

APPLICATIONS EXPERIENCES

REFERENCES

EVERYWHERE IN THE WORLD

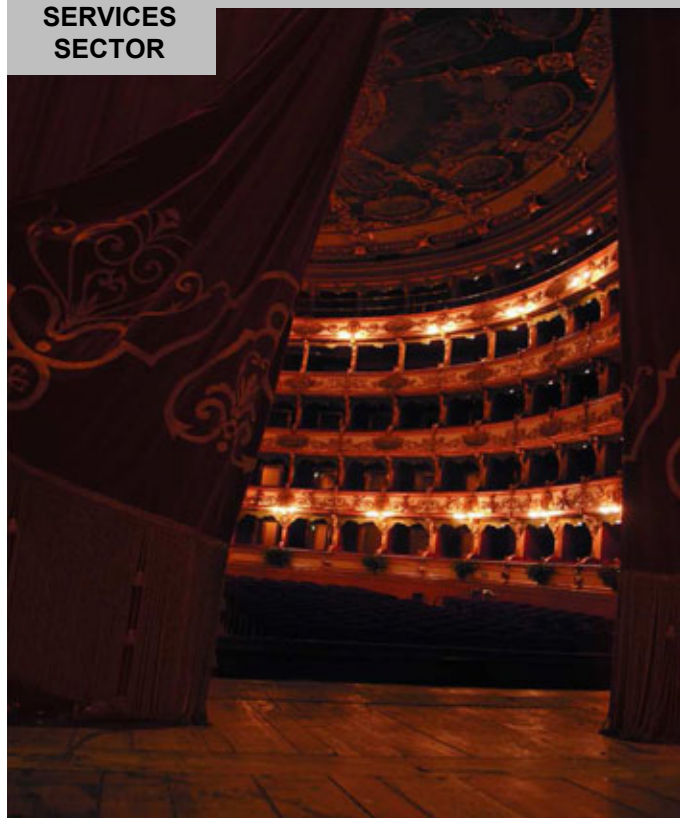


2009-2010

FPB *Palazzoli*

INDEX BY APPLICATION

SERVICES SECTOR



BRESCIA THEATRE	3
FERRARI	5
PORSCHE	6
MILAN TRADE FAIR CENTRE	7
BRESCIA TRADE FAIR CENTRE	9
IPERCOOP APRILIA 2 SHOPPING MALL	11
VERSILIA GOLF	12
MISS ITALY	13
LUMEZZANE SWIMMING POOL	14

INDUSTRY



FRATELLI MURATORI WINE SHOP	15
MONTE ROSSA WINE SHOP	17
PIO CESARE WINE SHOP	19
FRATELLI AVANZI WINE SHOP	21
HEAT EXCHANGER	23
GNUTTI MACHINERY	24
INVERNIZZI FACTORY	25
DANONE FACTORY	27
ARTIGIANA HAM FACTORY	29
PASTAIO FOOD FACTORY	30
STABIUMI CHEESE MANUFACTURE	31
ALLEGRIANI CHEMICAL INDUSTRY	33
INTERTISSUE PAPER MILL	35
APT TRANSPORT	36
COMAZOO FEEDSTUFF PRODUCER	37
CEMENTIZILLO CEMENT PLANT	39
O.R.I. MARTIN FOUNDRY	40
FERALPI GROUP STEELWORKS	41

PORTS - CAMPING SITES - URBAN ZONES



JEBEL ALI PORT	43
PORTOS DE GALICIA	44
SOLE PORT	45
BOGLIACO MARINA	47

WORK SITES



SAGRADA FAMILY	49
SALERNO PORT	50

TUNNELS - SUBWAYS



TURIN SUBWAY	51
NORTH EAST CAMPANIA SUBWAY	53
CESENA TUNNEL	55
COSSATO-VALLEMOSSE HIGHWAY	56

EXTERNAL SURFACES



MONTICHIARI AIRPORT	57
MONZA RACETRACK	59
VARANO RACETRACK	61

SHIPBUILDING



AUDACIA MOTORBOATS	63
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ATEX



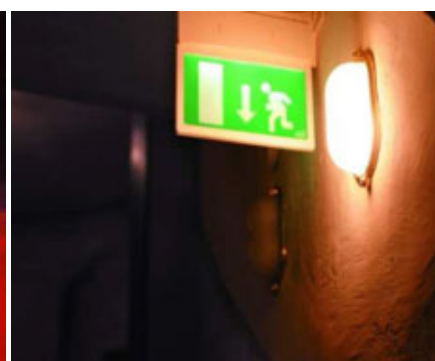
STERILGARDA BATTERY CHARGER	65
G & I CARPENTRY	67
BIALETTI PAINTING	69
FASSA BORTOLO WOOD DUSTS	71

GRAND THEATRE

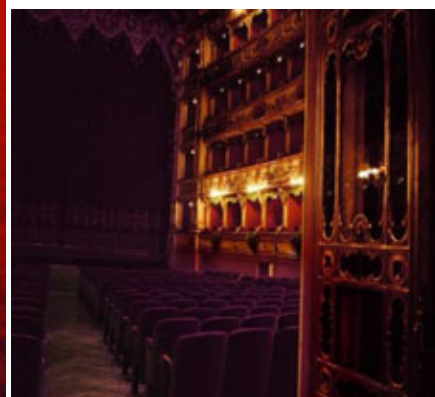
Brescia



Originally built in around 1634, it was restored in 1739 by the architect Carlo Manfredi. The facade was designed by the architect Gaspare Turbini in 1789. In 1806 the Milanese architect Luigi Canonica rebuilt the theatre with five sections of stalls, the upper two were then turned into the circle and gallery in 1904. In 1862 Gerolamo Magnani designed the decorations for the theatre hall; the ceiling was frescoed by Luigi Campini.



Corridors and stairs



Gallery Stalls



NAUTILUX
SERIES

RISK PROFILE

- Restoration and fire proofing treatment for all the existing parts in wood;
- Revamping of the electrical supply systems, installation of smoke detection, emergency and security lighting, fire prevention, heating and air conditioning systems;
- Replacement of lighting fixtures in the stalls, gallery, boxes, corridors and staircases;
- Disinfestation, consolidation and fire proofing of the wooden trusses.



THE SOLUTIONS

- Solid polished and clear varnished brass enclosure;
- Heat-resistant and acid etched diffuser in moulded glass;
- Fire-inhibiting lighting fixture;
- Cable gland suitable for mineral insulation safety cables;
- E27 Porcelain lampholder;
- Gaskets in non-ageing elastomer and stainless steel screws.



**SERVICES
SECTOR**

ROSSOCORSA
CONCESSIONARIA UFFICIALE PER LA LOMBARDIA

Brescia



The services of this car dealer are dedicated exclusively to Ferrari vehicles and consists of a highly specialised and trained team. All Ferrari cars designed and built at Maranello, can be customised with personal touches given to each car by the Rossocorsa Dealer programme.



TAIS Series



Repairs



Final Inspection

Receiving Inspection

RISK PROFILE

- Presence of inflammable substances (petrol in tanks, engine oil, mineral resin;
- High levels of vibration generated by electric screw drivers;
- Handling systems touched by gloves covered in oil and corrosive acids;
- Frequent starting and stopping of highly inductive loads (drills, grinding wheels, various electrical tools).

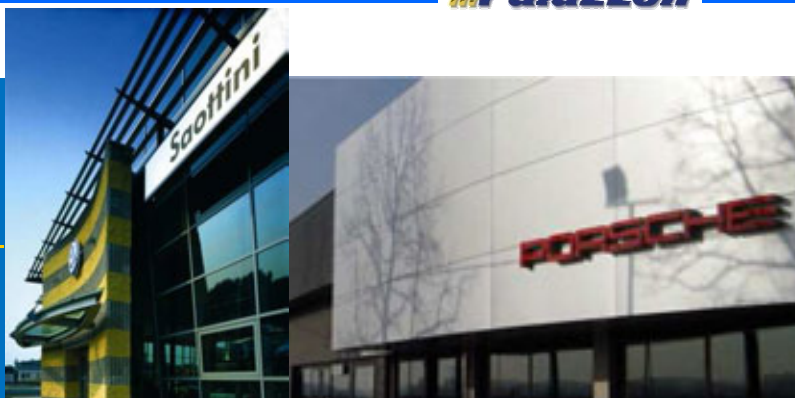


THE SOLUTIONS

- “Flame Proof” enclosure in thermosetting material;
- GWT 960°C, Self-extinguishing V0, >IK10;
- Excellent resistance against oils and corrosive acids;
- Low transpiration to surrounding atmospheres;
- Protection rating IP67
- AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors.

SAOTTINI GROUP

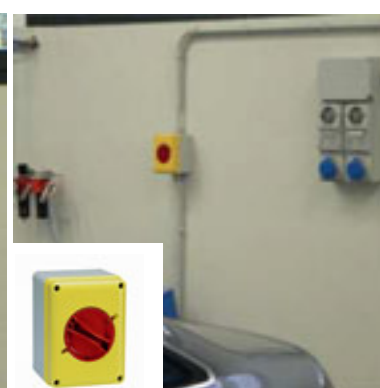
Brescia



The car dealer centre was opened by Ceirano from Turin in 1921 with Alfa Romeo and Fiat cars; in 1951 it also started dealing in Volkswagen and Porsche cars; in 2002 it raised the curtain on the prestigious stage of the “Brescia Porsche Centre”.



TER Series



CAM-ST Series Final Inspection



Repairs

Receiving Inspection

RISK PROFILE

- Presence of inflammable substances (petrol in tanks, engine oil, mineral resin);
- Handling systems touched by gloves covered in oil and corrosive acids
- Frequent starting and stopping of highly inductive loads (drills, grinding wheels, various electrical tools).



THE SOLUTIONS

- Accident-proof sockets with triple interlock ;
- Steel interlock bracket;
- Knobs can be locked in the “0” and “I” position.
- Emergency isolator switch with high visibility yellow cover;
- AC3 AC23A isolator switch at plate data amperage (16A,32A 63Aetc.), starting and stopping of cage motors.

TRADE FAIR CENTRE

Milan



The new large trade fair centre is one of the top centres in the trade fair world by dimension, functionality and architectural quality. It has eight huge halls with over 345.000 gross square metres of exhibiting space and sixty thousand outdoors.



TER Series

Underground niche

B-SMART Series

Outdoor

RISK PROFILE

- Install most of the sockets in underground niches ;
- Protect the sockets individually with a modular device;
- Protect the power distribution units against impacts and water seeping in from outside;
- Use highly reliable devices to supply power to the electrical tools.

THE SOLUTIONS



- TER: allows modular protection to be fixed to the DIN rail;
- Compact size 122x452mm;
- ENERGYTOWER: vandal-proof, tamper-proof stainless steel ;
- AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors.



SERVICES
SECTOR



Brescia



The Brescia Trade Fair Centre is organised as a multimedia centre which is able to connect Brescia to the world around it and to its province; the most modern network technologies have been installed and it functions like the beating heart of the whole territory.



NAUTILUX
SERIES

Restaurant



TER Series

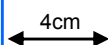
Kitchens



TAIS and CEE Series

RISK PROFILE

- Facilitate connection between plugs and sockets that supply power to the stands;
- Reduce volumes to a minimum to provide free passage through the tunnels;
- Aesthetic illumination of the restaurant;
- Protect the kitchen machine power sockets against accidental impacts.



THE SOLUTIONS

- 63A sockets with "EASY CONTACT" device to make it easier to remove the plugs from the sockets;
- CEE plug in TAIS socket with inclination less than 30°;
- NAUTILUX pendant lamps in polished brass and elegant finish;
- TER sockets framed and flush-mounted with just 4 cm protrusion.



**SERVICES
SECTOR**

ipercoop

**Shopping Mall
Aprilia**



Aprilia is a huge retail structure with a surface of 28,000 m2, it hosts a Mall, a variety of average sized specialised areas and a large shopping hall with a total of 80 retail outlets, 10 restaurants and parking for over 3,000 cars.



TAIS Series



TER Series

Walkway



ULYSSE Series

Garage

RISK PROFILE

- Humid, wet environments subject to frequent washing (butcher's, fishmonger);
- Low volume walkway columns;
- Electric panels in environments with crowds;
- Garage classified as the location with the highest fire risk.



THE SOLUTIONS

- THERMOSETTING enclosure with an excellent resistance against humidity, dust and corrosive vapours;
- TER panel with 2 interlocked sockets with fuses and volume of 25cm;
- Interlocked sockets with accident-proof system to prevent accidental contact with the live parts;
- THERMOSETTING FLAME PROOF that does not burn, does not produce smoke or toxic gases.

**SERVICES
SECTOR**

Versilia
GOLF & LUXURY RESORT

Forte dei Marmi



The inauguration carries the historical date of June 22nd 1990. The current owner has invested immensely in Versilia Golf over the last 3 years; the works improved the greens, renewed the machine fleet, restructured the garaging workshop and redesigned Hole 13, work performed by the renowned Spanish company IGD (Integral Golf Design) owned by José Maria Olazàbal.



Outdoor



Bar



TER Series



CEE Series

RISK PROFILE

- High risk of impacts and squashing;
- Frequent use of detergents;
- Frequent replacement of the appliances which are often plugged in and unplugged from the sockets;
- Risk of seeping water.

9cm



THE SOLUTIONS

- Compact size of the TER socket + CEE plug apparatus;
- Use of plastic polymers which are proofed against most acid and base products;
- Galvanic protection treatment on the pins which are plugged in and unplugged the most;
- Watertight gland to protect against water splashes and corrosive vapours.

**SERVICES
SECTOR**

67° CONCORSO NAZIONALE
MISS ITALIA

Salsomaggiore Terme



Salsomaggiore Terme has hosted the finals of Miss Italy for 39 years and this had promoted it as a luxury location for those who want to dedicate time to personal health. The term Health and Beauty could not have found a more appropriate interpretation.



ENERGYBOX Series



TER and CEE Series



Special plug connected to a domestic socket with IP55 rated maintenance

RISK PROFILE

- Mobility of electrical apparatus (wall, floor, pallet);
- Presence of water and dust in the power supply areas;
- Frequent handling of the electrical panels;
- Possibility of customising the electrical devices.



THE SOLUTIONS

- The ASC ENERGYBOX panels can be fitted onto a wall, post, pallet or stand;
- The IP55 protection rating is guaranteed by an insulating cover that protects the domestic plug, straight or at 90°, when it is inserted in the socket;
- The ENERGYBOX has a special handle used to move it around easily to wherever power is needed;
- Palazzoli has customised the electrical panels with the RAI logo, creating a bespoke solution for the broadcaster.

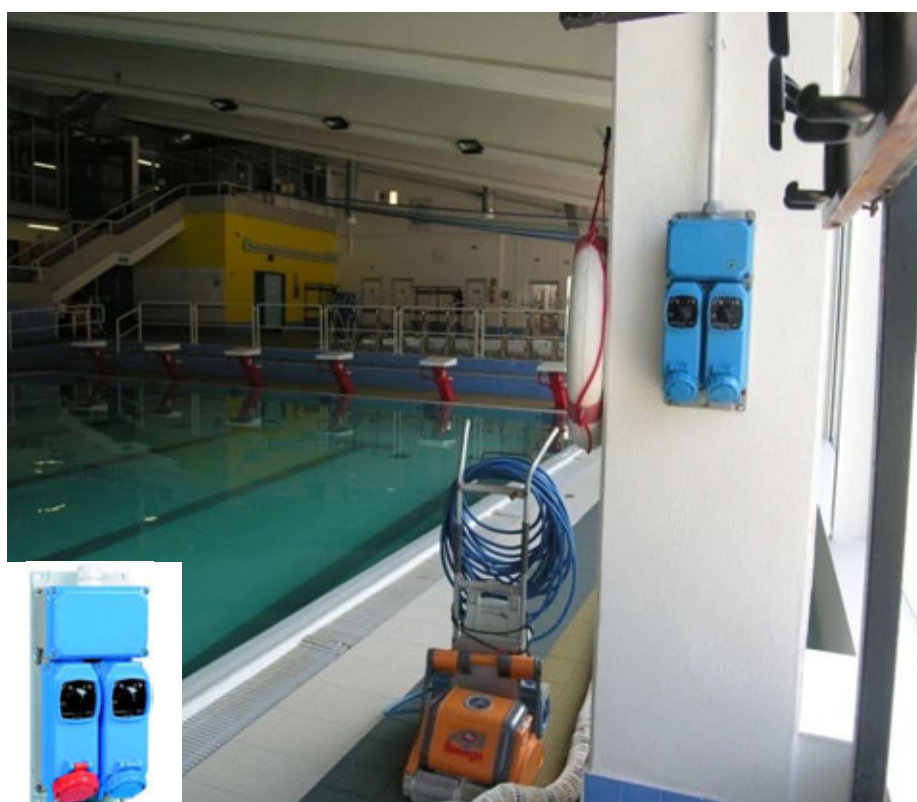
SERVICES
SECTOR



Lumezzane



The structure covers an area of 1,800mq. The large pool measures 25x13mt, with a depth that varies from 1.20 to 1.80mt. The small pool measures 10x6mt, and is 80cm deep. Outdoors there is also a pool measuring 16.66x10mt and a depth of from 1.10 to 1.20 mt, and a second pool measuring 12x10mt and a maximum depth of 80cm. Albatros is affiliated with the FEDERAZIONE ITALIANA NUOTO (Italian Swimming Federation), and holds a Federal Swimming School license.



Water bike hall



TAIS Series

Olympic swimming pool

CEE Series

Outdoor swimming pool

RISK PROFILE

- Presence of chlorine vapours;
- Humid environment with splashing water;
- Public health and safety issues.



THE SOLUTIONS

- The THERMOSETTING enclosure provides an excellent resistance against chlorine vapours;
- The IP67 protection rating allows the enclosures to resist against splashing water in complete safety;
- The TAIS system has double insulation to protect against direct contact with the live parts;
- The interlocking system, consisting in a steel bracket, guarantees the lack of power to the socket pins when the plug is removed.

INDUSTRY



Adro



The Fratelli Muratori farming business represents a completely new reality on the national wine producing scenario. It was established quite recently but its numbers and labels already place it among the most interesting newcomers on the market.



ULYSSE Series



Bottling pump room



Ageing cellar

Fermentation room

RISK PROFILE

- Presence of tiled rooms which are cleaned using water cleaning machines;
- Presence of gases such as nitrogen, sulphur dioxide, carbon dioxide and ethyl alcohol;
- Presence of silicon powders;
- Frequent cleaning and maintenance works on the wine vats;
- High risk of impact during manual handling of loads.

THE SOLUTIONS



- IP66 and IP67 protection ratings to guarantee against forceful jets and accidental immersions;
- "Flame Proof" THERMOSETTING enclosure with GWT 960°C, Self/extinguishing V0;
- No emission of toxic fumes (halogen free);
- Airtight enclosure;
- Impact resistance rating is much higher than IK10 (20J).



INDUSTRY



Bornato



The Monte Rossa farming business is located in a 17th century villa in Bornato, right on top of the hill that dominates the village. It was established in 1972 and after many years of meticulous selecting of vines and grapes, it now specialises in producing Franciacorta wine and is one of the most renowned in the area.



TAIS Series

Ageing room

Stainless steel vats room

RISK PROFILE

- Risk of accidental spillage of the chemical products used for cleaning;
- Handling of bottle pallets by operators on fork lift trucks;
- Presence of pressurised gas cylinders (sulphur dioxide, carbon dioxide, nitrogen) that can lead to explosion risks;
- Presence of silicon powders;

THE SOLUTIONS



- THERMOSETTING sturdy and robust system which can guarantee airtightness under all conditions;

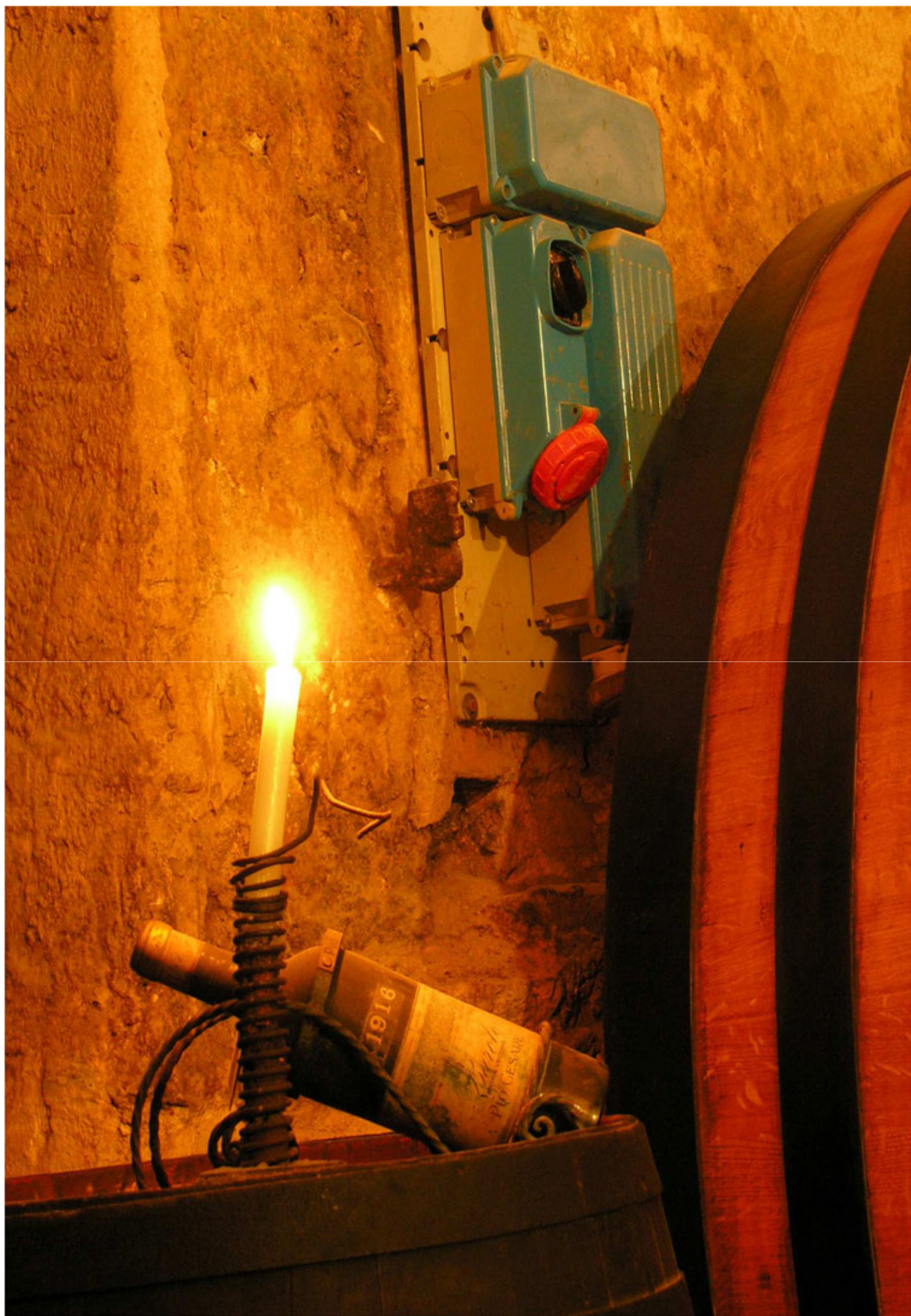


- High mechanical resistance, equivalent to metal enclosures;



- Excellent resistance against humidity, dust and corrosive vapours;

- Interlocked sockets fitted with AC23A - AC3 category isolator switch;



INDUSTRY



Alba



This is one of the historical wine cellars in Italy, located in the heart of the old city of Alba, created back in 1881 by Pio Cesare, great-grandfather of the current owners. These cellars produce and refine wines which are typical of the Langhe: Barolo, Barbaresco, Nebbiolo, Barbera, Dolcetto and Arneis.



ULYSSE Series

Barriques type barrel room



RINO Series

Vinification room



Bottling room

RISK PROFILE

- High risk of exposure of control and picking equipment to powders (free crystalline silicon);
- Power supplied in very humid environments;
- Presence of inflammable substances (nitrogen, carbon dioxide, sulphur dioxide and ethyl alcohol);
- High levels of vibration generated by load handling and transit of vehicles.

THE SOLUTIONS



- “Flame Proof” fire-proof THERMOSETTING enclosure;
- Non-toxic resin with GWT equal to 960°C;
- Airtight enclosure with IP66 and IP67 protection ratings;
- AISI 304 stainless steel lamp base and shatter-proof glass;
- No weak points (welded parts) to ensure it is rust-proof.

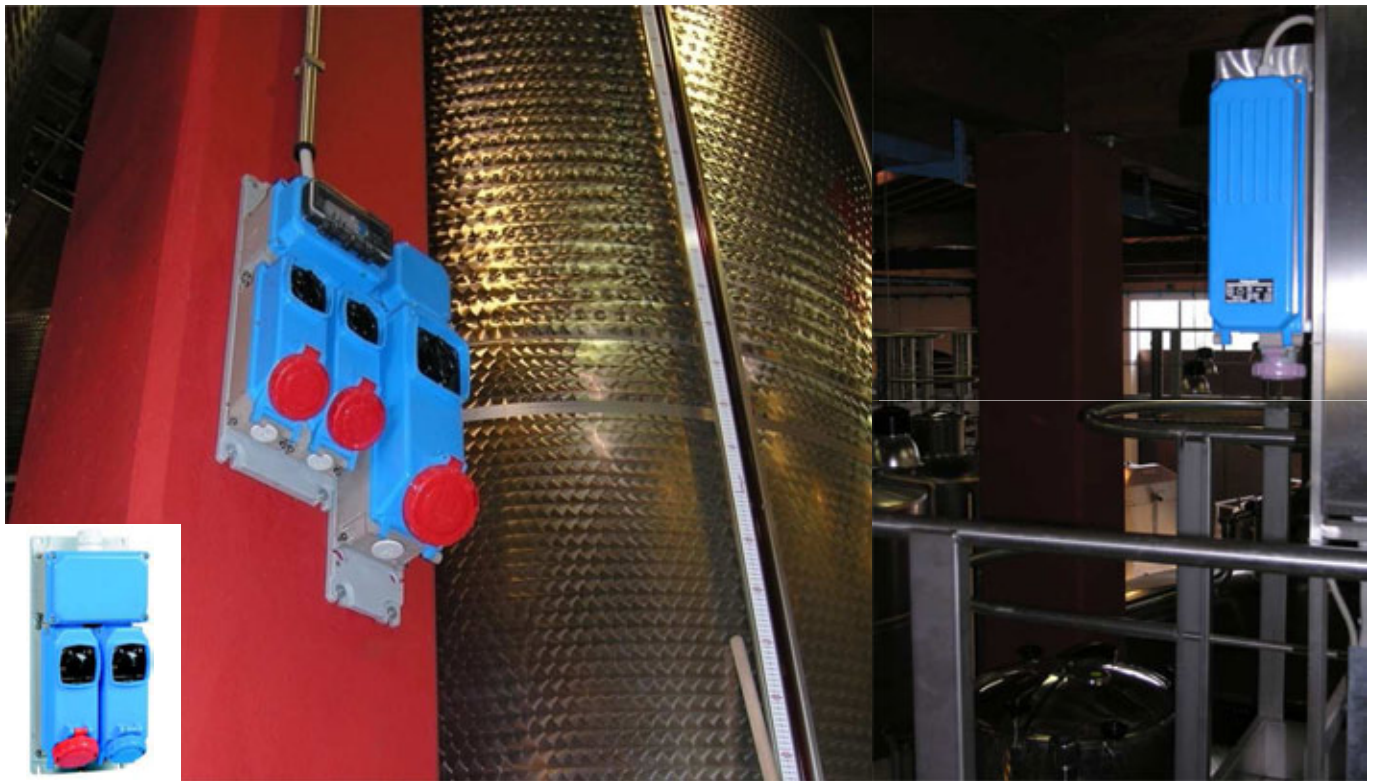




Manerba del Garda



A tradition that dates back to 1931 when Cav. Giovanni Avanzi produced his first excellent red wine from the grapes cultivated on the western banks of Lake Garda. The business expanded when it purchased the splendid 17th century property in Manerba del Garda which became the backprop and prestigious headquarters for the production of finest quality red and rosè wines.



TAIS Series

Stainless steel vats room

RISK PROFILE

- Presence of caustic soda;
- Work in limited spaces;
- Spilling and leaking of concentrated products;
- Washing operations with water jets with high risk of short circuits and direct contact with live parts;
- Presence of powders (free crystalline silicon).

THE SOLUTIONS



- Excellent resistance against humidity. Dust and corrosive vapours;



- THERMOSETTING sturdy and robust system which can guarantee airtightness under all conditions;



- Watertight gland to protect against water jets and the penetration of oxidising substances;
- Interlocked sockets fitted with AC23A - AC3 category isolator switch;



INDUSTRY



Brescia



In 1998 a highly advanced heat generation station (heat exchanger) was built with the unusual feature that it burns waste and recovers this energy to produce electricity and heat.



TAIS Series

Storage and unloading areas



CAM Series

RISK PROFILE

- Problems related to the supply of power within the waste storage area;
- Presence of powders that fall from the hopper into the load funnel;
- High levels of vibration generated by vehicles;
- High temperatures from the burner furnace;
- Frequent use of water cleaning machines and purification units.

THE SOLUTIONS



- "Flame Proof" THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;



- AC23 category cutoff switch which is able to detect and cutoff inrush and blocked rotor current;



- Dual insulation enclosures with IP65 protection rating. Resistant against rodents, chemical agents and guarantee high dimensional stability.



Brescia



Gnutti machinery was founded in Brescia in 1955 and was one of the first companies to launch itself on the market as a supplier of tooling machines. It is currently the world leader in the sector of designing and building transfer machines, with rotating tables, linear and drum layouts.



CEE Series

Transfer machine



TAIS MIGNON Series

Drum machine

RISK PROFILE

- Frequent splashing of oil during cutting processes;
- High vibration levels;
- Frequent insertion and extraction of plugs from sockets;
- Cleaning processes with water cleaning machines;
- Use of solvents and polishing agents.



THE SOLUTIONS

- Pins with high copper content and corrosion-proof treatment;
- Very thick crush-proof hand grip;
- THERMOSETTING enclosures with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- High protection rating and shape stability under all conditions.

INDUSTRY



Trecate



The seasoning facility is an avant-garde concern developed to comply with European health and quality standards. The SI Invernizzi plant is located in Trecate, with a covered area of 10,000 square metres and a storage capacity of 100,000 forms.



TAIS Series

Seasoning Department



TAIS MIGNON Series

Packaging Department

RISK PROFILE

- Warm-humid micro-climate created by the heat generated by the multi-purpose boilers and the stewing processes;
- Extremely high humidity level due to the use of water jet and pressure steam cleaning machines to wash the equipment;
- High levels of vibration from pumps, forming machines and the automatic feed system.



THE SOLUTIONS

- Excellent resistance against humidity. Powders and pressurised steams;
- THERMOSETTING sturdy and robust system which can guarantee airtightness under all conditions;
- Watertight gland to protect against water jets and the penetration of oxidising substances;
- Interlocked sockets fitted with AC23A - AC3 category isolator switch;

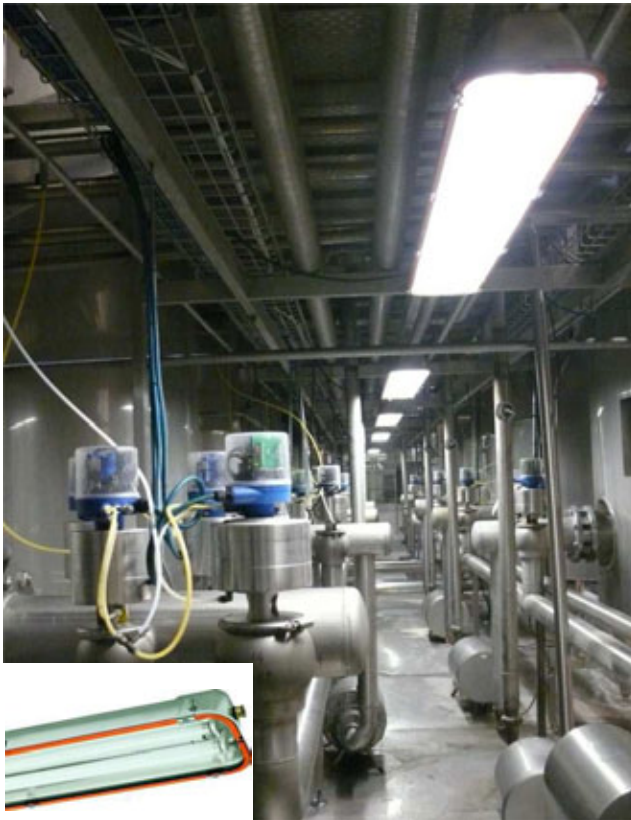




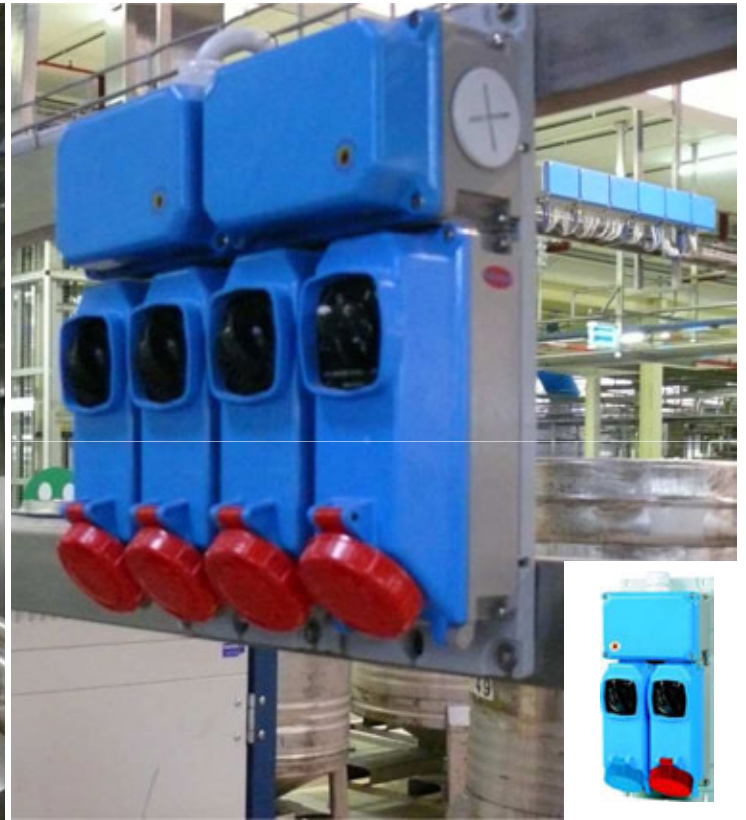
Casale Cremasco



Danone S.p.A. produces and markets fresh milk and cheese products in Italy, reaching a turnover of over 400 million euro per annum. Danone supplies Italian consumers with a wide range of food products, enriched with natural ingredients which, further to the normal benefits of yoghurt, also have a positive effect on the health and well-being of adults and children.



RINO-EX Series



Filtration, Centrifugation and Pasteurization

TAIS Series

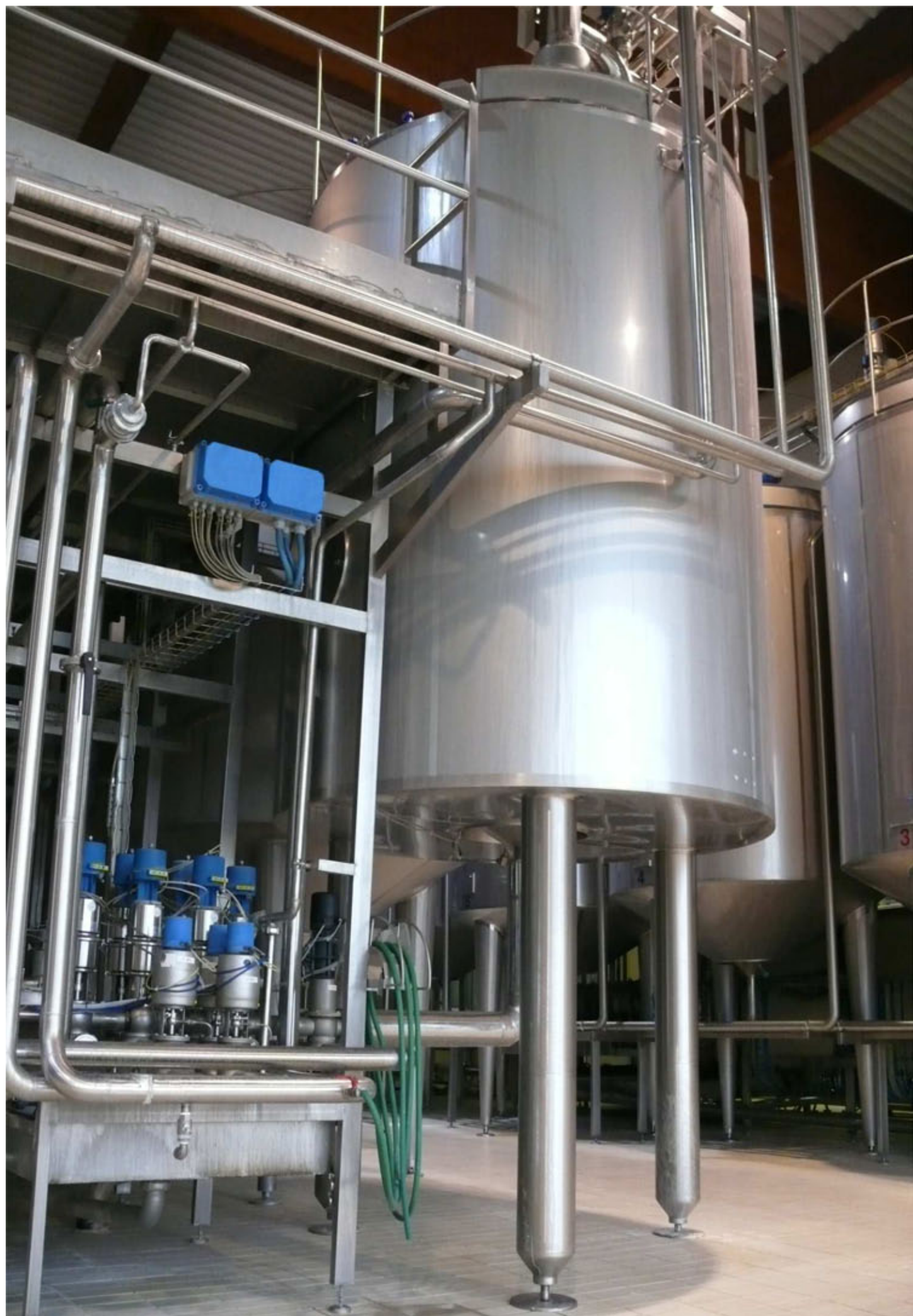
RISK PROFILE

- Warm-humid micro-climate;
- Use of sodium-chlorine disinfectants;
- Refrigeration with potentially explosive chemical substances (ammonia);
- Manual and mechanical handling of loads;
- Electrical installations in areas subject to water jets;
- Maintenance with risk of direct and indirect contact with live parts.



THE SOLUTIONS

- Humidity permeable enclosure, airtight against micro powders;
- Corrosion-proof enclosure against electrolyte based attacks;
- THERMOSETTING resin reinforced with fibre-glass to guarantee excellent resistance against stress and vibrations;
- Watertight gland to protect against water jets and the penetration of oxidising substances;
- Ex n lighting fixtures with limited respiration.



INDUSTRY



San Daniele del Friuli



The prosciutto ham produced by Artigiana San Daniele in Friuli has a characteristic mandolin shape, a weight of no less than 11 kg and it is compact and pink when sliced. It has a typical fragrance and a sweet taste. It is always marketed with a specific marking that identifies the product. This marking consists in a logo with the letters "SD" which is fire branded onto the product.



ULYSSE Series

Salting Department



Seasoning Department

RISK PROFILE

- Washing operations with water jets with high risk of short circuits;
- Salting of solid forms;
- Handling of forms by operators on fork lift trucks;
- Frequent starting and stopping of highly inductive loads (industrial washing machines, automatic salting machines, various electrical tools and equipment).



THE SOLUTIONS

- Humidity-proof THERMOSETTING enclosure;
- Halogen free non-toxic resin;
- Dual IP66 and IP67 protection rating to guarantee resistance against forceful jets (1,000 litres a second);
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A, 32A etc.), starting and stopping of cage motors.



Brescia



The challenge of "IL PASTAIO" began in Brescia where, without foresaking the passion and tradition of its local gastronomic culture, it goes a step further and makes its mark on international markets where it supplies specialities with highly intrinsic characteristics.



CEE Series



TAIS Series

Kneading machine

RISK PROFILE

- High contact vibration level with kneading machines;
- Frequent insertion and extraction of plugs from sockets;
- Daily use of water cleaning machines and disinfection of rooms with chlorine and water based products;
- Power supply to the lorry refrigeration compressors in the parking areas to preserve the products.



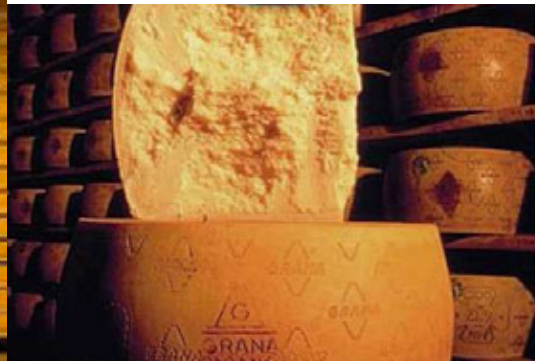
THE SOLUTIONS

- Pins with high copper content and corrosion-proof treatment;
- Very thick crush-proof hand grip;
- THERMOSETTING enclosures with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- High protection rating and shape stability under all conditions;
- Excellent level of UV ray resistance.

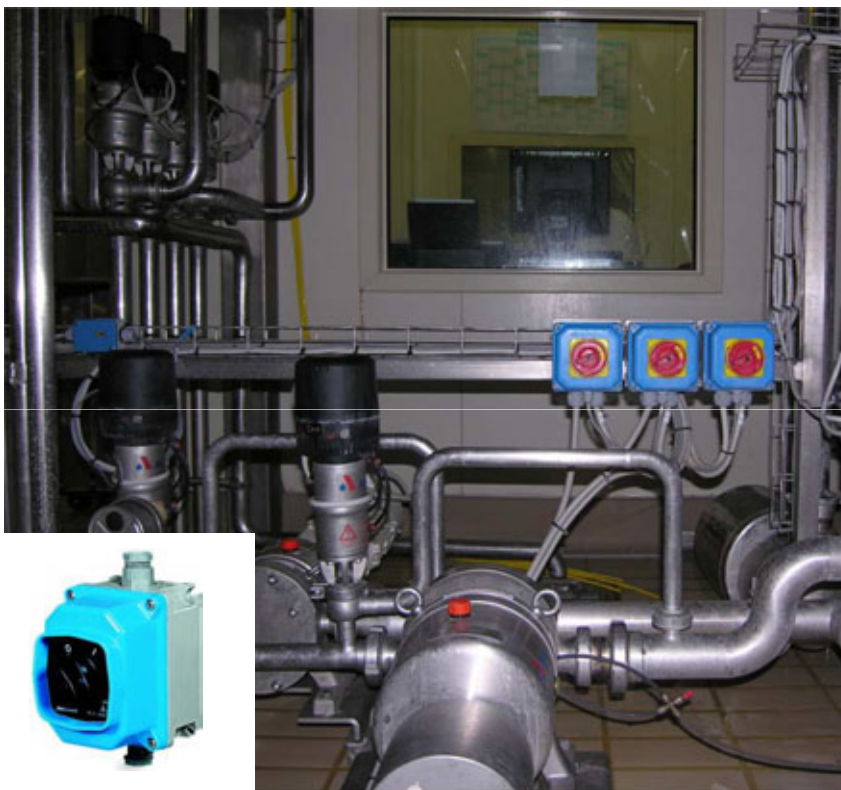
INDUSTRY



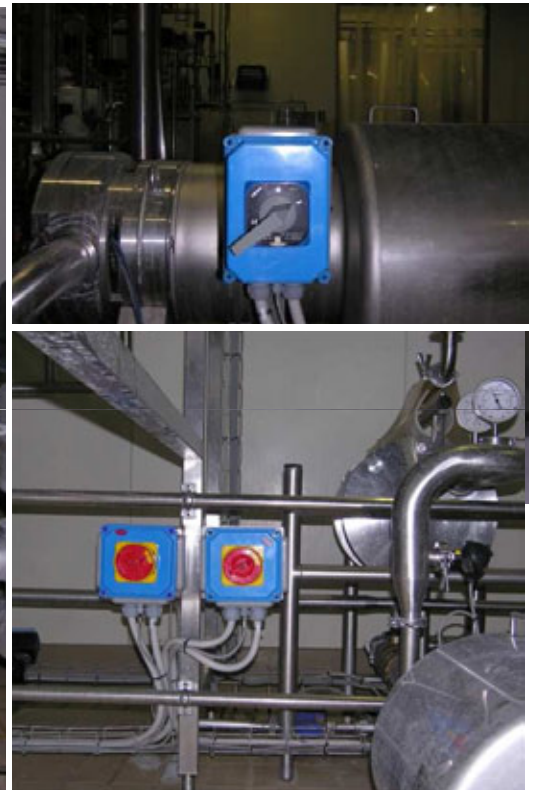
Azzano Mella



The company is located in Azzano Mella, just south of Brescia, in the heart of the Padana plains which has been the fatherland to the famous Grana Padano cheese for centuries. And this is the prize cheese produced by Caseificio Stabiumi, a company that has always been a member of the Grana Padano Protection Consortium and was one of the actual founders.



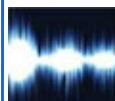
CAM Series



Pasteurization system

RISK PROFILE

- Vibrations caused by cleaning machines (centrifugal) pasteurising machines and the pumps that circulate the milk;
- Extremely high humidity level due to the use of water jet and pressure steam cleaning machines to wash the equipment;
- To prevent the possibility of operators starting up a machine which is undergoing maintenance work.



THE SOLUTIONS

- Enclosure reinforced with fibre-glass to guarantee excellent resistance against stress and vibrations;
- Dual break silver alloy contacts, each disk has two complete contacts with a high level of connection and disconnection;
- AC3 AC23A isolator switch at plate data amperage (16A, 32A etc.), starting and stopping of cage motors.



INDUSTRY



Grassobbio



The Allegri company was established in 1945, with a precise business purpose: to produce top quality chemicals with maximum respect for the environment. The range of products include antifreeze, paints, bleaches, deodorants, detergents, disinfectants, lubricators, polishes and solvents.



ULYSSE Series



Outdoor

Indoor

RISK PROFILE

- High risk due to hail stones and acid rain;
- High levels of vibration generated by load handling and transit of vehicles;
- Presence of hazardous agents of a chemical and biological nature;
- Frequent sanitising cycles with detergents and disinfectants.

THE SOLUTIONS



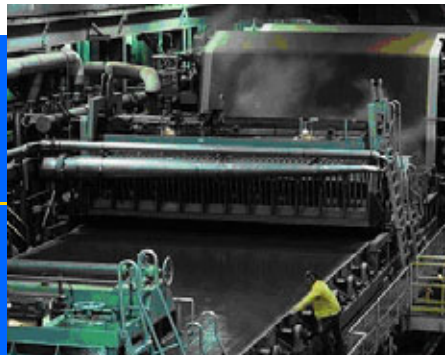
- THERMOSETTING enclosure with mechanical impact resistance on all sides >>IK10 (20Joule: impact force);
- Non-toxic resin with GWT equal to 960°C;
- Airtight enclosure with IP66 and IP67 protection ratings;
- Semi-spherical operating knob easily activated even with gloves; it can be locked in position 0 or 1;
- Easy to clean surfaces without receptacles.



INDUSTRY



United Kingdom



The Intertissue plant produces paper and is located at the Baglan Energy Park. Its range of products comprises toilet paper, paper hand and kitchen towels. Intertissue produces for many leading brands in this range of products (e.g. the REGINA brand).



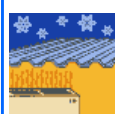
TAIS Series



Power supply to the forming frame

RISK PROFILE

- Extensive use of chemical products: loads (calcium carbonate), dyes (titanium dioxide) and optical bleaches (stilben sulphonic acid salts);
- Frequent micro-climatic changes due to transit between zones with a warm-humid climate to outdoor zones;
- Fire risk of paper powders triggered by static electricity produced by friction as the products are dragged.



THE SOLUTIONS

- Enclosure with mechanical impact resistance on all sides >>IK10 (20Joule: impact force);
- Completely robust and resistant to changes in temperature;
- “Flame Proof” THERMOSETTING panel with a GWT 960°C, self-extinguishing V0;
- The THERMOSETTING enclosure provides excellent resistance against dyes, bleaches and acids.



Gorizia



The Azienda Provinciale Trasporti (Provincial Transport Company) has been working in the public transport sector in Isontino with one single objective: to provide its citizens with an accessible, economical, safe, practical means of transport which ensures efficient connections between outskirts and villages, schools and work places.



B-SMART series



Washing, inspection and maintenance



ULYSSE Series

RISK PROFILE

- Presence of fuel, mineral resin and engine oil;
- Frequent splashing of oil during maintenance processes;
- Application outdoors subject to adverse atmospheric agents (rain, cold, snow, wind, heat etc.);
- Exposure to mixed dusts and asbestos dusts;
- Exposure to vibrations.

THE SOLUTIONS



- ENERGYTOWER: vandal-proof, tamper-proof AISI 316L stainless steel;
- ULYSSE with AC3 AC23A isolator switch at plate data amperage (16A, 32A etc.), starting and stopping of cage motors;
- The THERMOSETTING and STAINLESS STEEL enclosures provide excellent resistance against hydrocarbons;
- Protection ratings IP66 and IP67: completely insulated against dust and resistant to heavy rainfall.

INDUSTRY

COMAZOO
MANGIMIFICIO - ESSICCATOIO

Montichiari



Cooperativa Miglioramento Agricolo Zootecnico s.c.a.r.l. provides services including drying, storage and subsidised marketing of its own cereals and chemical-qualitative analyses on company fodder. Their core activity is the production of simple and compound feedstuffs, saline and vitamin supplements, milk for calves and many other.



Local sectioning



CAM Series

General sectioning ULYSSE Series

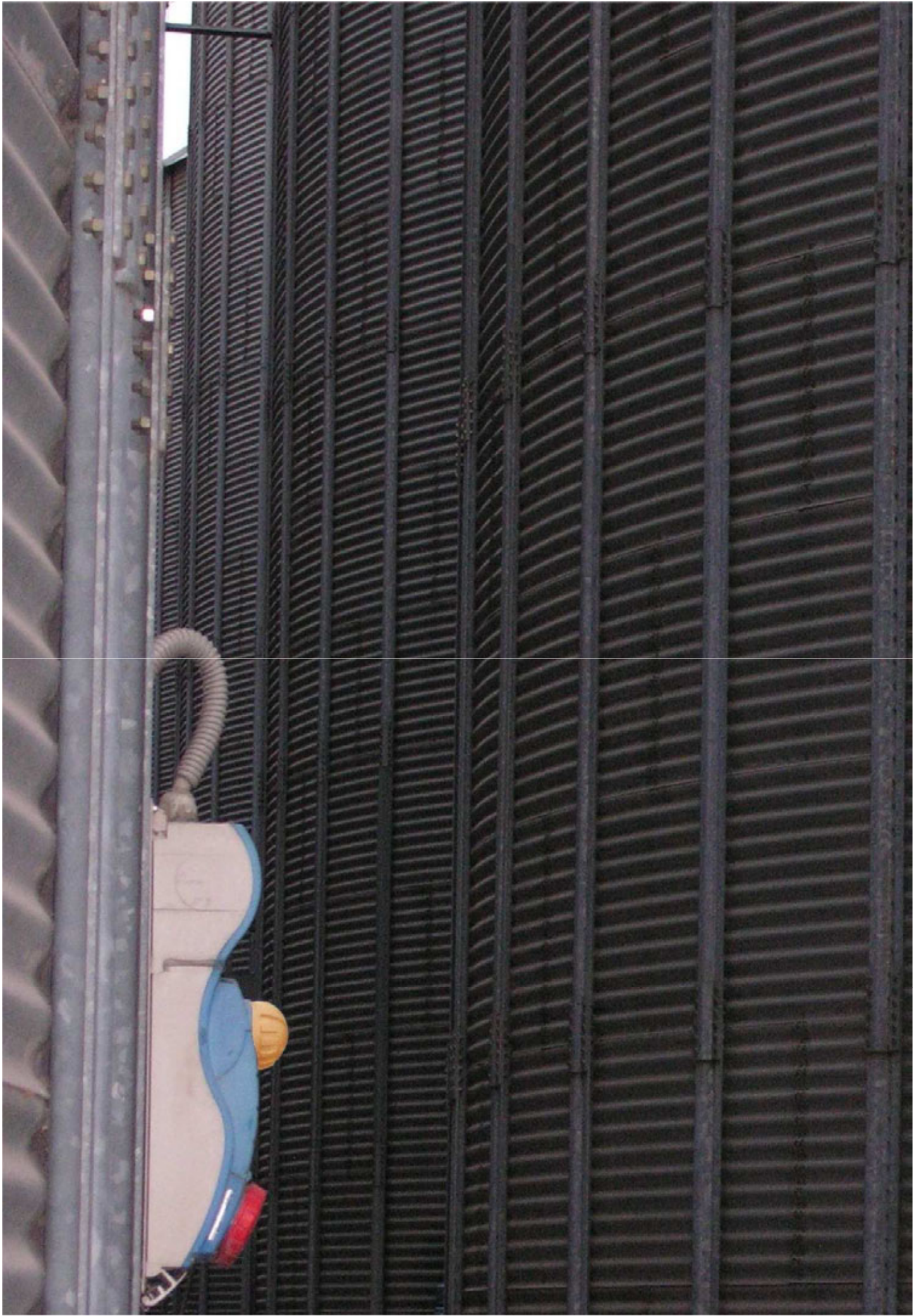
RISK PROFILE

- Presence of combustible dusts that develop during the handling, processing and drying of feedstuffs;
- High vibration levels;
- Frequent maintenance work;
- Activity requiring Fire Prevention Certification and classified as environments with high levels of fire risk.

THE SOLUTIONS



- “Flame Proof” fire-proof THERMOSETTING enclosure;
- Non-toxic resin with GWT equal to 960°C;
- Airtight enclosure with IP66 and IP67 protection ratings;
- AC23 category cutoff switch which is able to detect and cutoff inrush and blocked rotor current;
- Completely robust enclosure.



INDUSTRY



Fanna



This cement plant supplies a wide range of hydraulic binders, both Portland and Pozzolanici types, guaranteeing best possible results in all fields of application, to satisfy the various requirements this market has.



Circuit inside the electrical panel



TAIS TRE Series

Dust filtering system

RISK PROFILE

- Extensive dispersion of dusts, especially during accidental leaks;
- Frequent cleaning of equipment;
- Frequent maintenance work on fan exhaust, such as: replacement of motor, fitting, fan wheel or fan;
- Presence of pressurised devices with explosion risks;
- Development of polluting agents.

IP66



THE SOLUTIONS

- Protection rating IP66: completely insulated against dust and resistant to strong water jets from the cleaning machines;
- “Flame Proof” THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- Completely robust and resistant to changes in temperature;
- Halogen free resin, in the event of a fire it releases no halogen gases (fluorine, chlorine, bromine, iodine and astatine).



Brescia



Officine Riunite Italiane started its activities in the mechanical sector back in 1902.

Over the years to come it focused on top quality and special steels; it developed a range of products for specialised use, it acquires the technology needed to respond to the demands of a clientele that requires quality and product continuity.



Maintenance Department



TAIS Series

RISK PROFILE

- Storage and handling of hazardous and easily inflammable products such as organic solvents and varnishes used as removal agents;
- Propagation of vibrations with direct or indirect transmission;
- Exposure to foundry sand dusts that are dispersed into the atmosphere when the brackets are being refilled;
- Nitrogen oxides and chloride acids are released during the melting process.

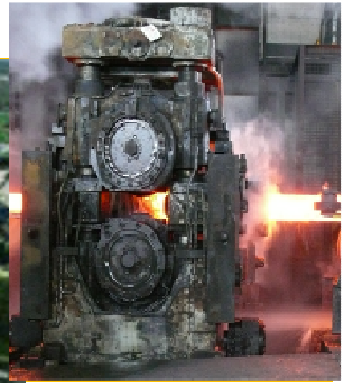


THE SOLUTIONS

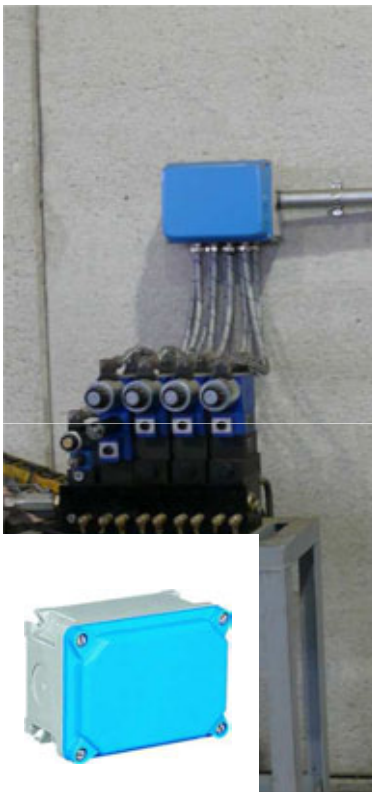
- “Flame Proof” THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- AC23 category cutoff switch which is able to detect and cutoff inrush and blocked rotor current;
- Dual insulation panels with IP65 protection rating. They are resistant against acid and base chemical agents and guarantee high dimensional stability.



Lonato



Over the years, the Feralpi Group has mainly developed its business in the building steel sector. In the steelworks sector, this development led to the acquisition of important companies in Italy and other parts of Europe. The Group is one of the top and most highly qualified European manufacturers in this sector.



TAIS Series



Room in front of the tower blast furnace



TAIS Series

RISK PROFILE

- Storage and handling of hazardous and easily inflammable products such as organic solvents and varnishes used as removal agents;
- Propagation of vibrations with direct or indirect transmission;
- Exposure to foundry sand dusts that are dispersed into the atmosphere when the brackets are being refilled;
- Nitrogen oxides and chloride acids are released during the melting process.

THE SOLUTIONS



- “Flame Proof” THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;



- AC23 category cutoff switch which is able to detect and cutoff inrush and blocked rotor current;

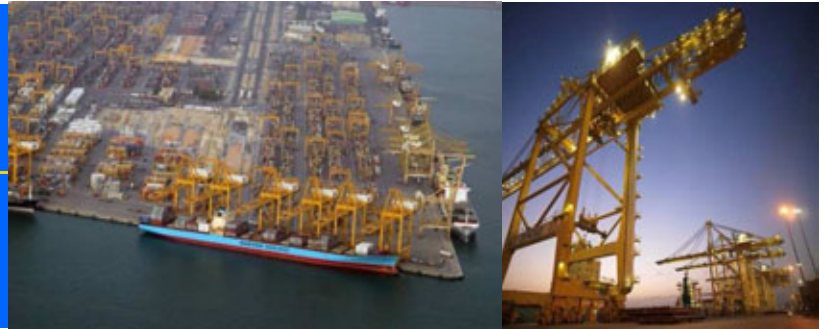


- Dual insulation panels with IP65 protection rating. They are resistant against acid and base chemical agents and guarantee high dimensional stability.



JEBEL ALI PORT

Dubai



Jebel Ali has a total of 71 mooring docks. The entrance channel is bordered by buoys and starts 15 km outside the port; it is 17 metres deep and 320 metres wide. The *appeal* element of Dubai consists in the Jebel Ali Free Zone (Jafza), that is the ideal *hub* for the storage and distribution of merchandise destined to a market of over 2 billion people.



Container park area



TAIS Series

RISK PROFILE

- Aggressive high saline content environment;
- Extreme temperature variations and max temperatures of over + 55°C;
- Frequent sand storms;
- Sun irradiation up to 1.20W/square metres;
- Constant power needed for refrigerator containers;
- Need for high level of impact resistance.



THE SOLUTIONS

- THERMOSETTING enclosure with excellent resistance to salt;
- Completely robust and resistant to changes in temperature;
- Excellent level of UV ray resistance;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors;
- Mechanical impact resistance on all sides >>IK10 (20Joule: impact force).

HARBOURS



Galicia has 28 sport harbours, equipped with all kind of services: 20 of them are managed by Portos de Galicia, while the other 8 harbours are managed by the Harbour Authorities. They have 8812 berthing quays in total: 4730 belong to *Portos de Galicia* and 4082 belong to the general purpose harbours. *Portos de Galicia*, a public body which is member of the Council of Territorial Jurisdiction, Public Works and Transports, is drawing up a "General Plan" that must consider and resolve, in a reasonable way, the development of sport harbours.



Open



Closed



ULYSSE Series



RISK PROFILE

- Aggressiveness of the salty environment.
- Temperature range with condensation.
- Presence of fuel and motor oil.
- Sun irradiation.
- Need for safe impact resistance.
- Use by non-trained personnel.
- Unpredictable load type (motors, resistances, etc.).

SOLUTIONS

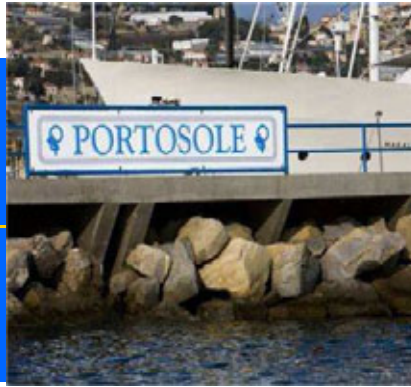


- Enclosure in THERMOSETTING material with excellent resistance against the sea salt.
- IP66/IP67 double protection rating which guarantees resistance against violent jets of water and accidental immersions.
- Excellent resistance against ultraviolet rays.
- Interlocked socket-outlets provided with AC3-AC23A disconnecter switch with relative current rating (16A, 32A, etc.); stop and starting of cage motors.
- Mechanical impact resistance on all sides >>IK10.

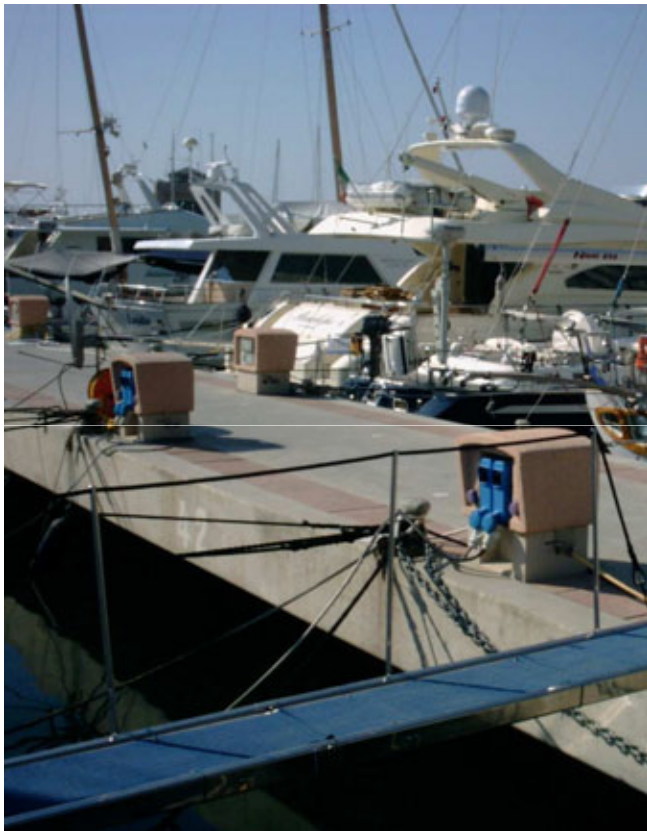
PORTS - CAMPING SITES - URBAN
ZONES

PORTOSOLE

Sanremo



Sole Port has celebrated its 30th anniversary. This tourist port was the first to be built in the Imperia province, and paved the way over the years for what was to become one of the most important tourist channels on the riviera: leisure sailing.



Master mooring harbour

TAIS Series

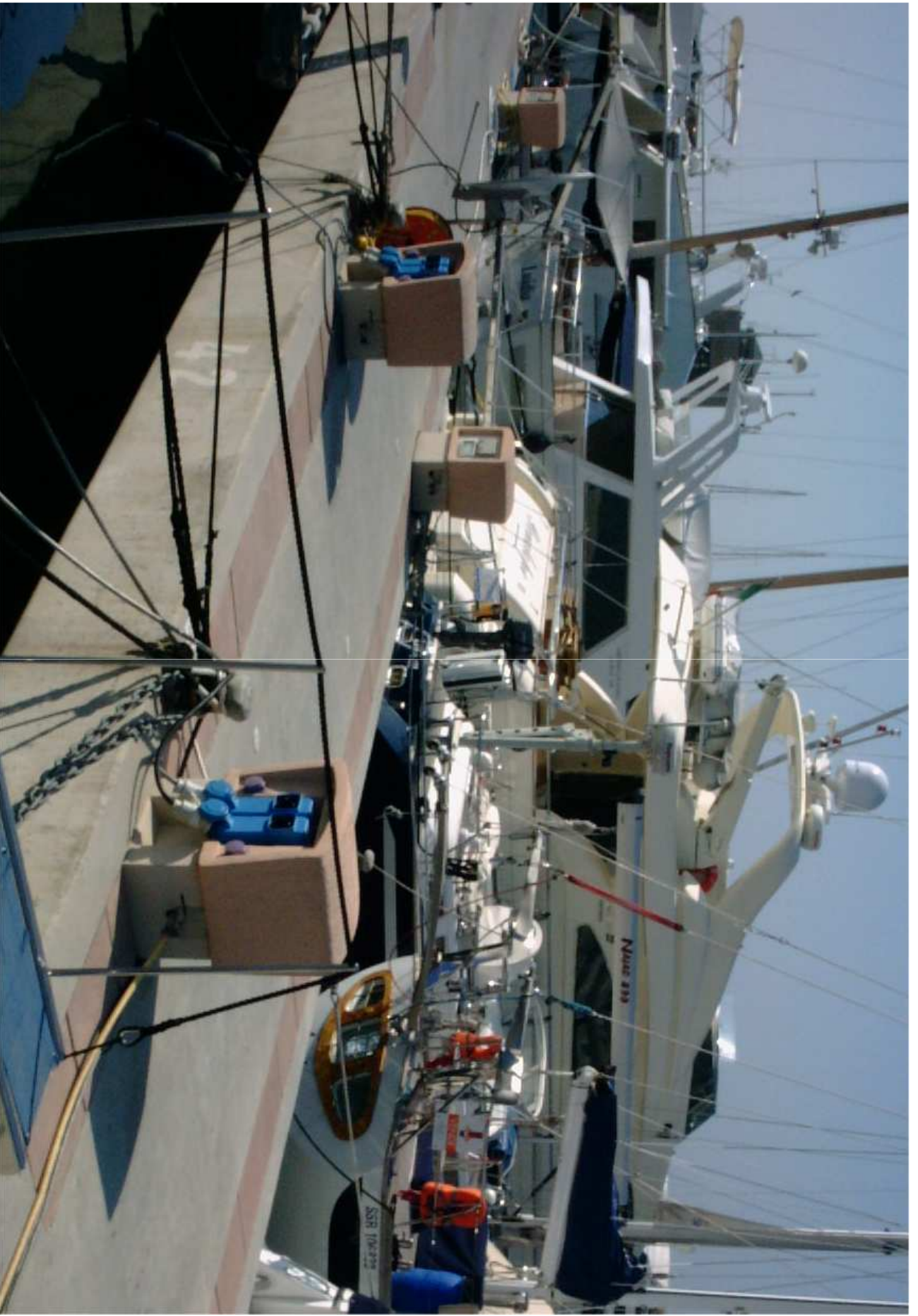
RISK PROFILE

- Aggressive high saline content environment;
- Temperature variations with risks of condensation;
- Use by untrained operators;
- Sun irradiation up to 1.20W/square metres;
- Presence of fuel and engine oil;
- Need for high level of impact resistance.



THE SOLUTIONS

- Corrosion-proof enclosure against combined based attacks: sea + hydrocarbons;
- Excellent level of salt resistance;
- Completely robust and resistant to changes in temperature;
- Excellent level of UV ray resistance;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors;
- High level of impact resistance.



PORTS - CAMPING SITES - URBAN ZONES



Bogliaco di Gargnano



The Bogliaco Marina is located on the Brescian coast of the fascinating and breathtaking panorama of Lake Garda. This port is protected by a marvellous natural environment, and an excellent geographic location with regards to the wind directions and the gulfs and bays which are very easy to reach; this provides all sailing and motorboat lovers with the possibility to find everything that suits their needs.



BSMART Series



Mooring harbour

RISK PROFILE

- Temperature variations with risks of condensation;
- Use of sockets by untrained operators;
- Sun irradiation up to 1.20W/square metres;
- Presence of fuel and engine oil;
- High risk due to hail stones and acid rain;
- Customisation of the tower.

THE SOLUTIONS



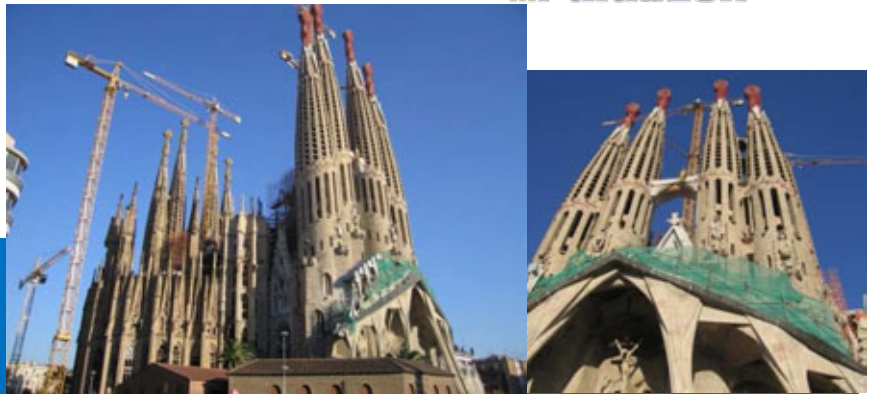
- Casing in AISI 316L stainless steel with transparent panel to illuminate the walkway;
- The IP56 protection rating guarantees they are water and dust-proof even when the flap is open;
- Electrical components are segregated inside watertight insulated enclosures to guarantee dual insulation;
- No maintenance is required, the steel used is non-toxic, flame-proof, smoke-proof and rodent-proof.



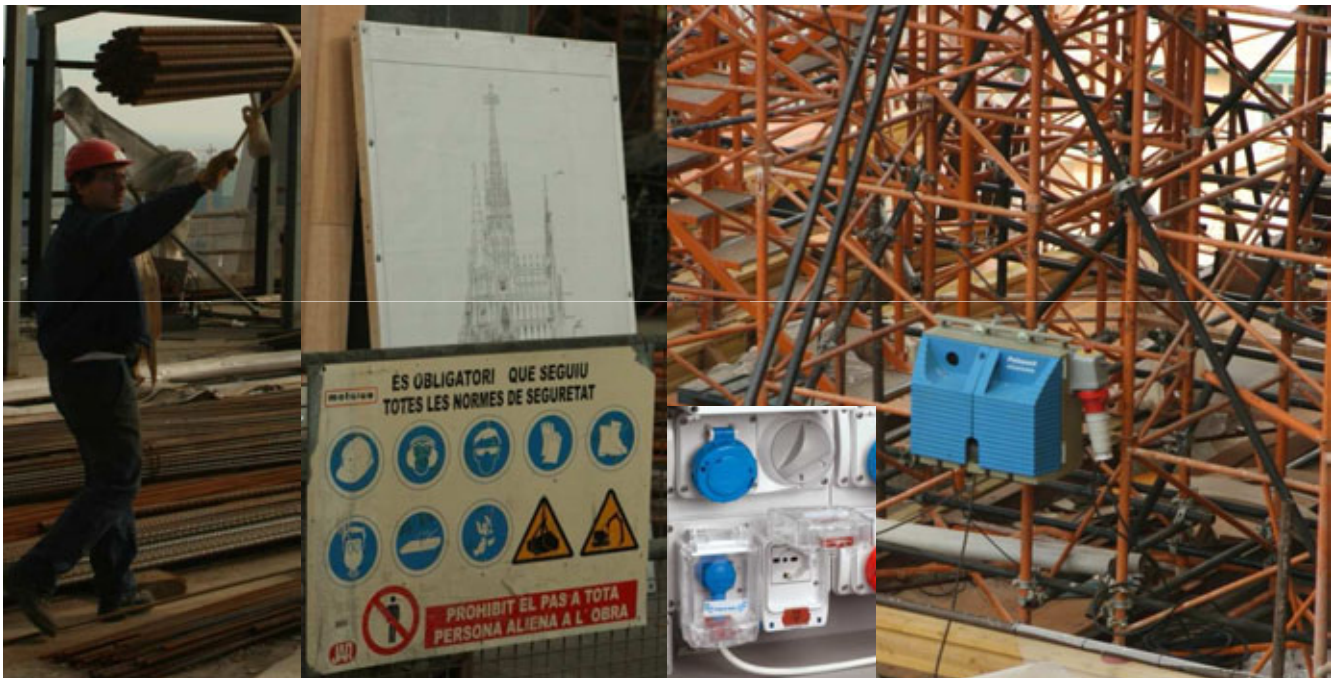
WORK SITES

SAGRADA FAMILIA

BARCELONA



The magnificent cathedral combines the classic Gothic elements with the undulating signs which are typical of Gaudi's architecture. The architect died before completing his work, but the story tells that it underwent a series of constant evolutions. The result is that there is still a work site open and construction on the cathedral still continues today. The Sagrada Familia is the symbol of Barcellona and interprets the visionary genius of this great architect to the best. When finished, it will have 3 façades alluding to the Nativity, the Passion, and the Glory and 18 towers (12 on the façade that depict the apostles, 4 dedicated to the Evangelists, 1 to the Virgin Mary, and the highest one to Jesus). A masterpiece of architecture of the 1900s.



Fixed scaffolding

Special interlocked socket and domestic socket with IP55 rated maintenance

ENERGYBOX Series

RISK PROFILE

- Dusts, fibres, fumes, vapours, gas, odours and other air-dispersed polluting agents.
- Exposure to vibration caused by the used of demolition tools, electric groove cutters, chisels and axes;
- Fall of materials from overhead;
- Electrocutation from sockets not protected for standard use.

THE SOLUTIONS

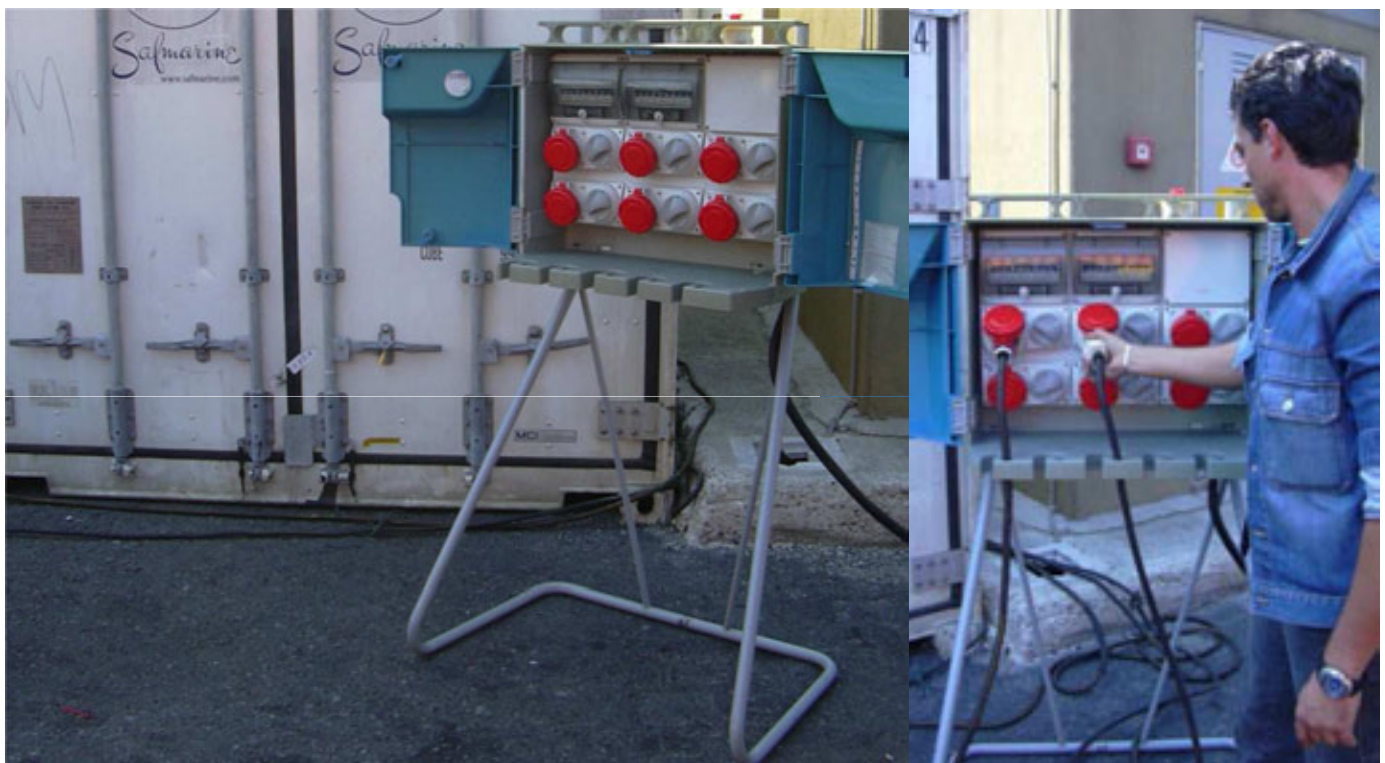


- The electrical panel can easily be fixed to the scaffolding thanks to the multi-purpose plates;
- Enclosure in bi-component, incombustible technopolymer, with impact resistance over IK 10 (20J);
- Electrical panels fitted with watertight domestic sockets even when the plug is inserted;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A, 32A etc.), with steel interlock bracket.

WORK SITES



The Trade Port in Salerno is located in the Northern end of the Salerno Gulf. SCT has built an important container terminal here to respond to the increasing demand by local shippers. The terminal has earned a strong reputation of reliability and efficiency over the years.

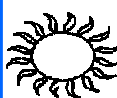


ENERGYBOX Series

Container area

RISK PROFILE

- High levels of vibration generated by load handling and transit of vehicles;
- Frequent handling of the electrical panels;
- Possibility of customising the electrical panels (3h sockets);
- Exposure to atmospheric agents (hail, direct sun, etc.);
- Constant supply power to guarantee the preservation of food products.



THE SOLUTIONS

- Enclosure in bi-component technopolymer, with impact resistance over IK 10 (20J);
- Easy to carry around thanks to the ergonomic handle;
- Possibility to create specific settings for each application;
- Incombustible enclosure with excellent level of UV ray resistance;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors.

TUNNELS -
SUBWAYS

MetroTorino

Turin



Line 1 of the Turin Subway covers a route from Rivoli - Cascine Vica - Collegno - Porta Nuova - Lingotto - Piazza Bengasi which is roughly 28 km long. The trains use an automatic control system which allows them to operate without operators onboard and reduce waiting times, up to 69 seconds.



Subway tunnel

TUNNEL54 and TAIS Series

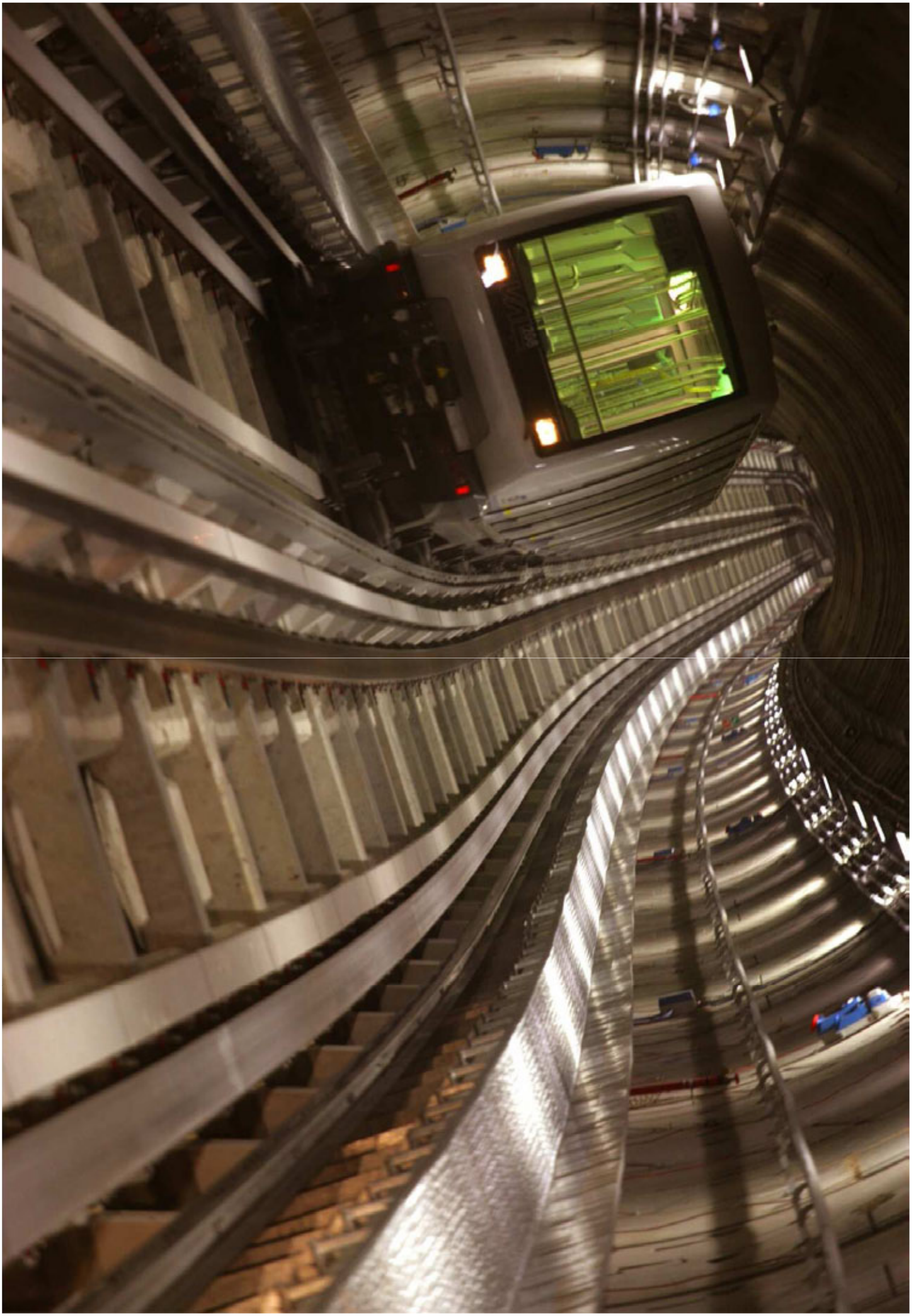
RISK PROFILE

- Power supply to the emergency line also in the event of a fire;
- Location with the highest fire risk;
- To guarantee that the air ventilation and treatment systems all work;
- High levels of vibration and humidity rates;
- Release of hazardous substances;
- To reduce maintenance to a minimum.

THE SOLUTIONS



- Fire proof TUNNEL54 series : test passed at 850°C for 90' and at 400°C for 120';
- TAIS Series in "Flame Proof" THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors.
- Completely indeformable material to changes in temperature.



**TUNNELS -
SUBWAYS**

METROCAMPANIANORDEST
IL TRASPORTO PUBBLICO AVANZA

Naples



The Alifana Bassa Railway is based on the renovation, with modern infrastructures (new track, normal gauge, direct current electrical supply at 1500 V) of the old railway Alifana Napoli Piazza Carlo III. Line 1 (or 'collinare') of the Naples Subway was opened in 1993 and constitutes a most important and modern infrastructure for public transport in Naples.



TAIS TRE, ALUPRES and RINO Series

Technical room



Alupres Series

Tunnel

RISK PROFILE

- Lighting in places with high humidity rates;
- Location with the highest fire risk;
- High vibration levels;
- Risks of condensation;
- Presence of brake oil and release of hazardous substances;
- To reduce maintenance to a minimum.

IP66



THE SOLUTIONS

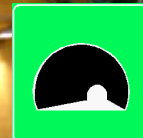
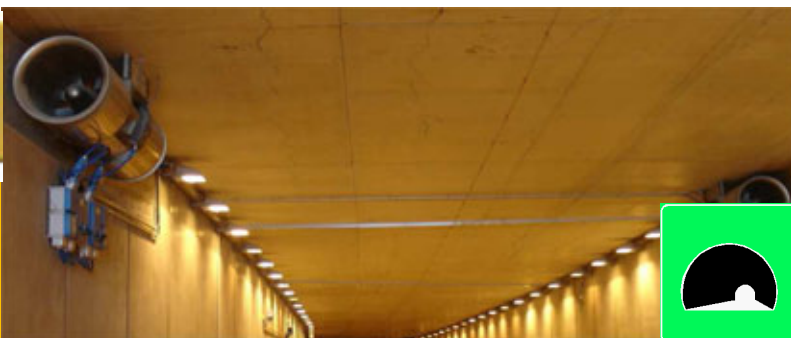
- AISI 304 stainless steel lamp base and humidity-proofing filter;
- TAIS TRE with "Flame Proof" THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- Protection rating IP66: completely insulated against dust and resistant to water infiltrations;
- Completely sturdy and resistant to changes in temperature.



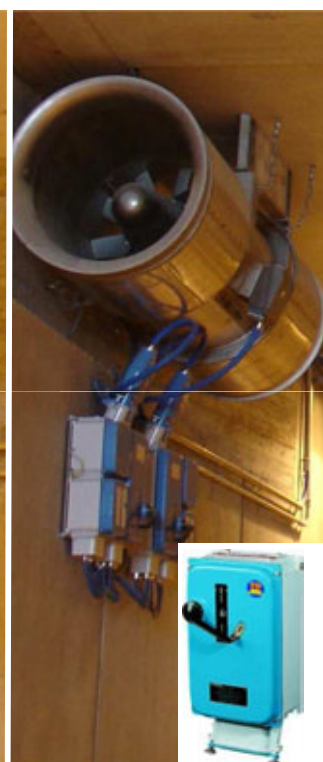
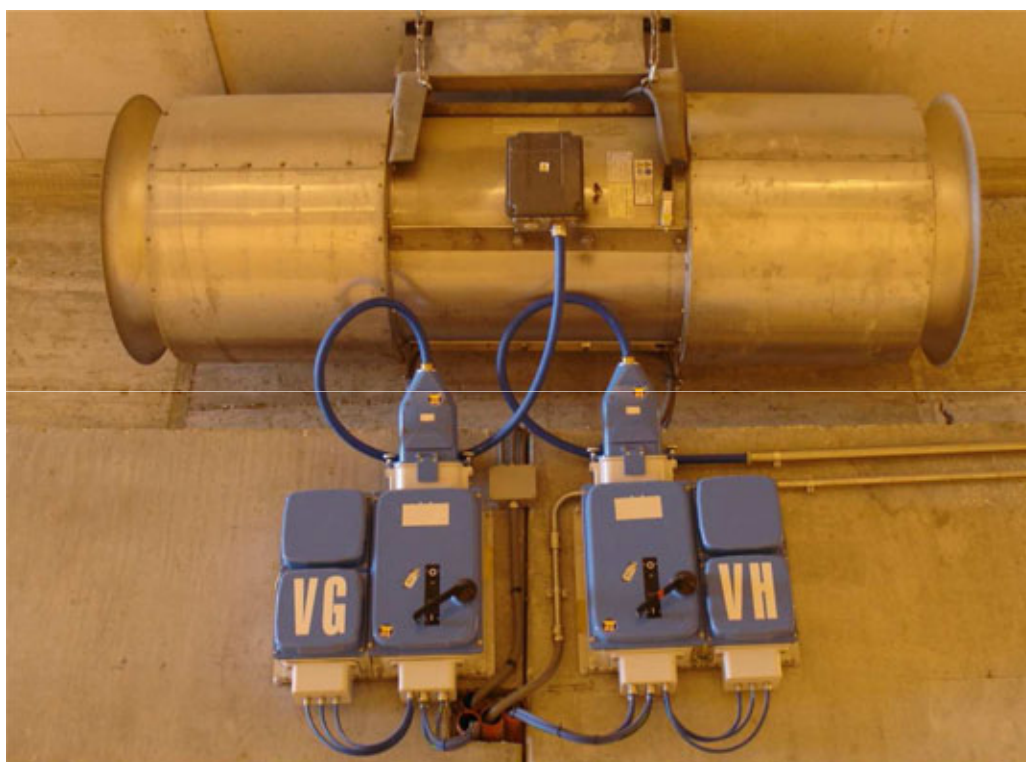
T17 SECANTE



Cesena



The characteristics of the works are as follows: two independent separate carriageways, two lanes in each direction, no crossroads, tunnel about 1,600 m long fitted with a vehicle exhaust fume treatment system, natural and artificial noise-proofing barriers, sliproads at intersections with urban road networks.



TUNNEL54 Series

RISK PROFILE

- Fire hazard and obligation to comply with Directive 2004/54/CE that requires the supply of automatic forced ventilation even in the event of a fire;
- Obligation to comply with the recent Guide Lines for the planning of Road Tunnel Safety and therefore the use of interlocked sockets and plugs which will ensure power supplies at 400°C for 90 minutes.



THE SOLUTIONS

- The TUNNEL54 series complies with the European Directives in force and with that provided in the Guide Lines;
- Guarantee to supply power to the ventilation and lighting devices even in the event of a fire;
- Power supply with n. 48 socket groups and 24 couples of fans and the condensers battery rephasing unit.

TUNNELS -
SUBWAYS

RONCO



Cossato – Vallemosso
Pedemontana



When the tunnel called 'Ronco' was opened, 1,460 metres long, the section from Cossato towards Vallemosso was closed. The tunnels in this section of Pedemontana have all been installed with avant garde security systems and comply to the strictest safety standards.



TUNNEL54 Series

RISK PROFILE

- Power supply to the automatic forced ventilation systems and emergency lighting also in the event of a fire;
- Presence of exhaust fumes;
- Presence of water infiltrations;
- Location with the highest fire risk;
- High vibration levels;
- Condensation risks.

THE SOLUTIONS



- Fire proof TUNNEL54 series : test passed at 850°C for 90' and at 400°C for 120';
- Series tested and certified by accredited laboratories, namely INTEK and IMQ;
- The galvanised aluminium alloy enclosure provides excellent resistance against hydrocarbons, acids and base products;
- Completely sturdy material to changes in temperature.

EXTERNAL SURFACES



The Brescia Airport dates back to 1909 and the landing strip was used in the First World War. The potential catchment area for merchandise sectors develops over 65% of total national production, generating annual import/export air traffic flows of over 500,000 tons a year. The strategic location is also ideal as an intercontinental hub.



RINO Series



Entrance Vehicle baggage deposit

TAIS Series

RISK PROFILE

- Danger due to lack of electrical safety (use of unsuitable cables and sockets);
- Exposure to atmospheric agents;
- Exposure to hazardous chemical agents by contact (oily substances, naphtha);
- Micro-climatic difficulty (heat + humidity);
- Presence of inflammable substances (petrol in tanks, engine oil).

THE SOLUTIONS



- "Flame Proof" THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- Dual insulation sockets, with IP65 protection rating;
- Material resistant to climatic changes to guarantee a high dimensional stability;
- Stainless steel lighting fixture without welded parts to ensure rustproof quality.



EXTERNAL SURFACES



Monza



The Monza Race Track is the largest Italian motorsport complex and is one of the most complete and famous in the world. It currently has three tracks: the Gran Prix track, 5,793m; the Junior track, with lighting for night time races, 2,405m; the speed track with overhead bends for record attempts and technical testing, 4,250m.



ALARM Series

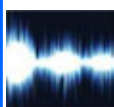


TAIS Series

Track

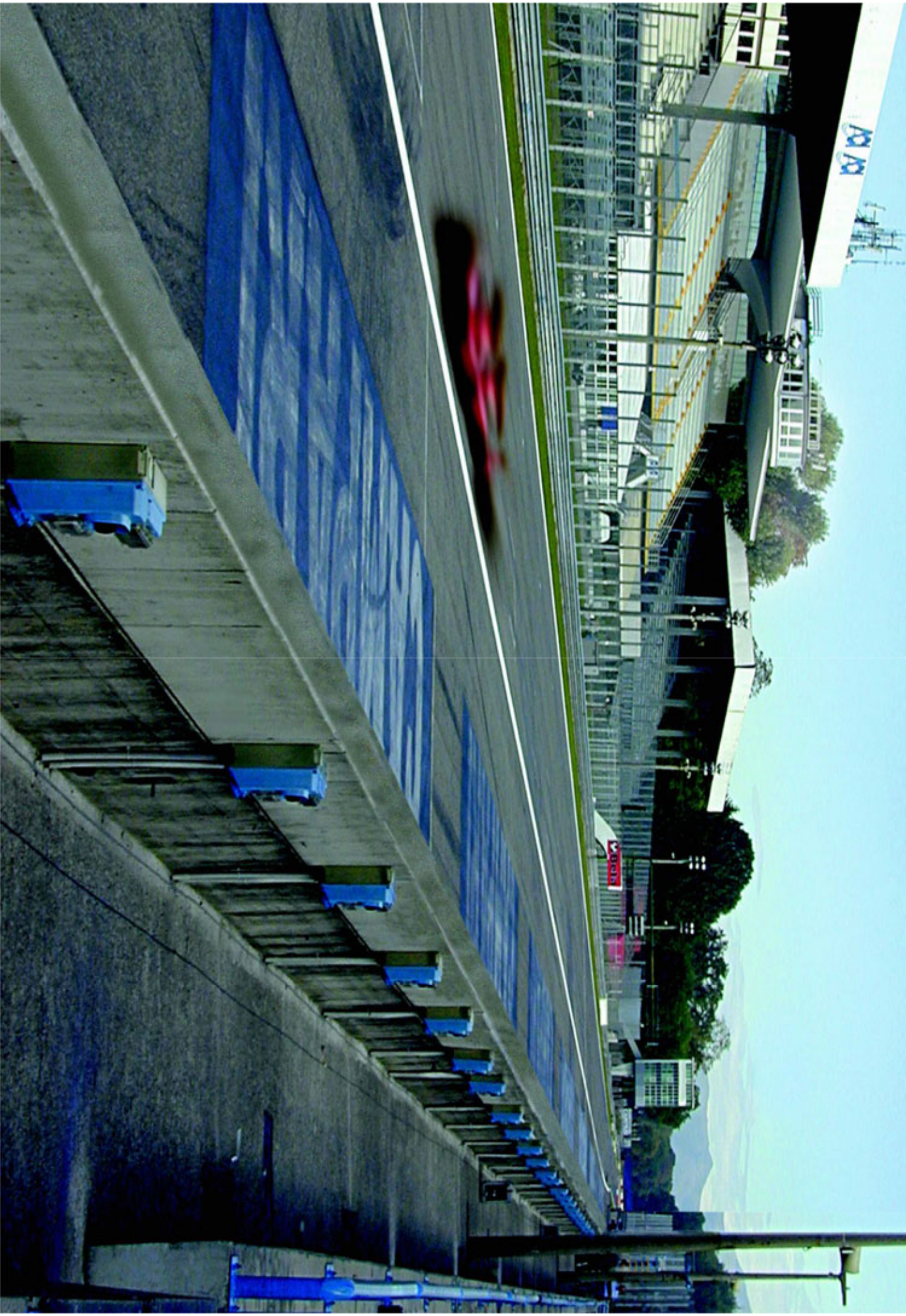
RISK PROFILE

- Temperature variations with risks of condensation;
- Presence of fuel and engine oil;
- High risk due to weather conditions;
- Impact risk due to transit of vehicles;
- High levels of vibration generated by load handling and transit of vehicles.



THE SOLUTIONS

- Completely sturdy and resistant to changes in temperature;
- Excellent level of hydrocarbon resistance;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A, 32A etc.), starting and stopping of cage motors;
- High level of mechanical impact resistance;
- Siren in IP66 metal enclosure with extended operation.

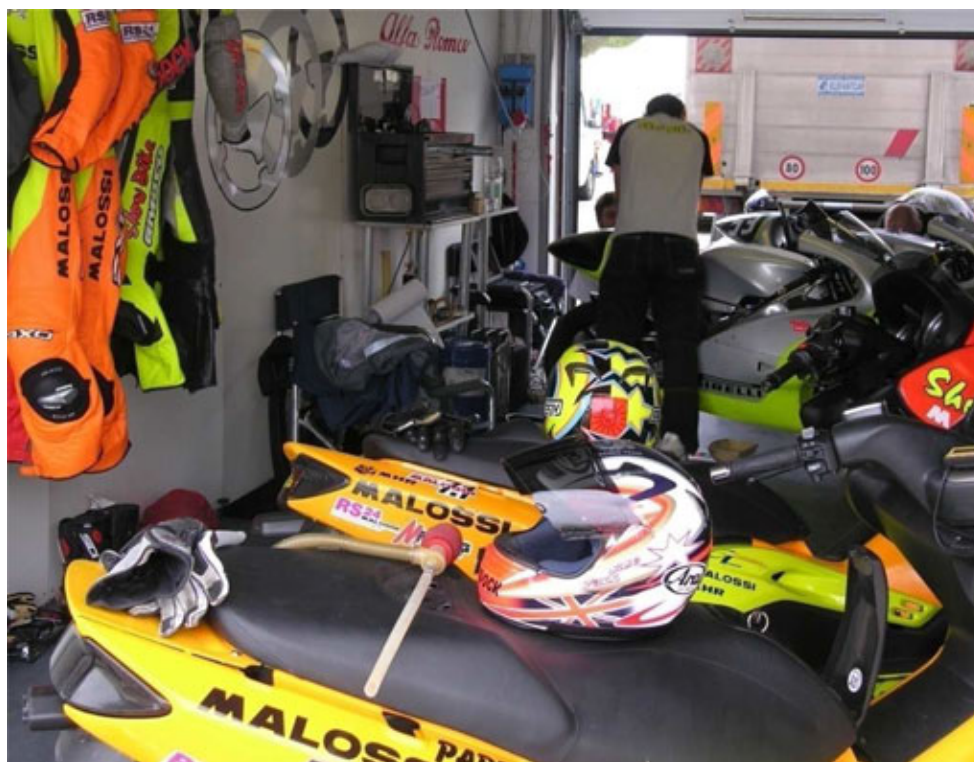


EXTERNAL SURFACES



The "Riccardo Paletti" Race Track, generally known as 'Varano' is located in the Cisa Pass area near Parma, its location makes it one of the most popular tracks for the enthusiasts in Northern Italy, as it is so easy to reach.

The track is very technical and guided, but also ideal for both newcomers and experts, who always enjoy one of the most famous bends on the circuit, the "Horse Shoe".



Box



TAIS Series

RISK PROFILE

- Temperature variations with risks of condensation;
- Use of sockets by untrained operators;
- Danger due to lack of electrical safety (use of unsuitable cables and sockets);
- Location with the highest fire risk;
- High vibration levels.

THE SOLUTIONS



- TAIS Series in "Flame Proof" THERMOSETTING enclosure with GWT 960°C, self-extinguishing V0 and impact resistance >> IK10;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A,32A etc.), starting and stopping of cage motors;
- Completely sturdy material during changes in temperature;
- High level of impact resistance.



M/nave AUDACIA ★★★

Genoa



The Audacia was launched with a festive ceremony at the Maritime Station in Genoa, and is a latest generation ferry cruiser. A type of «ferry cruiser». It has modern fittings and is the second of the eight «ferry cruisers» ordered by Grimaldi Holding to Nuovi Cantieri Apuania for a total investment of around 500 million euro.



RINO Series



NAVE Series



ALUPRES Series

RISK PROFILE

- Aggressive high saline content environment;
- Exposure to dusts, fumes and exhaust fumes from petrol and diesel vehicles;
- Contact with oily substances and naphtha;
- Strong sun irradiation;
- Mechanical repair and maintenance work on systems by machine operators;
- Need for high level of impact resistance.

THE SOLUTIONS



- Corrosion-proof enclosure against combined based attacks: sea + hydrocarbons;
- Excellent level of salt resistance;
- Completely sturdy and resistant to changes in temperature;
- Excellent level of UV ray resistance;
- Interlocked sockets fitted with AC3 AC23A isolator switch at plate data amperage (16A, 32A etc.), starting and stopping of cage motors;
- High level of impact resistance.





Castiglione delle Stiviere



Sterilgarda Alimenti has history that dates back over thirty years: it was established in 1969 by a group of entrepreneurs operating in the dairy sector. Research and a marked innovative spirit combined to making this company a leader in the production of UHT milk and cream; it then extended the range to include beschamel sauce, dessert puddings and cooked cream. The production plant is located in Castiglione delle Stiviere (MN) amidst the Morenic hills on Lake Garda.



ULYSSE-EX Series

Battery charger room



RINO-EX Series

RISK PROFILE

- Risk of explosive atmosphere (hydrogen/oxygen)
- High risks of corrosion due to direct contact and evaporation.

THE SOLUTIONS



- ATEX components certified by the European Consortium of Certification, suitable for use in potentially explosive environments type 2, 21 and 22;
- Electrical components with enclosure resistant to acids and base elements, with Ex nR type limited respiration that, regardless of the protection against explosions, it is also effective against the penetration of corrosive atmospheres inside the devices;
- Anti-static glass diffuser;
- Spark-proof terminals, sturdy rigid bases.





The G & I Company makes the most beautiful doors with care and craftsmanship, using innovative methods and with the help of the most modern technologies. The production combines the structural strength of wood with the beauty of the coatings in HPL and CPL, materials that have been used in the furniture industry for a long time.



ULYSSE-EX Series

Processing Department

CEE-EX Series

RISK PROFILE

- The presence of combustible dusts cause explosion and/or fire risks.
- Danger caused by dust clouds (explosion);
- Combustible dusts dispersed in the air (following milling or cutting operations etc.) form mixes (clouds) of combustible (wood dust) and combustible (oxygen) elements;
- Presence of layers of dust/shavings.

THE SOLUTIONS



- ULYSSE-EX series complies to Directive 94/9/EC standards and is therefore marked EC ATEX: for Zone 21 Group II Category 2D product; for Zone 22 Group II Category 2D and 3D product;
- Enclosure that does not allow solids to penetrate and has an IP 6X protection rating, also suitable for electro-conducting dusts;
- System with maximum surface temperature lower than the trigger maxT;
- ATEX products certified by C.E.C and IMQ.



BIALETTI INDUSTRIE

Coccaglio



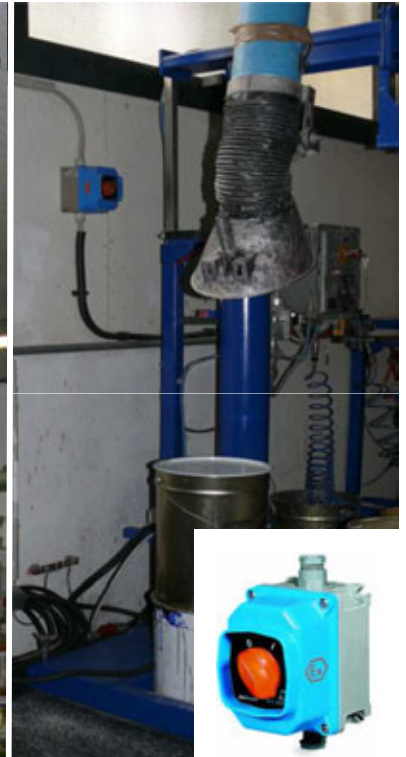
Bialetti was established in 1919 when Alfonso Bialetti opened a workshop in Crusinallo (VB) to produce semi-processed aluminium. His entrepreneurial spirit soon led him to transform his Workshop - Alfonso Bialetti & C. Fonderia in Conchiglia - into a workshop for the design and manufacturing of finished, market-ready products.



ULYSSE-EX Series



RINO-EX Series



CAM-EX Series

RISK PROFILE

- Operations which foresee the mixing of varnishes and solvents to create the product, with the presence of open containers which release inflammable vapours from the surfaces of the liquids;
- Presence of varnishing product dusts, solvents and isocyanates in the air;
- Need to classify the place according to IEC EN 60079-10 (IEC 31-30) Standards and the relative IEC 31-35:2007/05 Guide.



THE SOLUTIONS

- Components comply to Directive 94/9/EC standards and are therefore marked EC ATEX;
- Components certified by the C.E.C. Laboratory with Ex n protection mode;
- Enclosures with limited respiration that prevent contact between the explosive mix and the trigger agent;
- Notice from IMQ that Palazzoli has a production quality system that complies with Annex IV of the ATEX Directive.



**FASSA
BORTOLO**
QUALITÀ PER L'EDILIZIA

Montichiari



Fassa responds to a wide range of demands, of small and large worksites, supplying an extensive range of products, from premixed plasters to paints, from wall mortar to coatings, from concrete screeds to restoration products, revamping of reinforced concrete and thermal insulation. It also has a complete and certified range of bio-ecological products for building and restoring in harmony with nature, according to the most modern bio-architecture policies.



RINO-EX Series

ULYSSE-EX and TAIS-MIGNON-EX Series

ALUPRES-EX Series

RISK PROFILE

- The presence of wood dusts cause explosion and/or fire risks;
- Danger caused by dust clouds (explosion);
- Combustible dusts dispersed in the air (following milling or cutting operations etc.) form mixes (clouds) of combustible (wood dust) and comburent (oxygen) elements;
- Presence of rodents.

THE SOLUTIONS



IP66



- RINO-EX lighting fixtures for ordinary and emergency lighting;
- ULYSSE-EX (from 16 to 63A) and ALUPRES-EX (125A) for power distribution;
- TAIS-MIGNON-EX as control switches;
- System certified by the international laboratory C.E.C, with an Ex n protection mode that prevents contact between the explosive mix and the trigger agent;
- Anti-rodent enclosures.



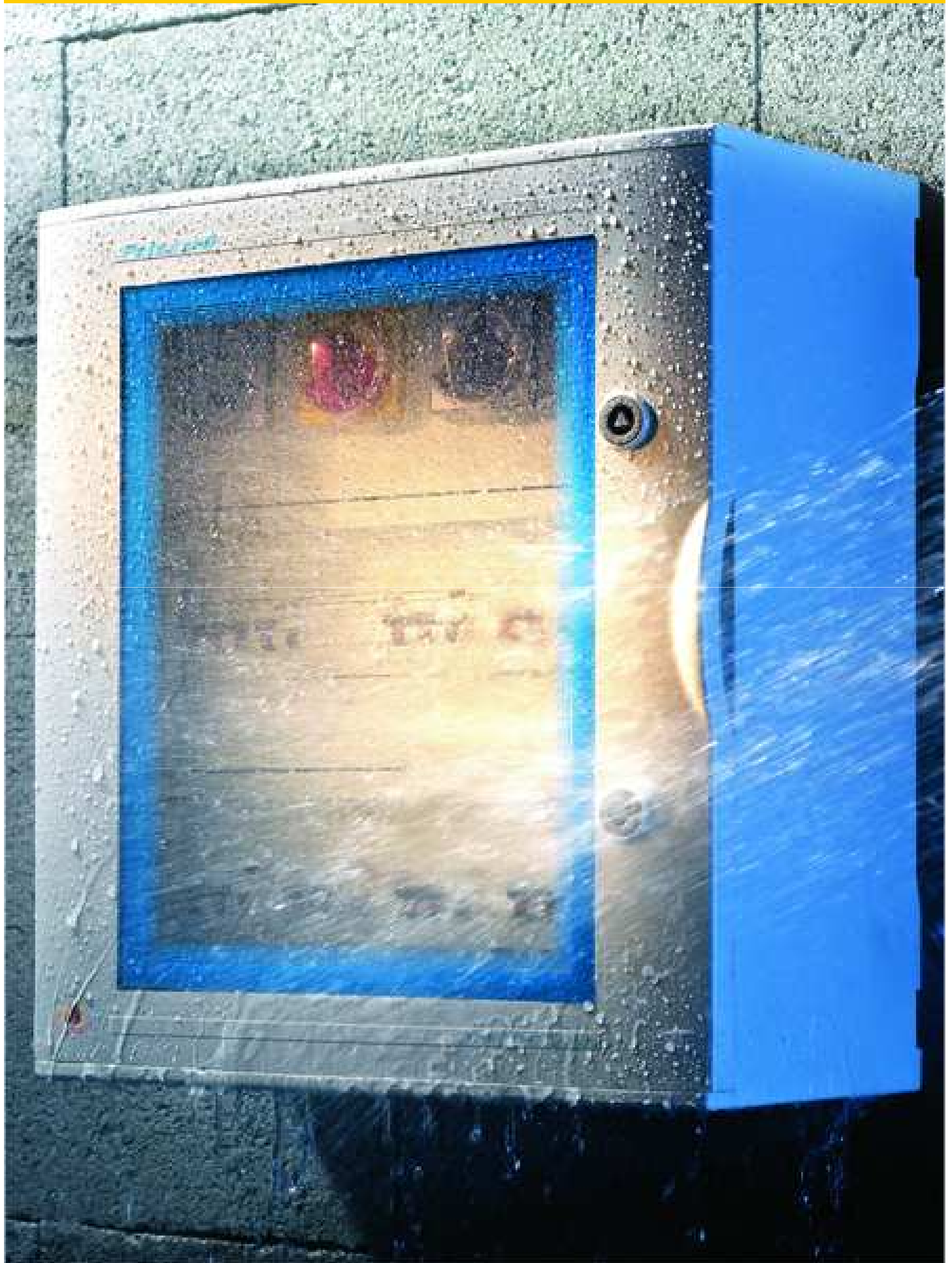
Install and forget it



Foreman



Use it everywhere



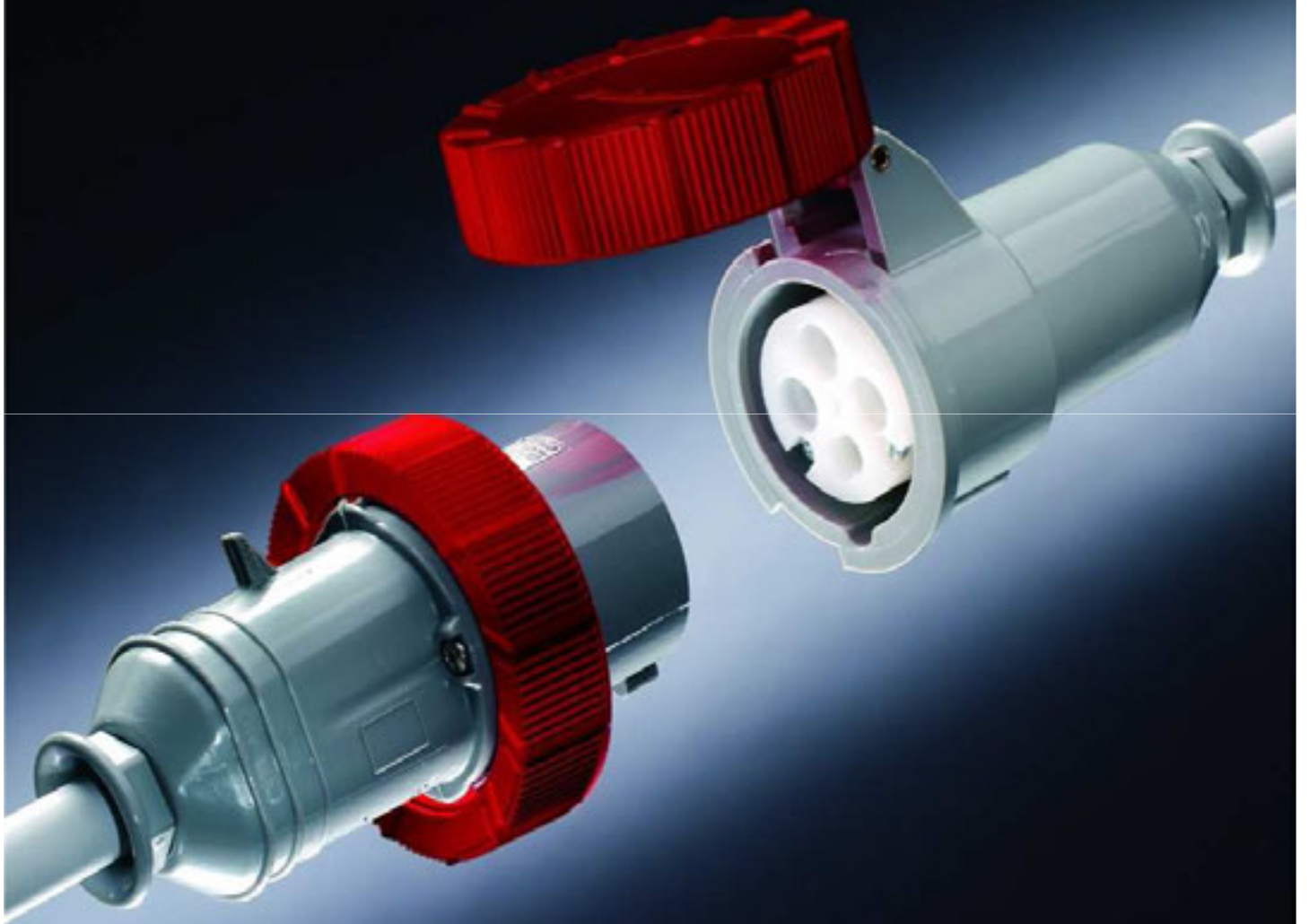
All in one piece



Explosion proof



Safe coupling



APPLICATIONS EXPERIENCES

REFERENCES

EVERYWHERE IN THE WORLD

55291



LIGHT INDUSTRY - INDUSTRY



PORTS - CAMPINGS - BUILDING SITES



MARINE - ATEX - TUNNELS

F/P/B **Palazzoli**

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