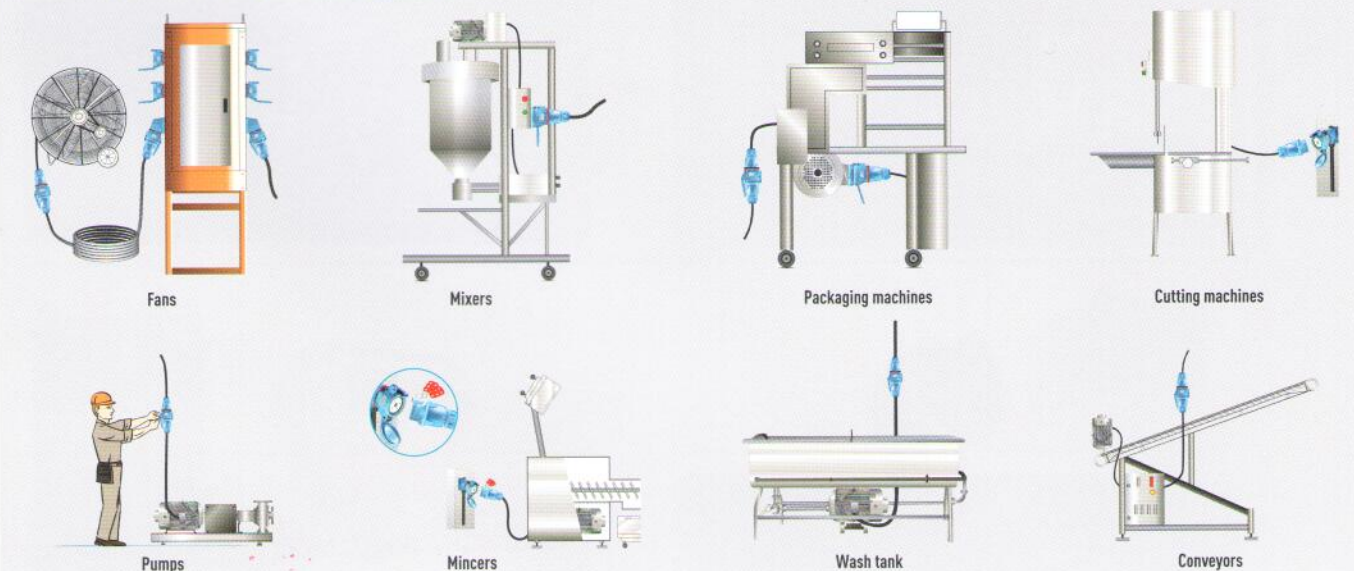
Faster maintenance for fixed equipment and higher productivity for mobile equipment

It takes just seconds to disconnect and reconnect equipment fitted with MARECHAL® DECONTACTOR™, with no need to wait for a qualified electrician. For static equipment, this means faster maintenance. For mobile equipment, it means less down-time and higher productivity. In addition to the automatic isolation, a quick glance is all that is needed to confirm that the equipment has been isolated from the power. This eliminates the risk of maintenance work being carried out on a live connection.

Common applications at power generation facilities:



Common applications at food industries facilities:



Common applications at water and wastewater plants:



A wide range, suitable for all industrial sectors

This extensive and comprehensive product range covers all industrial applications. With sizes varying from 5 A to 700 A, it offers a wide range of options.



INDUSTRIAL POWER SUPPLY

DECONTACTOR™ & CONNECTORS - 16 A to 250 A

The DSN, DS and DN DECONTACTOR™ ranges cover applications from 20 A to 250 A making them the most versatile for industry.

PNC and PN are compact 16 A and 30 A connectors design for all type of environment (humidity, corrosion, pollution ...) found in many industrial sectors. DB disconnectable motor switches combine the function of an AC-3 motor switch with the convenience of a plug and socket.



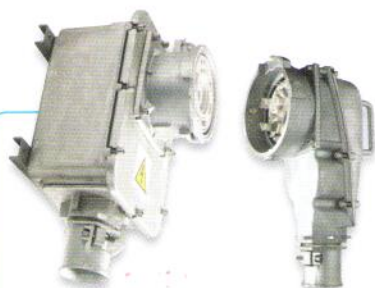
SIGNAL & CONTROL

MULTICONNECT CONNECTORS

5 to 37 contacts - 5 A to 30 A

Low currents: 4 mA to 20 mA, 16 A

Our multicontact connectors can hook up equipment to a power supply and transmit data. The silver-nickel alloy used for the butt contacts provides exceptional conductivity and longevity (can withstand several thousands of operations). The casing is available in GRP or metal to ensure excellent resistance - even in harsh conditions. And because the contacts are crimped, the connectors can be mounted and demounted quickly and easily.



HIGH CURRENT

PLUGS & SOCKETS AND CONNECTORS

Up to 700 A - 1000 V

MARECHAL® high-current plugs offer a reliable solution for connections even under the harshest environments. Our DS4 range offers compact plug and socket-outlet systems for connections up to 400 A. The sturdy metal box means that the system will continue to work reliably even in harsh conditions. Our PF range can accommodate up to six auxiliaries and two pilots, is IP66/IP67 watertight, and has an electromechanical lock-out system. Thanks to a unique butt contact mechanism, our CS1000 and SP single-pole connectors can be used with currents of 400 A or 700 A.





HIGH TEMPERATURE

DECONTACTOR™ & CONNECTORS

25 A to 90 A

This range of power connectors and signal & control connectors, provides excellent connection quality in high-temperature environments, up to 400 °C.



SELF-EJECTING

DECONTACTOR™ & RETTBOX® / RETTBOX®-AIR

Mechanical ejection up to 150 A

Electromechanical ejection boxes up to 32 A - 13 bars

Self-ejecting systems avoid the need to disconnect electrical equipment, allowing a mobile device to be moved without unplugging it, or where equipment is located in high-risk areas. There are many applications: emergency vehicles, ambulance, road transport vehicles, electric boats, rolling heating or cooling in the food industry, canteens or hospitals, or switch boards located at vulnerable places (a toll terminal for example).



BOXES

SOCKET-OUTLETS WITH PROTECTION up to 63 A TUNNEL APPLICATIONS BOXES

MARECHAL® offers a wide range of boxes for all industrial applications and a large choice of products designed specifically for power-supply in tunnels. Compliant with CEI EN 61439-1 and CEI EN 61439-3, CD box is composed of two parts fixed on hinges: a protection part, with a transparent window and a key locking option, and a terminal part for a quick access to the connection. Made from halogen free fiberglass reinforced polyester compound or thermoplastic, tunnel boxes allow a service tap-off from the main through cable without the need to strip or cut the main cable.



Products that meet your needs

The plugs and sockets as well as socket-outlet boxes and junction boxes in this range are meant for use in hazardous areas in compliance with the ATEX 94/9/EC Directive and as per the IECEx in zones 1 and 2 (Gas) and zones 21 and 22 (Dust).

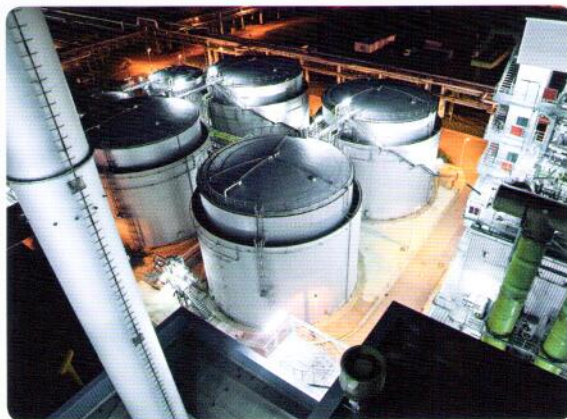


DXN

DECONTACTOR™ - 20 A / 32 A / 63 A

Ex II2 G D Ex de IIC Gb

- IP66/IP67 water- and dust-tight
- Integrated load-break switch
- Robust and compact design
- High performance poly casing
- Self-ejecting version available



DX

DECONTACTOR™ - 20 A / 32 A / 63 A / 125 A / 200 A

Ex II2 G D Ex de IIC Gb

- IP65 water- and dust-tight
- Integrated load-break switch
- Locking in on/off positions by keying axis

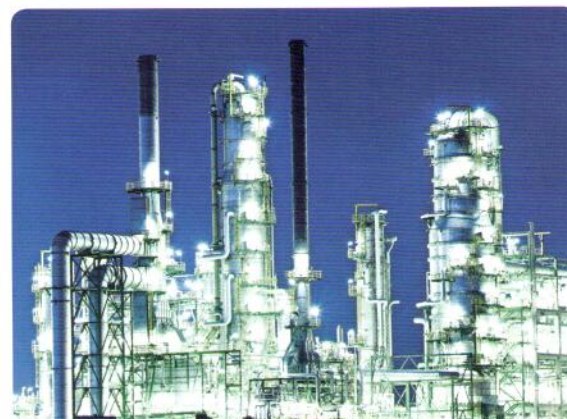


PXN12C / DXN25C / DXN37C

MULTICONTACTS CONNECTORS - 10 A

Ex II2 G D Ex e IIC

- From 12 to 37 contacts
- Locking in connected or disconnected position
- Corrosion-free metal casing





SPeX

SINGLE POLE POWER CONNECTOR - 680 A

Ex II 2 G D Ex e IIC

- IP65/IP66 water- and dust-tight
- Electromechanical interlocking system
- Mechanic and visual keying
- High performance poly casing



MXBs / MXBJ / B2X

SOCKET BOXES & JUNCTION BOXES Up to 350 A

Ex II 2 G D Ex e IIC

- IP66 water- and dust-tight
- Combination of multi-contact connectors and socket-outlets on the same distribution box
- Glass reinforced, graphite-filled polyester resin enclosures



PNCX

COMPACT CONNECTOR - 10 A

Ex II 3 G D

- Zones 2 (gas) and 22 (dust)
- Compact and easy to use
- IP66/IP67 watertight (IP68 according to specification)
- Long life



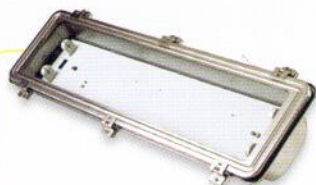
A wide range of technologically advanced products

TECHNOR is a worldwide technology company of MARECHAL ELECTRIC GROUP, with operational businesses in Italy, United Arab Emirates and Singapore. TECHNOR has a high level of experience in developing and designing Ex equipment for most applications.

The company main markets are within Oil & Gas and Petrochemical Industries. Products enable safe transport and application of electric signals and power in potentially explosive atmospheres. The core business is in the electrical, instrumentation and electronics fields.

All the equipment for use in explosive atmosphere satisfy the requirements of international and national regulations (Atex, IECEx and Gost) and each individual systems' component is certified in accordance with specific Ex-certification requirements.

■ LIGHTING



RMS... Series

IP66/IP67, Ex-nA, Ex-de Fluorescent Lights

Ideal for Onshore and Offshore, Marine applications and for all kinds of industry where a high level of corrosion resistance is required. Stainless steel AISI-304 or AISI-316L body, glass tempered window and glass-frame done in one unit without welding.



EVF-P

Ex-de, Ex-em Fluorescent Lights

Fluorescent luminaries manufactured with cylindrical polycarbonate lamp housing and two end-cups in Copper free aluminium. The high resistance polycarbonate light housing is made of 3 different layers extrusion with UV filter to grant the best possible protection against direct sun heating and radiation effects. Shape has been designed to minimize wind resistance. Suitable for marine environment conditions.



EVde...

Ex-de, Discharge Lighting Fixtures

Range of built in control gear HID lighting fixtures, for general lighting applications, providing Ex-e junction box, adjustable SS AISI 304 mounting bracket suitable for universal installation, facilitate mounting and maintenance. Compact design in aluminium grade body, for onshore and offshore applications.

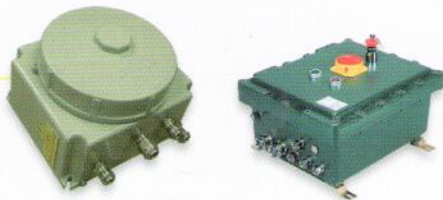


FL...

Ex-de, Discharge Floodlights

HID floodlight, for general lighting application, platform installation, cranes, providing integral looping facility Ex-e junction box, stainless steel adjustable fixing bracket, built in ballast, internal anti condensation paint, compact design in aluminum grade body as well as stainless steel, for onshore and offshore installation.

■ FLAMEPROOF ENCLOSURES



GUB..., EJB...

Ex-d IIB, IIB+H2 and IIC Enclosure

Large range of enclosures manufactured in Copper free aluminium, Cast Iron or Stainless steel. Ideal for instrument housing, control, check, connection, automation, interruption and/or protection use. They can be equipped with pushbuttons, pilot lamps and selector switches. Enclosures can be customized project by project to get control panel, lighting distribution boards, heat tracing distribution boards, motor starters, as well as, assembled together, or mounted on a self supporting frame, generate switch-rack for onshore and offshore applications.

■ JUNCTION BOXES

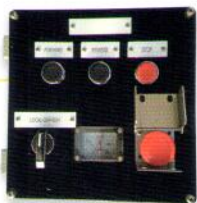


AQ-AR...

Ex-e and Ex-ia Enclosure

The AQ/AR range of stainless steel AISI-316L enclosure used as instrument and electrical terminal boxes, as well as control panels equipped with push button and switches, all designed for use in any environment where an explosive atmosphere may be present and are especially recommended for chemical agent environments, sea-water corrosion resistance and extremis of low and high temperature, offshore and onshore oriented.

■ CONTROL STATIONS



CP... /EF...

Ex-d, Ex-e, Ex-de, Ex-dem Control Station

Range of GRP, Copper free aluminium or Stainless Steel control stations designed to offer a flexible, light weight and cost effective solution tailor made upon customer request. To be assembled with Ex-de operators in case EF.. Ex-de version and with PL.. operators in case of CP.. Ex-d version.

■ AUDIBLE & VISUAL SIGNALS



AWL... Series EV-de

Ex-d, Ex-de IIC Warning Lights

The top of technology among Aircraft Warning Lights, LIOL, MIOL with LED technology, reliable long life and maintenance saving products, in compliance with ICAO and FAA, along with signalization unit like beacons, flashing unit, rotating light.

■ CABLE GLANDS & ACCESSORIES

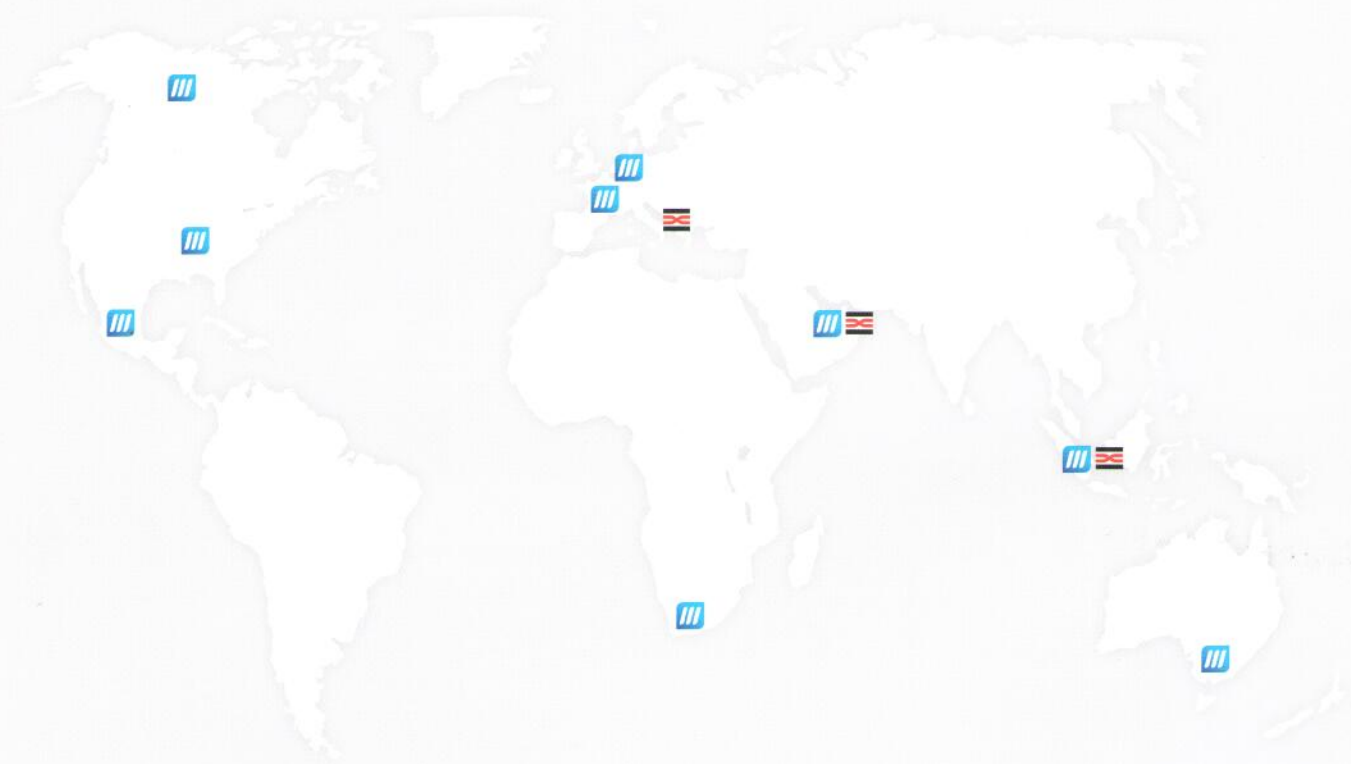


P...,

Ex-d/e Cable Glands

Single seal, double seals cable glands, suitable for unarmored and armored cables. Nickel-chrome plated brass, stainless steel and aluminum made, hexagon shape, anti-ageing EPDM oil resistant gaskets. These cable glands are used in classified Area Zone 1 & 2 and Zone 21 & 22.

MARECHAL ELECTRIC GROUP



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