Explosion-proof control boxes and explosion-proof distribution boxes



Overview

Ex Local Control Stations & Distribution Boxes · Atex Atex control stations, explosion protected control units and distribution boxes made stainless steel.

Key Takeaways

Explosion-proof distribution and control boxes are specialized enclosures designed to safely contain electrical components in hazardous environments, preventing internal sparks or explosions from igniting surrounding flammable gases, vapors, or dust. OverviewExplosion-proof boxes are essential in industries such as oil & gas, chemical processing, pharmaceuticals, and offshore platforms. They are engineered to contain internal explosions and prevent flame propagation to the surrounding atmosphere, ensuring both personnel safety and equipment protection.

These enclosures are typically made from stainless steel, cast aluminum, or iron, and are designed to withstand high pressures and extreme temperatures. Types and Functions1. Distribution Boxes: Serve as hubs for power distribution, connecting multiple circuits safely in hazardous zones.

Can include terminal blocks, circuit breakers, MCBs, MCCBs, bus bars, and surge protectors. Designed for Zone 1, Zone 2, Zone 21, and Zone 22 hazardous areas, with IP66 or higher ingress protection. Examples include HRMD92 and AGP17 series, which support voltages up to 1000V AC and currents up to 2000A, with ambient temperature ranges from -60°C to +60°C.

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2. Control Boxes: House control devices such as push buttons, switches, indicators, relays, and PLCs. Enable local or remote control of motors, lighting, and other industrial equipment.

Can be customized with stainless steel (AISI 304L/316L) or GRP enclosures, and are often modular to accommodate multiple control elements under a single actuator. Designed to operate reliably in extreme temperatures and outdoor conditions, with flameproof joints and reinforced hinges to prolong service life.

Key Features

Certifications: ATEX, IECEx, UL, and CENELEC compliance ensures global safety standards are met. Protection Methods: Flamepath containment, gas-tight sealing, heat dissipation, and intrinsic safety for sensitive circuits. Ingress Protection: Typically IP66 or higher to prevent dust and water ingress.

Customization: Modular designs allow for tailored configurations, including integrated meters, soft starters, and emergency devices. Materials: Stainless steel, cast aluminum, or GRP for corrosion resistance and durability in harsh environments. Optional Features: Purge and pressurization systems, encapsulation, and seismic-proof designs for specialized applications.

Applications

Industrial Plants: Chemical, petrochemical, and pharmaceutical facilities. Offshore Platforms: Power distribution and control in Zone 1 hazardous areas. Energy and Utilities: Low- and medium-voltage power handling systems, including modular switchgear and battery solutions.

Specialized Environments: High-temperature, high-moisture, or corrosive conditions requiring robust, certified enclosures. ConclusionExplosion-proof distribution and control boxes are critical for safe electrical operation in hazardous areas, combining robust mechanical design, certified safety standards, and flexible configurations. Selecting the right enclosure involves considering hazard zone classification, material, ingress protection, and required control or distribution functionality to ensure compliance and operational reliability.

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Article Content

Ex Local Control Stations & Distribution Boxes · Atex Delvalle

Atex control stations, explosion protected control units and distribution boxes made stainless steel maritime grade AISI 316L or AISI 304L. Atex Delvalle provides a custom build facility for Hazardous

Ex Equipment

ROSE Aluminium, Polyester and Stainless-Steel Ex Enclosures and Control Stations assure reliable protection for electrical distribution systems in explosion

Explosion Protected Control Boxes |Innovations | R. STAHL

The 8150 series sits perfectly alongside R. STAHL''s portfolio of other explosion proof and hazardous areas equipment, including junction boxes, controllers, control boxes and distribution boxes.

Explosion Proof Distribution Box & Electrical Enclosures

Choose our explosion-proof solutions, choose safety. Durable Hexlon Explosion Proof Distribution Boxes and Electrical Enclosures, IECEx and ATEX certified for Zone 1 and Zone 2.

Custom CZ1290 Explosion-proof distribution boxes

CZ Electric Co., Ltd was established in 1990, is a CZ1290 Explosion-proof distribution boxes suppliers, and is headquartered in Jiaxing City, Zhejiang

HRMD92 Explosion proof Distribution Box (Ex d IIB+H2)

Available with a wide range of built in components. Enclosure: 316 stainless steel. Equipped with a specialised hinge structure which can prevent damage to the flameproof joints when opening and

Explosion-proof Control Box | KNTECH

With a thickness of over 5mm and outdoor plastic powder used, the explosion-proof effect is guaranteed without frequent replacement, and the service life is long,

Explosion Proof Control Panel & Equipment for Hazardous Areas

Our product portfolio includes explosion-proof distribution boxes, circuit breakers, isolators, power distribution cabinets, integrated control systems, magnetic starters, as well as control pushbutton and

Control and Distribution Panels | Ex d | EJB Series

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The enclosure series EJB forms the optimal basis for the application-specific configuration of terminal boxes, control stations as well as control and distribution panels. The enclosures are certified Ex d

Explosion-Proof Distribution Boxes & Panels Manufacturer

The explosion-proof distribution box safely delivers power in hazardous zones (oil, gas, chemical plants) with rugged, spark-resistant casing—ATEX/IECEx, IP66 certified for reliable operation in explosive

Dahua Technology

Dahua Technology is a world-leading video-centric AIoT solution and service provider. With its ''Dahua Think#'' corporate strategy, Dahua Technology focuses on two core businesses: City and Enterprise.

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Cortem Group: To be sure to be safe | Cortem S.p.A.

We design and manufacture explosion-proof electrical equipment for areas with risk of explosion and fire, meeting on-shore and off-shore applications. We work to assure environments where people''s

Electric switches,junction boxes,control station,explosion and ...

The Pioneers in India and a leading manufacturer of an extensive range of Explosion proof equipment that is innovation driven and is committed to carve a niche for itself as a renowned Ex equipment

Full Guide on Explosion-Proof Distribution Panel

In conclusion, explosion-proof distribution panels are a critical safety feature in hazardous industrial environments, providing reliable protection against potential explosions. By choosing the right panel,

Enclosures and Distribution boxes | Sonderhoff

We meet the IEC 60079 standard for electrotechnical devices with explosion protection and thus your requirements for ATEX approval of explosion-proof control cabinets.

Warom Explosion Proof Equipment | ATEX IECEx Explosion-proof

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Warom specializes in manufacturing explosion-proof electrical equipment, with products covering explosion-proof lighting fixtures, explosion-proof distribution boxes, explosion-proof control

Energy Distribution

BARTEC offers one of the most extensive ranges of explosion-proof and substance-resistant components, devices, and systems for controlling, switching, and connecting for hazardous areas

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Website: https://explosivefunctions.co.za
Technical inquiry: https://explosivefunctions.co.za/contact.html
EU project coordination: Parque das Nações, Lisbon, Portugal

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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