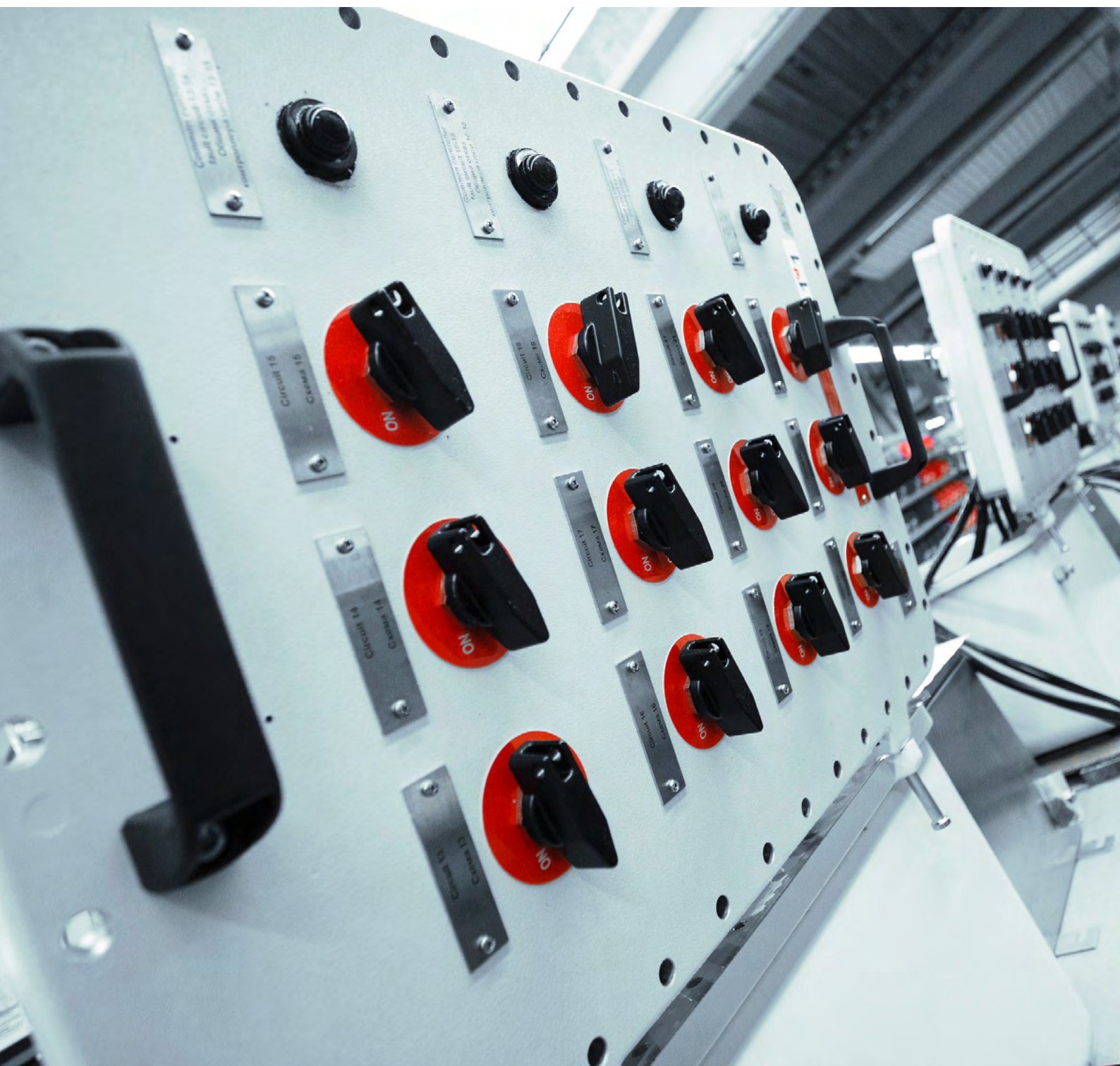




ROSE

A Phoenix Mecano Company



EX EQUIPMENT CATALOGUE

www.rose-systemtechnik.com

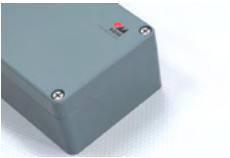


Introduction

Service Industries

Page

04

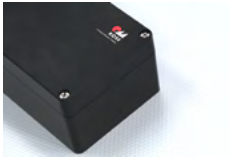


Ex Aluminium

Enclosure systems made from aluminium die-casting for use in all hazardous areas

Page

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Ex Polyester

Fibre-reinforced enclosure system made from polyester resin for use in all explosive hazardous areas

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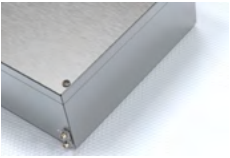


Ex Polyester Okta Box

Fibre-reinforced enclosure systems made from polyester resin for use in all explosive hazardous areas

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Ex Stainless Steel

Enclosure system made from stainless steel for use in explosive hazardous areas

Page

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Ex Stainless Steel Cabinets

Enclosure system made from stainless steel for use in explosive hazardous areas

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Ex d EJB

The Ex d EJB enclosure series is suitable for use in Gas Group IIB+ H2 to protect electrical and control solutions

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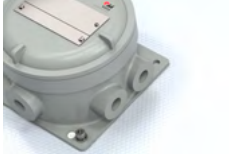


Ex d GUB

The Ex d GUB enclosure series is suitable for use in Gas Group IIC to protect power distributions and complex control systems for machinery and equipment

Page

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Ex d TBE

The Ex d TBE enclosure series is suitable for use in Gas Group IIC to protect electrical and control solutions

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Markings for hazardous areas (Ex areas)

All important markings at a glance

Page

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Protection Classes and Tightening Torques

IP, NEMA, IK protection types and tightening torques

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Approvals

Overview of all current approvals for various areas of application

Page

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Technical Information

All important technical information at a glance

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Since 1969 ROSE Systemtechnik is well known for their robust and innovative industrial enclosures. Nowadays the company is not only one of the leading suppliers for enclosures but also when it comes to individual solutions. We can maintain a leading position on today's world market thanks to over 2,190 reliable employees.

Our products are made to protect sensitive built-in components against External influences, they are found in many different industries such as: railway- and traffic engineering, machine- and plant construction, automation engineering, potentially Explosive atmospheres, measurement- and control technology as well as the food and beverage industry.

The 37,000 m² site in Porta Westfalica is home to the headquarters with around 350 employees who work in production, sales, marketing and development. In addition to the site on the edge of the Wiehengebirge, ROSE Systemtechnik has another plant in Finow. Industrial and control enclosures, device carriers and accessories are assembled there. The development and production of our HMI solutions is located in Hohenlockstedt.

Alongside a wide variety of industrial enclosures, HMI Panel-PCs and Ex proof enclosures, ROSE Systemtechnik offers unmatched services, that also provide tailor-made solutions.

ROSE Systemtechnik sticks out in all categories thanks to our Extensive service. Enclosures made of aluminium, polyester, polycarbonate, ABS and stainless steel belong to our integrated system solutions. Just as the assembly with i. e. cable glands or terminal blocks and customer specific surface finishing as well as packaging and detailed security tests.

Regarding special requirements, we also develop tailor-made special enclosures in close contact with the customer.





Overview of our services:

Machining:

- > Milling
- > Drilling
- > Thread cutting
- > Backwards cutting
- > Engraving
- > Laser machining



Surface engineering:

- > Painting
- > Printing
- > Special coating
- > Blasting
- > Cleaning
- > Passivation
- > Powder coating
- > Screen printing
- > Pad printing



Equipment:

- > Cable glands
- > Terminal blocks
- > Mounting plates
- > Membrane keyboards and electrical inspection
- > Wiring
- > Circuit board assembly



Mounting of HMI Solutions:

- > Unpacking
- > Assembly and fitting
- > Briefing employees at your location
- > Adjusting already existing systems
- > Leaving a spotless workplace
- > Disposal of packaging material



Laboratory:

- > IP protection class test
- > IK impact tests
- > Protection class test according to DIN EN 60529
- > Impact tests according to EN 62262
- > Heat and climate tests according to IEC 60079



Traffic engineering

Enclosure solutions for traffic engineering

Traffic engineering includes transportation of people and goods

- > on the street
- > on the rails
- > on water
- > in the air

Sensitive electronics from traffic engineering or traffic guidance systems are safely protected by innovative and robust industrial enclosures from ROSE Systemtechnik. Traffic engineering has very high requirements towards our products. As they are often exposed to extreme weather conditions such as

- > Corrosion
- > Vibrations
- > Stone impacts
- > Varying temperatures
- > Strong pollution

We partake to a functioning infrastructure in this sector with our special industrial enclosures, because traffic engineering connects people and supports globalisation due to freight trafficking.



eMobility

Enclosure solutions for eMobility

We need to have a more sustainable way of dealing with our environment to fight against climate change in the best possible way. Emissions can be lowered with electric cars to path the way into a more climate friendly mobility solution. That's why ROSE Systemtechnik supports this sector with the following products:

- > Charging stations
- > Wall boxes
- > Special enclosures
- > High Voltage Power Distribution Units
- > Housing for batteries

Our charging stations and wall boxes define themselves with the following attributes:

- > Withstanding environmental stress
- > Made of aluminium
- > Can be equipped with up to two charging sockets
- > Can be designed individually according to customer requirements

Especially our wall boxes are best suited for personal use at home. They can transfer about 22 kW into the car with the appropriate installations. Which means that even at home aggregates can be charged within a short amount of time. ROSE offers different variations of wall boxes within this sector, which all have their own advantages, not only aluminium but also stainless steel and polyester wall boxes can be the perfect solution for private usage.



Automotive

Enclosure solutions for the automotive industry

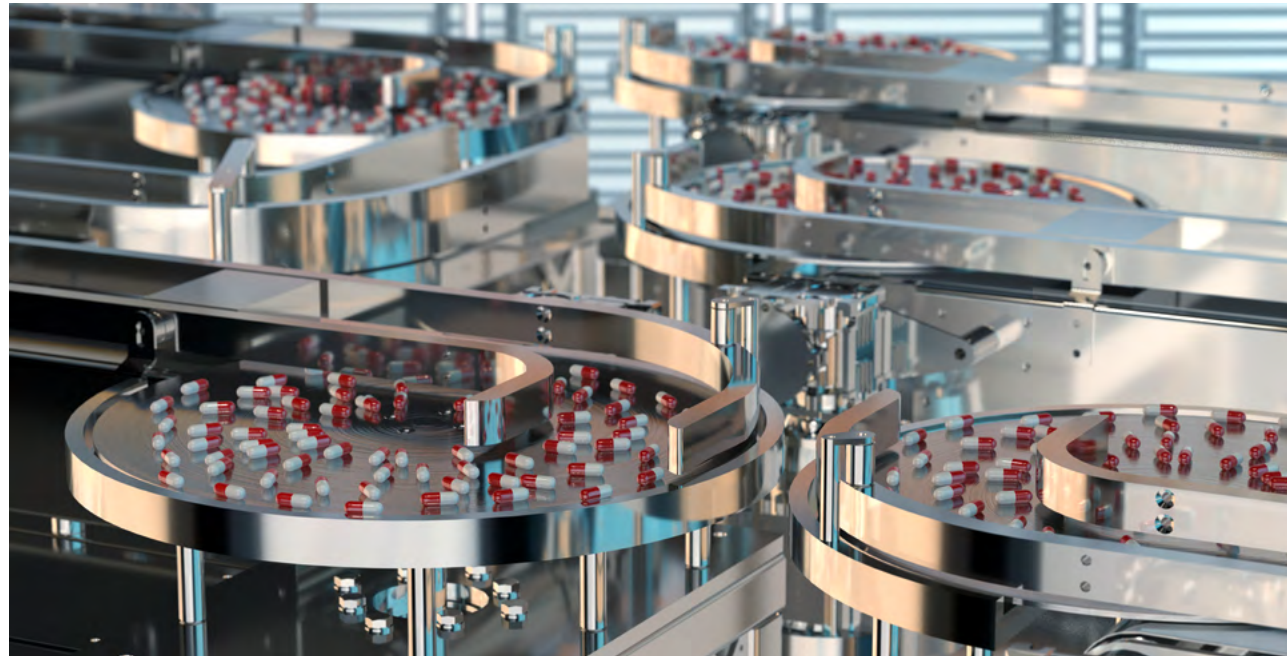
Assembly lines in the automotive industry are leading when it comes to all things regarding automation and advancements. Currently this sector is facing several challenges:

- > eMobility
- > Digitization
- > Shorter model cycles

However, the manufacturers of the required production equipment must also meet the frequently changing trends in the automotive industry. Because the machine- and plant construction sector must deal with way more than just fair market prices. That's why we at ROSE not only offer industrial-, operating-, and display enclosures as well as support arm systems with a high-quality standard but moreover:

- > Comprehensive technical know how
- > Fast reaction- and responding times
- > Short delivery times
- > Reliability
- > Flexibility

ROSE offers a new product line called HMI Solutions which combines different IPC products with our established control enclosures and support arm systems. That is why we also offer complete solutions for machine and plant construction in addition to the distributor housings.



Chemistry

Enclosure solutions for the chemistry industry

There is a high fire hazard during the conversion from natural raw materials into synthetic material, as many chemicals are easily flammable and sensitive to mechanical exposure. That's why sparks and discharge from electrical components needs to be shielded while simultaneously protecting them from intrusion through corrosive materials. This especially affects industrial sectors like:

- > Synthetic industry
- > Food industry
- > Automotive industry
- > Machine and plant construction

Stainless steel Ex enclosures from ROSE Systemtechnik guarantee a safe containment of

- > Electrical distribution systems
- > Devices
- > Built in components
- > Small parts

We are specialised in Ex projects for many years and offer custom-made enclosure solutions in this area.



Oil and gas

Industry solutions for the Oil- and gas industry

Natural and combustible gases as well as flammable liquids, such as gasoline or oil, are often pumped in areas with Extreme ambient temperatures. Particularly safe enclosures are needed to protect the environment from pollution caused by ignition. ROSE produces different kinds of enclosures in various types for that use.

- > Terminal enclosures
- > Control enclosures
- > Display enclosures
- > Operating enclosures

These are used in both onshore and offshore applications. There are certain criteria you must consider when choosing an Ex product:

- > Zone
- > Temperature resistance
- > Dust or gas atmosphere
- > Location
- > Size
- > Protective function

ROSE Systemtechnik also offers a wide range of applications made of stainless steel, polyester, polycarbonate or aluminium for the various types of ignition protection.



Machine and plant construction

Industry solutions for the machine- and plant construction

More machines are needed to produce goods to meet the increasing demands of a steadily rising world population. ROSE Systemtechnik offers different industrial enclosures for automation processes. We also support our customers in machine- and plant construction with custom-made enclosure concepts and excellent service. We score particularly well with:

- > Innovation
- > Reliability
- > Swiftness
- > Flexibility

Depending on the application machines and plants may need to withstand heavy exterior impact. In the food industry as an example:

- > Chemical cleaning
- > Water
- > Food residues

That's why industrial enclosures and system solutions from ROSE Systemtechnik are extremely durable and easy to maintain. Built in components are interchangeable at any time.



Agricultural technology

Industry solutions for agricultural technology

Almost 10% of earth's surface is used agriculturally. The vehicles used are becoming more digitalized. Drones and radio-controlled agricultural machinery with sensitive electronics are being used to make arable farming even more efficient. Technicians and engineers like to speak of Smart-Farming-Systems.

- > Sensor technology
- > Satellite based GPS orientation
- > Robot technologies

ROSE Systemtechnik enclosures made of aluminium, stainless steel or polyester can protect any kind of electrical fittings with protection classes up to IP 69K against

- > Vibrations
- > Water
- > Dust
- > Acids

Additionally, they reliably shield from electromagnetic interference and are especially shock-proof. Quick maintenance of the machines is assured through easy handling.



Wind energy

Industry solutions for wind turbines

Power generation through wind energy is set to be the most important source of renewable energy in the future. Wind turbines are mainly placed

- > on fields
- > in the ocean
- > at lakes

Customized enclosures from ROSE Sytemtechnik are installed on the inside and outside of wind turbines to protect electronics. They need to withstand strong vibrations and caused by the movement of the rotor blades and be impact resistant due to possible collision. A special coating protects against:

- > Lubricating oil
- > Gasoline
- > Salt and seawater
- > Fertilizer

Terminal boxes made of aluminium are being installed in maintenance platforms as an example. Offshore plants need to use special stainless steel enclosures due to corrosion resistance.



Shipbuilding

Industry solutions for shipbuilding

90% of goods worldwide are being transported via ships. Which makes shipbuilding mandatory for globalisation. In addition, there are markets for ferries, yachts and cruise ships. Parts are exposed to especially strong weather conditions due to water and wind.

- > Saltwater
- > Varying temperatures
- > Wind
- > Swell

Control stations made of stainless steel and distribution boxes made of aluminium from ROSE Systemtechnik are used in numerous ships. Our enclosures receive a special coating against corrosion which makes them not only weather-proof but also protects them against:

- > Oil and grease
- > Fuels
- > Brine
- > Detergent

We offer enclosures in individual sizes and shapes. Certificates from the American Bureau of Shipment, Lloyds Register of Shipping and Maritime Register of Shipping show, that our products meet the high expectations from the nautical industry.



Vehicle construction

Industry solutions for construction vehicles

Construction vehicles are massive, that's why they need a strong power unit. This sector currently goes through a turnaround when it comes to motorisation. From old diesel engines to environmentally friendly eMobility that's the current agenda for the manufactures of construction vehicles. The benefits gained from this are remarkable:

- > Due to high braking energy vehicles can charge themselves.
- > Considerable reduction of diesel usage and CO² emissions.
- > The vehicles are almost silent.
- > Maintenance costs are lower.
- > There are no restrictions due to environmental zones.

We produce high-voltage distributors as a central link between aggregates, batteries and E-Motors, to assist manufacturers on their way to eMobility. Power distribution units from ROSE Systemtechnik are characterized by

- > Reliability
- > Quality
- > Flexibility
- > High IP protection class

Our competent solution team consisting of designers and engineers will develop a suiting special enclosure, should your HVDU-solution not fit with our standard enclosure.

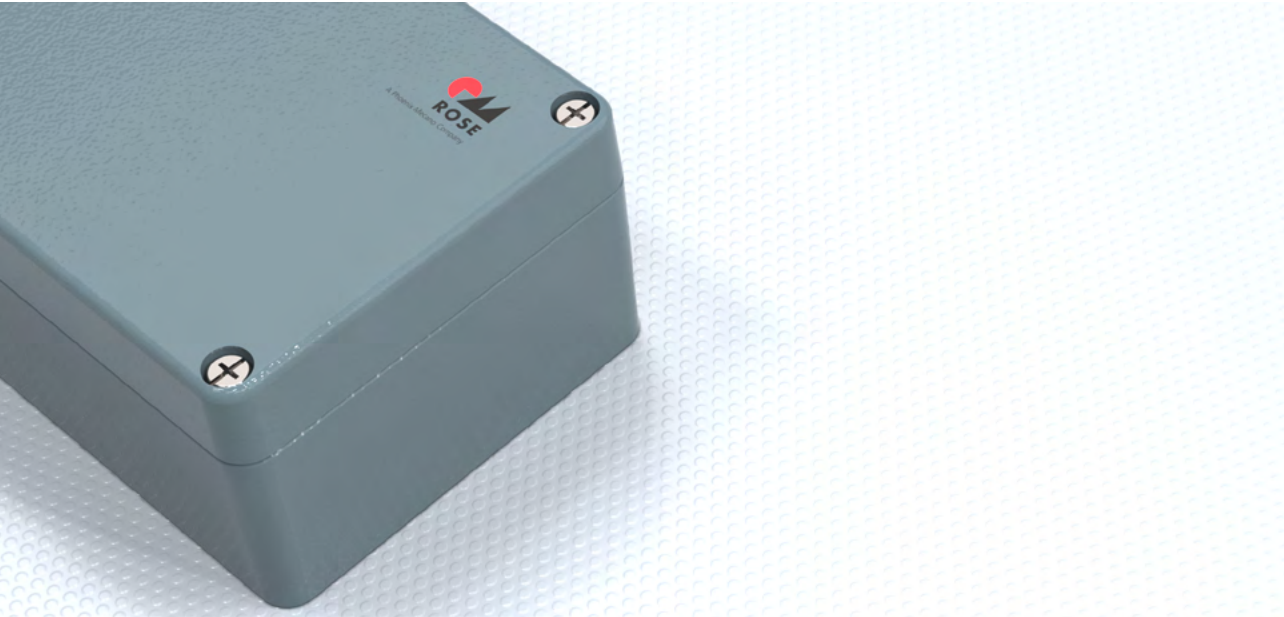
Applications



> Ex Aluminium

Aluminium enclosures / Ex Enclosures

EX EQUIPMENT



> Approvals

- + Enclosure systems made of aluminium die casting for use in Ex areas
Zone 1 / Zone 2 / Zone 21 / Zone 22
- + Available as a component (U approval) or as a fully certified device,
including the installation of terminals or electronic equipment
- + Optional version with viewing window

Technical data	
Material:	DIN EN 1706 EN AC-AISI 12 (Fe)
Colour:	powder coated, RAL 7001, silver grey
Ingress protection:	IP66 according to EN 60529
Impact resistance:	7 Joule according to EN 60079-0
Temperature resistance:	-55 °C up to +135 °C
Further versions available upon request:	EMC, SBG, SBGL, SWB

Included in delivery

Empty enclosure: Enclosure with silicone gasket and external earth connection.
Terminal enclosure: Enclosure system – depending on the version, with silicone gasket, external earth, mounting rail, internal earth connection, terminals, machining, cable glands.



3-D data
and drawings

> Ex Aluminium

Aluminium enclosures / Ex Enclosures

EX EQUIPMENT

Product overview								
Ex empty Order no.	Type	Mounting plates	Mounting rails TS15	Mounting rails TS35	Earthing rails	Protective earth busbar	W x L x H (mm)	Weight (kg)
250606030	AExB 25010						64 x 58 x 34	0,2
250610030	AExB 25015		10 06 11 07 0				64 x 98 x 34	0,2
250615030	AExB 25020		10 06 10 02 0				64 x 150 x 34	0,4
250808060	AExB 25025	10 01 10 01 0	10 06 10 03 0				80 x 75 x 57	0,3
250813060	AExB 25030	10 01 10 03 0	10 06 10 04 0				80 x 125 x 57	0,4
250818060	AExB 25035	10 01 10 05 0	10 06 10 05 0				80 x 175 x 57	0,6
250825050	AExB 25040		10 06 10 06 0				80 x 250 x 52	0,7
251010080	AExB 25045	10 01 10 24 0	10 06 10 07 0				100 x 100 x 81	0,6
251016080	AExB 25050	10 01 10 25 0	10 06 10 08 0				100 x 160 x 81	0,8
251020080	AExB 25055	10 01 10 26 0	10 06 10 09 0				100 x 200 x 81	1,0
251212080	AExB 25060	10 01 10 07 0		10 06 14 21 0	10 06 20 01 0	10 06 80 01 0	120 x 122 x 81	0,9
251212090	AExB 25065	10 01 10 07 0		10 06 14 21 0	10 06 20 01 0	10 06 80 01 0	120 x 122 x 91	1,0
251222080	AExB 25070	10 01 10 08 0		10 06 14 22 0	10 06 20 02 0	10 06 80 02 0	120 x 220 x 81	1,4
251222090	AExB 25075	10 01 10 08 0		10 06 14 22 0	10 06 20 02 0	10 06 80 02 0	120 x 220 x 91	1,4
251236080	AExB 25080	10 01 10 09 0		10 06 14 25 0	10 06 20 03 0	10 09 10 58 0	120 x 360 x 81	2,0
251414090	AExB 25085	10 01 10 27 0		10 06 14 54 0	10 06 20 14 0	10 09 10 15 0	140 x 140 x 91	1,5
251420090	AExB 25090	10 01 10 28 0		10 06 14 55 0	10 06 20 08 0	10 09 10 60 0	140 x 200 x 91	2,3
251616090	AExB 25095	10 01 10 10 0		10 06 14 23 0	10 06 20 04 0	10 09 10 56 0	160 x 160 x 91	1,5
251626090	AExB 25100	10 01 10 11 0		10 06 14 24 0	10 06 20 05 0	10 09 10 57 0	160 x 260 x 91	2,0
251636090	AExB 25105	10 01 10 12 0		10 06 14 25 0	10 06 20 03 0	10 09 10 58 0	160 x 360 x 91	2,5
251656090	AExB 25110	10 01 10 13 0		10 06 14 26 0	10 06 20 06 0	10 09 10 59 0	160 x 560 x 91	3,8
251818100	AExB 25115	10 01 10 29 0		10 06 14 56 0	10 06 20 16 0	10 09 10 17 0	180 x 180 x 101	2,3
251828100	AExB 25120	10 01 10 30 0		10 06 14 57 0	10 06 20 09 0	10 09 10 18 0	180 x 280 x 101	2,9
252310110	AExB 25125	10 01 10 14 0		10 06 14 29 0	10 06 20 02 0	10 09 10 66 0	230 x 100 x 111	1,8
252320110	AExB 25130	10 01 10 15 0		10 06 14 30 0	10 06 20 08 0	10 09 10 60 0	232 x 202 x 111	2,4
252320180	AExB 25135	10 01 10 15 0		10 06 14 30 0	10 06 20 08 0	10 09 10 60 0	232 x 202 x 181	4,0
252328110	AExB 25140	10 01 10 16 0		10 06 14 31 0	10 06 20 09 0	10 09 10 18 0	230 x 280 x 111	3,0
252333110	AExB 25145	10 01 10 17 0		10 06 14 32 0	10 06 20 10 0	10 09 10 62 0	230 x 330 x 111	3,4
252333180	AExB 25150	10 01 10 17 0		10 06 14 32 0	10 06 20 10 0	10 09 10 62 0	230 x 330 x 181	5,3
252340110	AExB 25155	10 01 10 18 0		10 06 14 27 0	10 06 20 11 0	10 09 10 63 0	230 x 400 x 111	3,8
252340230	AExB 25160	10 01 10 18 0		10 06 14 27 0	10 06 20 11 0	10 09 10 63 0	230 x 400 x 225	6,8
252360110	AExB 25165	10 01 10 19 0		10 06 14 28 0	10 06 20 12 0	10 09 10 65 0	230 x 600 x 111	7,0
253140110	AExB 25170	10 01 10 20 0		10 06 14 27 0	10 06 20 11 0	10 09 10 63 0	313 x 404 x 111	5,3
253140140	AExB 25175	10 01 10 20 0		10 06 14 27 0	10 06 20 11 0	10 09 10 63 0	312 x 403 x 141	6,7
253140180	AExB 25180	10 01 10 20 0		10 06 14 27 0	10 06 20 11 0	10 09 10 63 0	313 x 404 x 181	8,5
253140230	AExB 25185	10 01 10 20 0		10 06 14 27 0	10 06 20 11 0	10 09 10 63 0	313 x 404 x 227	8,7
253160110	AExB 25190	10 01 10 21 0		10 06 14 28 0	10 06 20 12 0	10 09 10 65 0	310 x 600 x 111	8,7
253160180	AExB 25195	10 01 10 21 0		10 06 14 28 0	10 06 20 12 0	10 09 10 65 0	310 x 600 x 181	11,1
256060200	AExB 25200	10 01 10 22 0		10 06 14 33 0		10 09 10 19 0	600 x 600 x 202	26,0

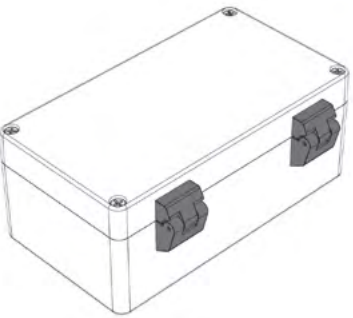
New Approvals					
Ex Terminal box Order no.	Type	Ex Control Station Order no.	Type	Ex empty Order no.	Type
050606030	ExAJ 25010	150606030	ExAC 25010	250606030	ExAE 25010
050610030	ExAJ 25015	150610030	ExAC 25015	250610030	ExAE 25015
050615030	ExAJ 25020	150615030	ExAC 25020	250615030	ExAE 25020
050808060	ExAJ 25025	150808060	ExAC 25025	250808060	ExAE 25025
050813060	ExAJ 25030	150813060	ExAC 25030	250813060	ExAE 25030
050818060	ExAJ 25035	150818060	ExAC 25035	250818060	ExAE 25035
050825050	ExAJ 25040	150825050	ExAC 25040	250825050	ExAE 25040
051010080	ExAJ 25045	151010080	ExAC 25045	251010080	ExAE 25045
051016080	ExAJ 25050	151016080	ExAC 25050	251016080	ExAE 25050
051020080	ExAJ 25055	151020080	ExAC 25055	251020080	ExAE 25055
051212080	ExAJ 25060	151212080	ExAC 25060	251212080	ExAE 25060
051212090	ExAJ 25065	151212090	ExAC 25065	251212090	ExAE 25065
051222080	ExAJ 25070	151222080	ExAC 25070	251222080	ExAE 25070
051222090	ExAJ 25075	151222090	ExAC 25075	251222090	ExAE 25075
051236080	ExAJ 25080	151236080	ExAC 25080	251236080	ExAE 25080
051414090	ExAJ 25085	151414090	ExAC 25085	251414090	ExAE 25085
051420090	ExAJ 25090	151420090	ExAC 25090	251420090	ExAE 25090
051616090	ExAJ 25095	151616090	ExAC 25095	251616090	ExAE 25095
051626090	ExAJ 25100	151626090	ExAC 25100	251626090	ExAE 25100
051636090	ExAJ 25105	151636090	ExAC 25105	251636090	ExAE 25105
051656090	ExAJ 25110	151656090	ExAC 25110	251656090	ExAE 25110
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051828100	ExAJ 25120	151828100	ExAC 25120	251828100	ExAE 25120
052310110	ExAJ 25125	152310110	ExAC 25125	252310110	ExAE 25125
052320110	ExAJ 25130	152320110	ExAC 25130	252320110	ExAE 25130
052320180	ExAJ 25135	152320180	ExAC 25135	252320180	ExAE 25135
052328110	ExAJ 25140	152328110	ExAC 25140	252328110	ExAE 25140
052333110	ExAJ 25145	152333110	ExAC 25145	252333110	ExAE 25145
052333180	ExAJ 25150	152333180	ExAC 25150	252333180	ExAE 25150
052340110	ExAJ 25155	152340110	ExAC 25155	252340110	ExAE 25155
052340230	ExAJ 25160	152340230	ExAC 25160	252340230	ExAE 25160
052360110	ExAJ 25165	152360110	ExAC 25165	252360110	ExAE 25165
053140110	ExAJ 25170	153140110	ExAC 25170	253140110	ExAE 25170
053140140	ExAJ 25175	153140140	ExAC 25175	253140140	ExAE 25175
053140180	ExAJ 25180	153140180	ExAC 25180	253140180	ExAE 25180
053140230	ExAJ 25185	153140230	ExAC 25185	253140230	ExAE 25185
053160110	ExAJ 25190	153160110	ExAC 25190	253160110	ExAE 25190
053160180	ExAJ 25195	153160180	ExAC 25195	253160180	ExAE 25195
056060200	ExAJ 25200	156060200	ExAC 25200	256060200	ExAE 25200

Accessories



External mounting brackets
(Set = 4 pieces)

Order no.	for enclosures
10 03 11 01 0	for XX 08 08 06 0 - XX 10 20 08 0
10 03 11 02 0	for XX 12 12 08 0 - XX 31 60 18 0, XX 14 01 00 0 - XX 14 03 00 0



External hinges
Swivel range 150°
(Set = 2 pieces)
Order no. 10 02 70 01 0



Internal hinges
Swivel range 150°
(Set = 2 pieces)
Order no. 10 02 20 01 0

> Areas of usage

Hydrogen Applications / Ex Enclosures

EX EQUIPMENT

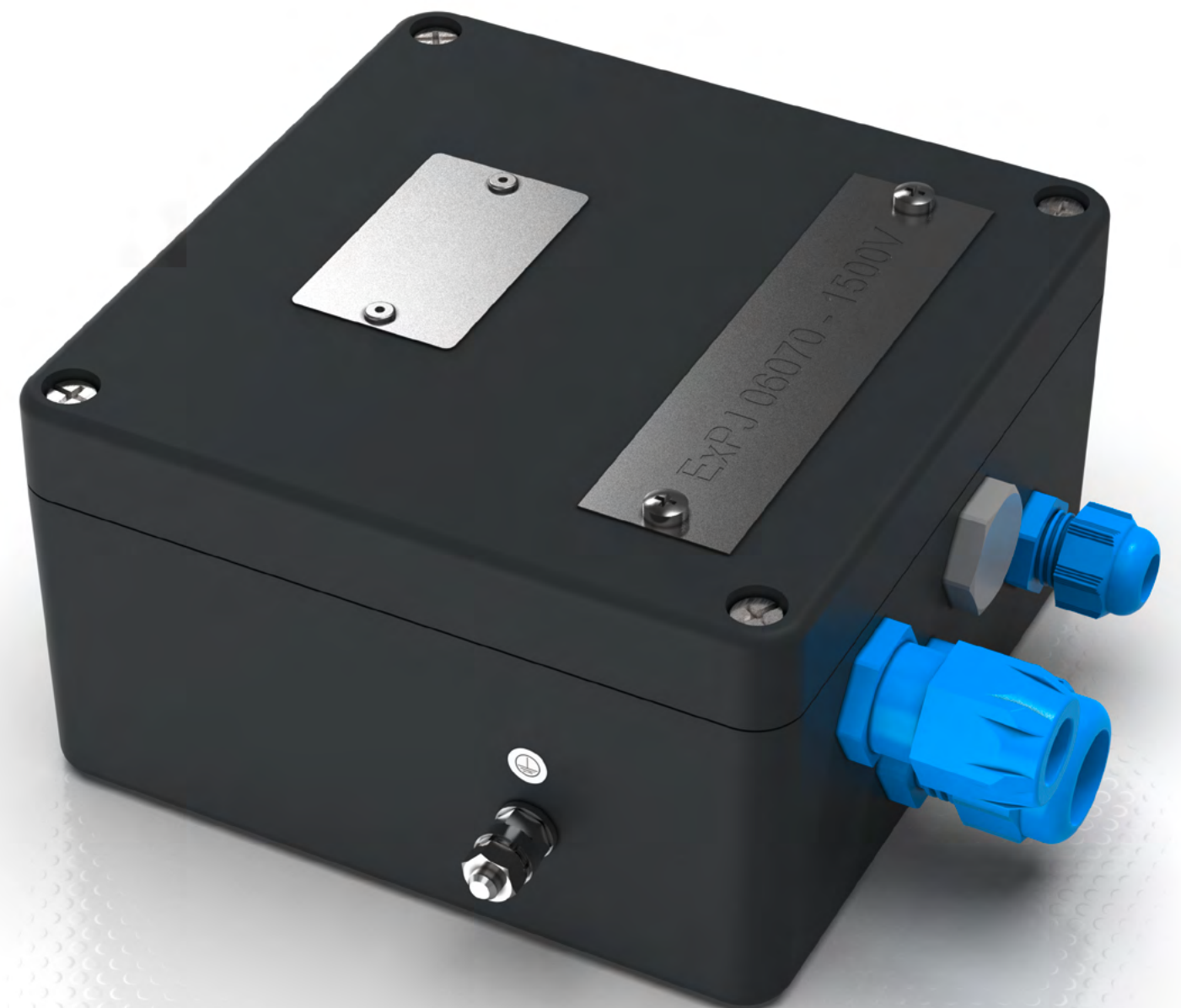


> Ex Polyester

Polyester enclosures / Ex Enclosures

EX EQUIPMENT

Applications



> Ex Polyester

Polyester enclosures/ Ex Enclosures

EX EQUIPMENT



> Approvals

- + Glass fibre reinforced enclosure system made of polyester resin for use in Ex areas Zone 1 / Zone 2 / Zone 21 / Zone 22
- + Available as a component (U approval) or as a fully certified device, including the installation of terminals or electronic equipment
- + Optional version with viewing window

Technical data

Material:	glass fibre reinforced, thermosetting polyester with graphite additive
Colour:	RAL 9011, graphite black
Ingress protection:	IP66 according to EN 60529
Impact resistance:	7 Joule according to EN 60079-0
Flammability:	self-extinguishing, UL 94 V-0
Surface resistance:	<109 Ohm according to IEC 60093
Toxicity:	halogen-free
Temperature resistance:	-55 °C up to +127 °C
Further versions available upon request:	EMC

Included in delivery

Empty enclosure: Enclosure with silicone gasket.
Terminal enclosure: Enclosure system - depending on the version, with silicone gasket, mounting rail, internal earth connection, terminals, offshore plate, machining, cable glands



3-D data and drawings

> Ex Polyester

Polyester enclosures / Ex Enclosures

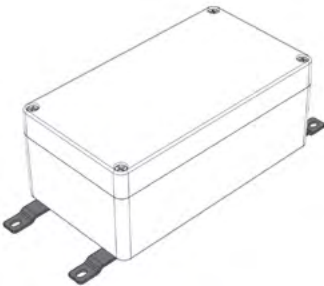
EX EQUIPMENT

Product overview

Ex empty Order no.	Type	W x L x H (mm)	Weight (kg)	Mounting plates	Earthing rails	Protective earth busbar	Mounting rails TS15	Mounting rails TS35	Earth plate Side A/B	Earth plate Side C/D
26 08 08 06 0	PExB 26010	75 x 80 x 56	0,2	10 01 11 01 0			10 06 10 03 0		10 09 53 31 0	10 09 53 31 0
26 08 08 08 0	PExB 26015	75 x 80 x 75	0,3	10 01 11 01 0			10 06 10 03 0		10 09 53 67 0	10 09 53 67 0
26 08 11 06 0	PExB 26020	75 x 110 x 56	0,3	10 01 11 03 0			10 06 11 02 0		10 09 53 32 0	10 09 53 31 0
26 08 11 08 0	PExB 26025	75 x 110 x 75	0,4	10 01 11 03 0			10 06 11 02 0		10 09 53 68 0	10 09 53 67 0
26 08 16 06 0	PExB 26030	75 x 160 x 56	0,4	10 01 11 05 0			10 06 10 08 0		10 09 53 33 0	10 09 53 31 0
26 08 16 08 0	PExB 26035	75 x 160 x 75	0,5	10 01 11 05 0			10 06 10 08 0		10 09 53 69 0	10 09 53 67 0
26 08 19 06 0	PExB 26040	75 x 190 x 56	0,5	10 01 11 07 0			10 06 10 10 0		10 09 53 34 0	10 09 53 31 0
26 08 19 08 0	PExB 26045	75 x 190 x 75	0,5	10 01 11 07 0			10 06 10 10 0		10 09 53 70 0	10 09 53 67 0
26 08 23 06 0	PExB 26050	75 x 230 x 56	0,6				10 06 11 05 0		10 09 53 36 0	10 09 53 31 0
26 08 23 08 0	PExB 26055	75 x 230 x 75	0,7				10 06 11 05 0		10 09 53 71 0	10 09 53 67 0
26 12 12 09 0	PExB 26060	120 x 122 x 91	0,8	10 01 10 07 0	10 06 20 01 0	10 06 80 01 0		10 06 14 21 0	10 09 53 35 0	10 09 53 35 0
26 12 22 09 0	PExB 26065	120 x 220 x 91	1,1	10 01 10 08 0	10 06 20 01 0	10 06 80 02 0		10 06 14 22 0	10 09 53 36 0	10 09 53 36 0
26 16 16 09 0	PExB 26070	160 x 160 x 91	1,3	10 01 10 10 0	10 06 20 04 0	10 09 10 56 0		10 06 14 23 0	10 09 53 37 0	10 09 53 37 0
26 16 26 09 0	PExB 26075	160 x 260 x 91	1,7	10 01 10 11 0	10 06 20 05 0	10 09 10 57 0		10 06 14 24 0	10 09 53 38 0	10 09 53 37 0
26 16 36 09 0	PExB 26080	160 x 360 x 91	2,2	10 01 10 12 0	10 06 20 03 0	10 09 10 58 0		10 06 14 25 0	10 09 53 39 0	10 09 53 37 0
26 16 56 09 0	PExB 26085	160 x 560 x 91	3,2	10 01 10 13 0	10 06 20 06 0	10 09 10 59 0		10 06 14 26 0	10 09 53 40 0	10 09 53 37 0
26 25 26 12 0	PExB 26090	250 x 255 x 121	2,7	10 01 11 15 0	10 06 20 05 0	10 09 11 41 0		10 06 14 34 0	10 09 53 41 0	10 09 53 41 0
26 25 26 16 0	PExB 26095	250 x 255 x 161	3,3	10 01 11 15 0	10 06 20 05 0	10 09 11 41 0		10 06 14 34 0	10 09 53 41 0	10 09 53 41 0
26 25 40 12 0	PExB 26100	250 x 400 x 121	3,7	10 01 11 16 0	10 06 20 11 0	10 09 10 63 0		10 06 14 27 0	10 09 53 42 0	10 09 53 41 0
26 25 40 16 0	PExB 26105	250 x 400 x 161	4,8	10 01 11 16 0	10 06 20 11 0	10 09 10 63 0		10 06 14 27 0	10 09 53 42 0	10 09 53 41 0
26 25 60 12 0	PExB 26110	250 x 600 x 121	5,2	10 01 11 17 0	10 06 20 12 0	10 09 10 64 0		10 06 14 28 0	10 09 53 43 0	10 09 53 41 0
26 36 36 09 0	PExB 26115	360 x 360 x 91	4,2	10 01 11 18 0	10 06 20 03 0	10 09 10 58 0		10 06 14 25 0	10 09 53 39 0	10 09 53 37 0
26 41 40 12 0	PExB 26120	405 x 400 x 121	5,6	10 01 11 19 0	10 06 20 11 0	10 09 10 63 0		10 06 14 27 0	10 09 53 42 0	10 09 53 41 0
26 41 40 20 0	PExB 26125	405 x 400 x 201	6,7	10 01 11 19 0	10 06 20 11 0	10 09 10 63 0		10 06 14 27 0	10 09 57 50 0	10 09 57 50 0

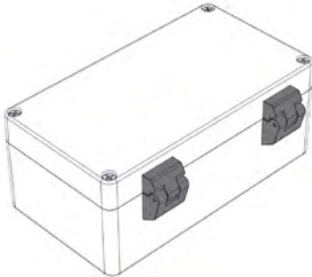
New Approvals					
Ex Terminal box Order no.	Type	Ex Control Station Order no.	Type	Ex empty Order no.	Type
06 08 08 06 0	ExPJ 26010	16 08 08 06 0	ExPC 26010	26 08 08 06 0	ExPE 26010
06 08 08 08 0	ExPJ 26015	16 08 08 08 0	ExPC 26015	26 08 08 08 0	ExPE 26015
06 08 11 06 0	ExPJ 26020	16 08 11 06 0	ExPC 26020	26 08 11 06 0	ExPE 26020
06 08 11 08 0	ExPJ 26025	16 08 11 08 0	ExPC 26025	26 08 11 08 0	ExPE 26025
06 08 16 06 0	ExPJ 26030	16 08 16 06 0	ExPC 26030	26 08 16 06 0	ExPE 26030
06 08 16 08 0	ExPJ 26035	16 08 16 08 0	ExPC 26035	26 08 16 08 0	ExPE 26035
06 08 19 06 0	ExPJ 26040	16 08 19 06 0	ExPC 26040	26 08 19 06 0	ExPE 26040
06 08 19 08 0	ExPJ 26045	16 08 19 08 0	ExPC 26045	26 08 19 08 0	ExPE 26045
06 08 23 06 0	ExPJ 26050	16 08 23 06 0	ExPC 26050	26 08 23 06 0	ExPE 26050
06 08 23 08 0	ExPJ 26055	16 08 23 08 0	ExPC 26055	26 08 23 08 0	ExPE 26055
06 12 12 09 0	ExPJ 26060	16 12 12 09 0	ExPC 26060	26 12 12 09 0	ExPE 26060
06 12 22 09 0	ExPJ 26065	16 12 22 09 0	ExPC 26065	26 12 22 09 0	ExPE 26065
06 16 16 09 0	ExPJ 26070	16 16 16 09 0	ExPC 26070	26 16 16 09 0	ExPE 26070
06 16 26 09 0	ExPJ 26075	16 16 26 09 0	ExPC 26075	26 16 26 09 0	ExPE 26075
06 16 36 09 0	ExPJ 26080	16 16 36 09 0	ExPC 26080	26 16 36 09 0	ExPE 26080
06 16 56 09 0	ExPJ 26085	16 16 56 09 0	ExPC 26085	26 16 56 09 0	ExPE 26085
06 25 26 12 0	ExPJ 26090	16 25 26 12 0	ExPC 26090	26 25 26 12 0	ExPE 26090
06 25 26 16 0	ExPJ 26095	16 25 26 16 0	ExPC 26095	26 25 26 16 0	ExPE 26095
06 25 40 12 0	ExPJ 26100	16 25 40 12 0	ExPC 26100	26 25 40 12 0	ExPE 26100
06 25 40 16 0	ExPJ 26105	16 25 40 16 0	ExPC 26105	26 25 40 16 0	ExPE 26105
06 25 60 12 0	ExPJ 26110	16 25 60 12 0	ExPC 26110	26 25 60 12 0	ExPE 26110
06 36 36 09 0	ExPJ 26115	16 36 36 09 0	ExPC 26115	26 36 36 09 0	ExPE 26115
06 41 40 12 0	ExPJ 26120	16 41 40 12 0	ExPC 26120	26 41 40 12 0	ExPE 26120
06 41 40 20 0	ExPJ 26125	16 41 40 20 0	ExPC 26125	26 41 40 20 0	ExPE 26125

Accessories



External mounting brackets
(Set = 4 pieces)

Order no.	for enclosures
10 03 11 01 0	for XX 08 08 06 0 - XX 10 20 08 0
10 03 11 02 0	for XX 12 12 08 0 - XX 31 60 18 0, XX 14 01 00 0 - XX 14 03 00 0



External hinges
Material aluminium
Swivel range 150°
(Set = 2 pieces)
Order no. 10 02 70 01 0

> Areas of usage

LNG Applications / Ex Enclosures

EX EQUIPMENT

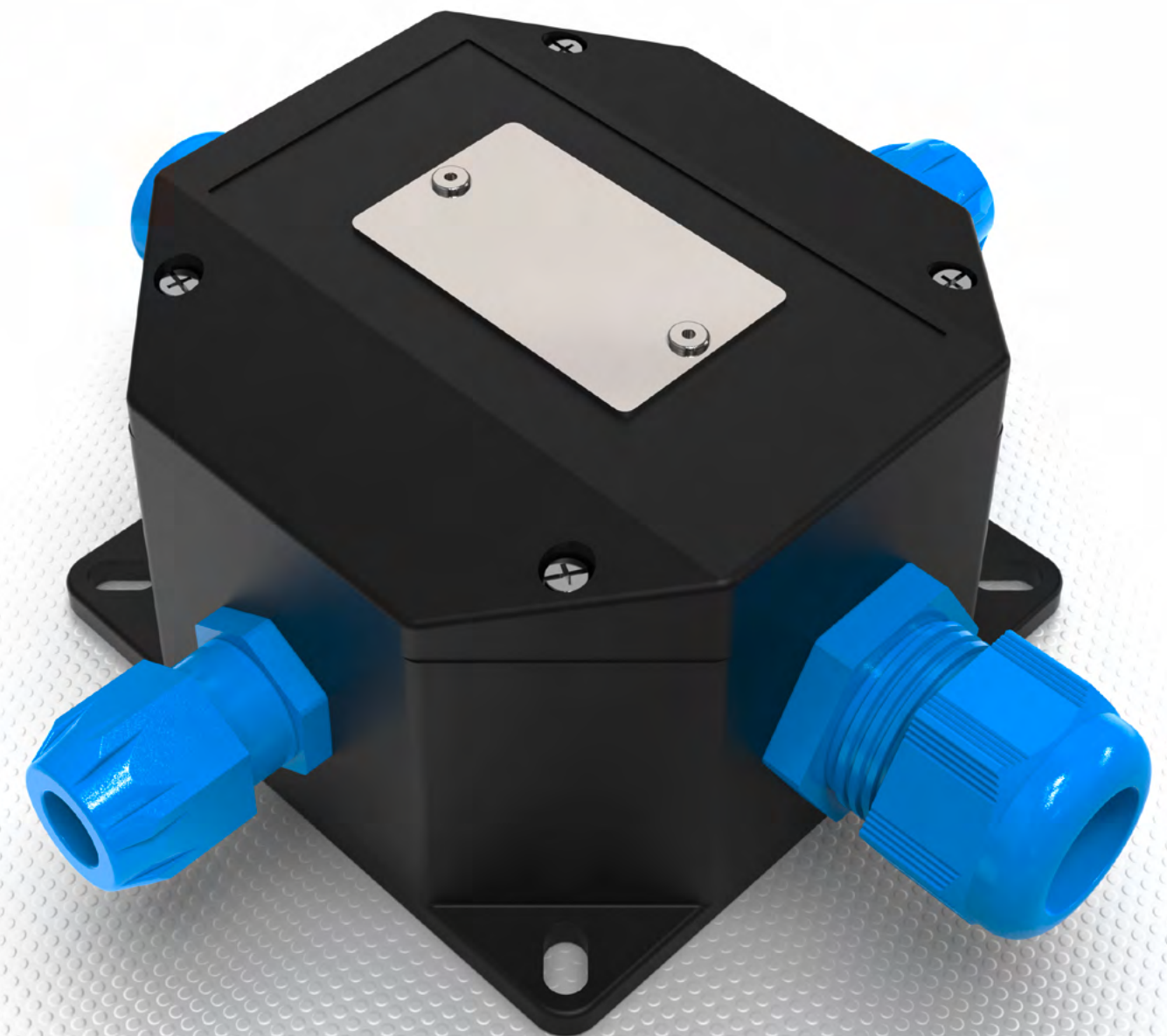


> Ex Polyester Okta-Box

Polyester enclosures / Ex Enclosures

EX EQUIPMENT

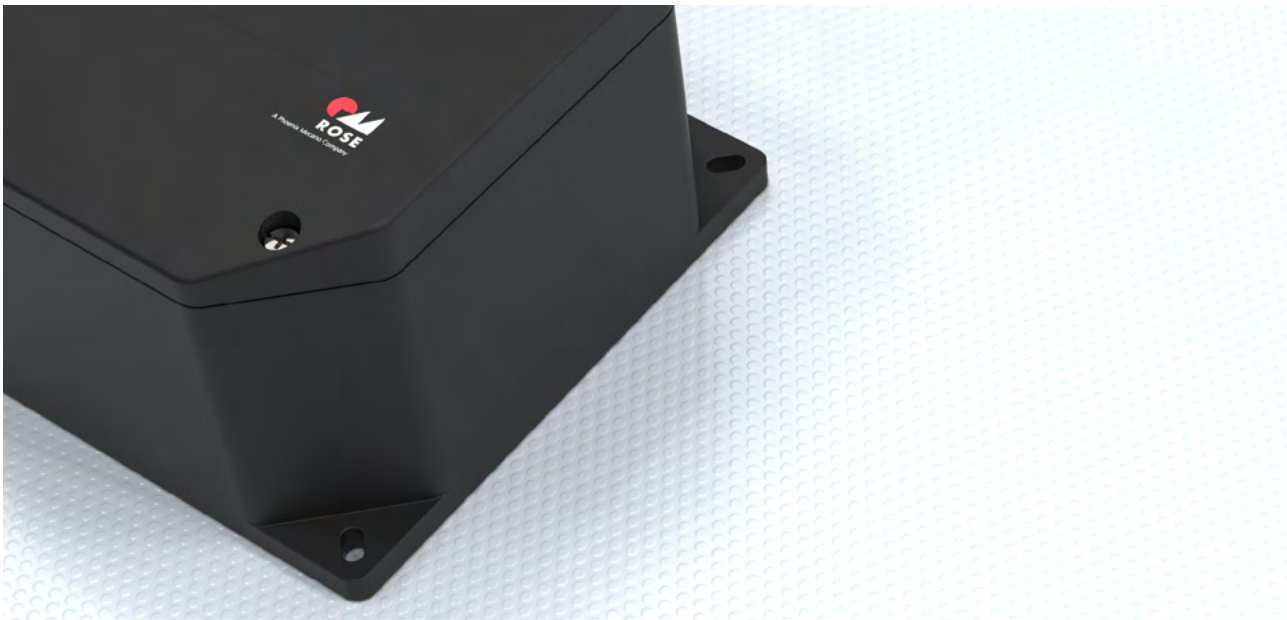
Applications



> Ex Polyester Okta-Box

Polyester enclosures / Ex Enclosures

EX EQUIPMENT



> Approvals

- + Glass fibre reinforced enclosure systems made of polyester resin for use in Ex areas Zone 1 / Zone 2 / Zone 21 / Zone 22
- + Available as a component (U approval) or as a fully certified device, including the installation of terminals or electronic equipment
- + Enclosures with external brackets

Technical data

Material:	glass fibre reinforced, thermosetting polyester with graphite additive
Colour:	RAL 9011, graphite black
Protection class:	IP 66 according to EN 60529
Impact resistance:	7 Joule according to EN 60079-0
Flammability:	self-extinguishing, UL 94 V-0
Surface resistant:	<109 Ohm according to IEC 60093
Toxicity:	halogen-free
Temperature resistance:	-55°C up to +127 °C
Further versions available upon request:	EMC

Included in delivery

Empty enclosure: Enclosure with silicone gasket.
Terminal enclosure: Enclosure system - depending on the version, with silicone gasket, offshore plate, mounting rail, internal earth connection, terminals, machining, cable glands.



3-D data
and drawings

> Ex Polyester Okta-Box

Polyester enclosures / Ex Enclosures

EX EQUIPMENT

Product overview

Order no.	Type	Mounting rails TS15 horizontal	Mounting rails TS35 horizontal	Mounting rails TS15 diagonal	Mounting rails TS35 diagonal	W x L x H (mm)	Weight (kg)
26 88 01 00 0	Okta ExB 2601	10 06 12 01 0		10 06 12 07 0		81 x 81 x 75	0,320
26 88 02 00 0	Okta ExB 2602	10 06 10 50 0	10 06 14 83 0	10 06 11 02 0	10 06 13 33 0	121 x 121 x 75	0,500
26 88 03 00 0	Okta ExB 2603	10 06 10 08 0	10 06 14 72 0	10 06 10 04 0	10 06 14 86 0	161 x 161 x 93	0,320
26 88 04 00 0	Okta ExB 2604		10 06 13 35 0	10 06 10 05 0	10 06 14 75 0	200 x 200 x 125	2,1

New Approvals

Ex Terminal box Order no.	Type	Ex Control Station Order no.	Type	Ex empty Order no.	Type
06 88 01 00 0	Ex0J 2601	16 88 01 00 0	Ex0C 2601	26 88 01 00 0	Ex0E 2601
06 88 02 00 0	Ex0J 2602	16 88 02 00 0	Ex0C 2602	26 88 02 00 0	Ex0E 2602
06 88 03 00 0	Ex0J 2603	16 88 03 00 0	Ex0C 2603	26 88 03 00 0	Ex0E 2603
06 88 04 00 0	Ex0J 2604	16 88 04 00 0	Ex0C 2604	26 88 04 00 0	Ex0E 2604

> Ex Polyester Okta-Box

Polyester enclosures / Ex Enclosures

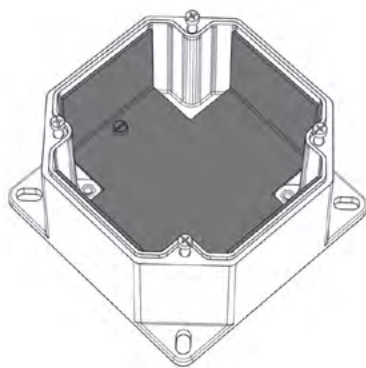
EX EQUIPMENT

> Ex Stainless Steel

Stainless Steel enclosures / Ex Enclosures

EX EQUIPMENT

Accessories



Offshore plates
for the mounting of electromechnical components

Order no.	for enclosures
10 01 60 15 0	for XX 88 01 00 0
10 01 60 16 0	for XX 88 02 00 0
10 01 60 17 0	for XX 88 03 00 0
10 01 60 18 0	for XX 88 04 00 0

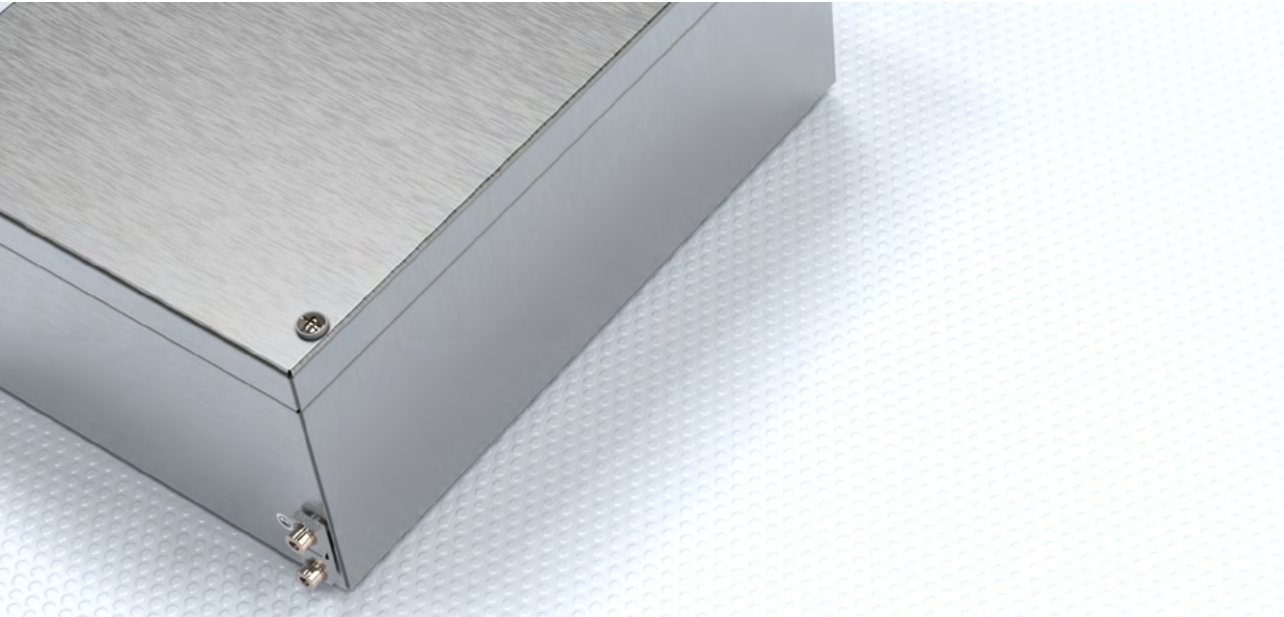
Applications



> Ex Stainless Steel

Stainless Steel enclosures / Ex Enclosures

EX EQUIPMENT



> Approvals

- + Enclosure system made of stainless steel for use in Ex areas
Zone 1 / Zone 2 / Zone 21 / Zone 22
- + Available as a component (U approval) or as a fully certified device,
including the installation of terminals or electronic equipment
- + Optional version with viewing window

Technical data

Material:	Stainless steel 1,25 mm resp. 1,5 mm; 1.4404 / 316L
Protection class:	IP66 according to EN 60529
Surface:	ground, grain 240
Impact resistance:	7 Joule according to EN 60079-0
Temperature resistance:	-60 °C up to +135 °C
Further versions available upon request:	EMC

Included in delivery

Empty enclosure: Enclosure with silicone gasket and external earth connection.
Terminal enclosure: Enclosure system - depending on the version, with silicone gasket, mounting rail, internal earth connection, terminals, machining, cable glands. Mounting kit to be ordered separately.



3-D data
and drawings

> Ex Stainless Steel

Stainless Steel enclosures / Ex Enclosures

EX EQUIPMENT

Product overview

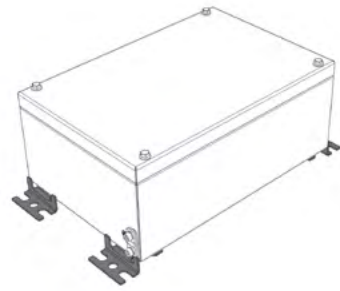
Ex empty Order no.	Type	Dimensions L x W x H (mm)	Weight (kg)	Mounting plates	Earthing rails	Protective earth busbar	Mounting rails TS35
34 10 10 06 0	IGExB 34010	100 x 100 x 61	0,6	10 01 10 53 0	10 06 20 26 0	10 06 81 27 0	10 06 14 41 0
34 15 10 06 0	IGExB 34015	100 x 150 x 61	0,7	10 01 10 54 0	10 06 20 04 0	10 09 10 56 0	10 06 14 35 0
34 15 15 08 0	IGExB 34020	150 x 150 x 81	1,2	10 01 10 38 0	10 06 20 04 0	10 09 10 56 0	10 06 14 35 0
34 20 10 06 0	IGExB 34025	100 x 200 x 61	0,9	10 01 10 55 0	10 06 20 22 0	10 06 81 22 0	10 06 14 37 0
34 20 20 08 0	IGExB 34030	200 x 200 x 81	1,8	10 01 10 40 0	10 01 10 40 0	10 06 81 22 0	10 06 14 37 0
34 20 20 12 0	IGExB 34035	200 x 200 x 121	2,1	10 01 10 40 0	10 01 10 40 0	10 06 81 22 0	10 06 14 37 0
34 30 15 08 0	IGExB 34040	150 x 300 x 81	1,9	10 01 10 39 0	10 01 10 39 0	10 06 81 21 0	10 06 14 36 0
34 30 20 08 0	IGExB 34045	200 x 300 x 81	2,4	10 01 10 41 0	10 01 10 41 0	10 06 81 21 0	10 06 14 36 0
34 30 20 12 0	IGExB 34050	200 x 300 x 121	2,8	10 01 10 41 0	10 01 10 41 0	10 06 81 21 0	10 06 14 36 0
34 30 30 12 0	IGExB 34055	300 x 300 x 121	3,8	10 01 10 44 0	10 01 10 44 0	10 06 81 21 0	10 06 14 36 0
34 30 30 16 0	IGExB 34060	300 x 300 x 161	4,1	10 01 10 44 0	10 01 10 44 0	10 06 81 21 0	10 06 14 36 0
34 38 38 16 0	IGExB 34065	380 x 380 x 161	5,9	10 01 10 45 0	10 01 10 45 0	10 06 81 24 0	10 06 14 39 0
34 40 15 08 0	IGExB 34070	150 x 400 x 81	2,4	10 01 10 56 0	10 01 10 56 0	10 06 81 23 0	10 06 14 38 0
34 40 20 12 0	IGExB 34075	200 x 400 x 121	3,4	10 01 10 43 0	10 01 10 43 0	10 06 81 23 0	10 06 14 38 0
34 40 30 16 0	IGExB 34080	300 x 400 x 161	5,3	10 01 10 48 0	10 01 10 48 0	10 06 81 23 0	10 06 14 38 0
34 50 30 16 0	IGExB 34085	300 x 500 x 161	6,3	10 01 10 57 0	10 01 10 57 0	10 06 81 25 0	10 06 14 40 0
34 50 40 16 0	IGExB 34090	400 x 500 x 161	7,4	10 01 10 49 0	10 01 10 49 0	10 06 81 25 0	10 06 14 40 0
34 60 20 12 0	IGExB 34095	200 x 600 x 121	5,8	10 01 10 58 0	10 01 10 58 0	10 06 81 28 0	10 06 14 42 0

> Ex Stainless Steel

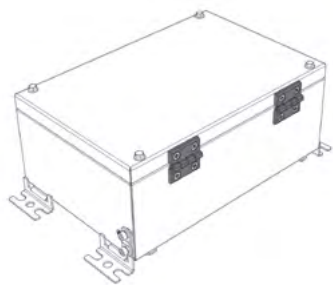
Stainless Steel enclosures / Ex Enclosures

EX EQUIPMENT

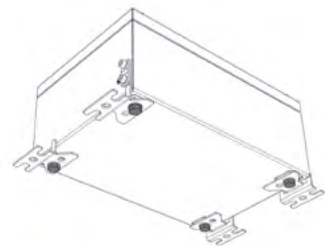
Accessories



External mounting brackets
(Set = 4 pieces)
Order no. 37 10 50 00



External hinge set
Swivel range 150°
(Set = 2 pieces)
Order no. 37 00 00 02



Mounting set
Sealing discs, nuts and screws
(Set = 4 pieces)
Order no. 37 99 00 01 0

> Ex Stainless Steel hinged

Stainless Steel enclosures / Ex enclosures

EX EQUIPMENT

Applications



> Ex Stainless Steel hinged

Stainless Steel enclosures / Ex enclosures

EX EQUIPMENT



> Approvals

- + Enclosure system made of stainless steel for use in Ex areas
Zone 1 / Zone 2 / Zone 21 / Zone 22
- + Available as a component (U approval) or as a fully certified device,
including the installation of terminals or electronic equipment
- + Optional version with viewing window
- + With concealed hinges and double-bitted lock

Technical data

Material:	Stainless steel 1,25 mm resp. 1,5 mm; 1.4404 / 316L
Protection class:	IP66 according to EN 60529
Surface:	ground, grain 240
Impact resistance:	7 Joule according to EN 60079-0
Temperature resistance:	-60 °C up to +135 °C
Further versions available upon request:	EMC

Included in delivery

Empty enclosure: Enclosure with silicone gasket and external earth connection.
Terminal enclosure: Enclosure system - depending on the version, with silicone gasket, mounting rail, internal earth connection, terminals, machining, cable glands. Mounting kit to be ordered separately.



3-D data
and drawings

> Ex Stainless Steel hinged

Stainless Steel enclosures / Ex enclosures

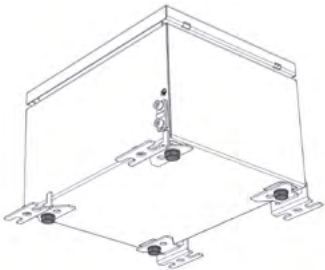
EX EQUIPMENT

Product overview

Ex empty Order no.	Type	Dimensions L x W x H (mm)	Weight (kg)	Mounting plates	Earthing rails	Protective earth busbar	Mounting rails TS35
34 00 22 09 0	IGSExB 34010	250 x 200 x 97	2,4	10 01 10 66 0	10 06 20 22 0	10 06 81 22 0	10 06 14 37 0
34 00 22 15 0	IGSExB 34015	250 x 200 x 157	2,9	10 01 10 66 0	10 06 20 22 0	10 06 81 22 0	10 06 14 37 0
34 00 32 09 0	IGSExB 34020	250 x 350 x 97	3,5	10 01 10 67 0	10 06 20 03 0		10 06 14 25 0
34 00 33 16 0	IGSExB 34025	300 x 300 x 167	4,4	10 01 10 44 0	10 06 20 21 0	10 06 81 21 0	10 06 14 36 0
34 00 44 16 0	IGSExB 34030	380 x 380 x 167	6,1	10 01 10 45 0	10 06 20 24 0	10 06 81 24 0	10 06 14 39 0
34 00 44 21 0	IGSExB 34035	380 x 380 x 217	6,9	10 01 10 45 0	10 06 20 24 0	10 06 81 24 0	10 06 14 39 0
34 00 53 16 0	IGSExB 34040	300 x 500 x 167	6,4	10 01 10 57 0	10 06 20 25 0	10 06 81 25 0	10 06 14 40 0
34 00 63 16 0	IGSExB 34045	300 x 600 x 167	8,8	10 01 10 68 0	10 06 20 27 0	10 06 81 28 0	10 06 14 42 0
34 00 64 21 0	IGSExB 34050	380 x 600 x 217	11,4	10 01 10 69 0	10 06 20 27 0	10 06 81 28 0	10 06 14 42 0



External mounting brackets
(Set = 4 pieces)
Order no. 37 10 50 00



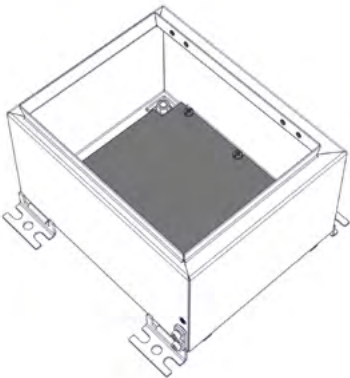
Mounting set
Sealing discs, nuts and screws
(Set = 4 pieces)
Order no. 37 99 00 01 0

> Ex Stainless Steel hinged

Stainless Steel enclosures / Ex enclosures

EX EQUIPMENT

Accessories



Mounting plates
for the mounting of electromechanical components

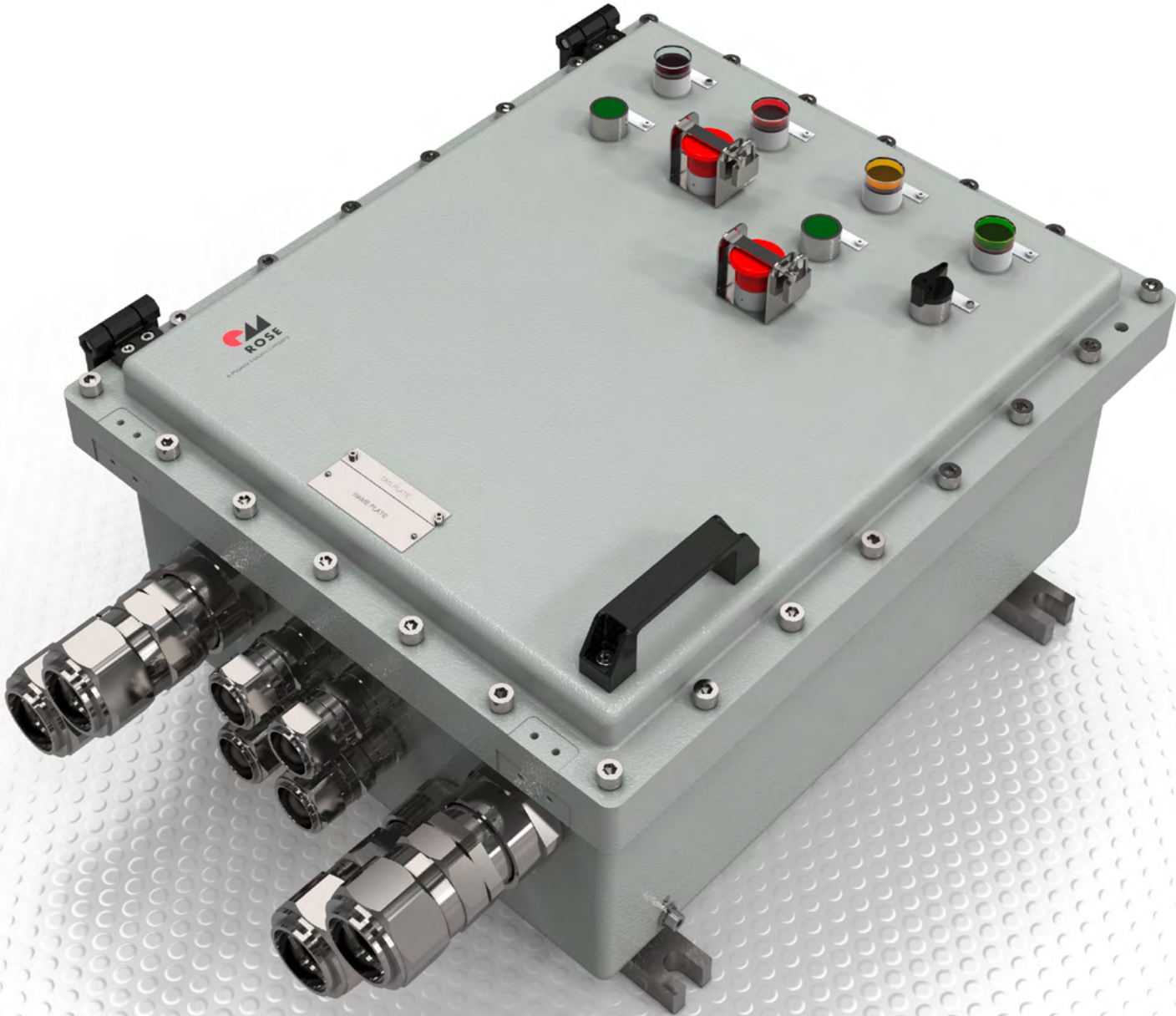
Order no.	for enclosure
10 01 10 66 0	for XX 00 22 09 0, XX 00 22 15 0
10 01 10 67 0	for XX 00 32 09 0
10 01 10 44 0	for XX 30 30 12 0, XX 30 30 16 0, XX 00 33 16 0
10 01 10 45 0	for XX 38 38 16 0, XX 00 44 16 0, XX 00 44 21 0
10 01 10 57 0	for XX 50 30 16 0, XX 00 53 16 0
10 01 10 68 0	for XX 00 63 16 0
10 01 10 69 0	for XX 00 64 21 0

> Ex d IIB+H2 Enclosure series EJB

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

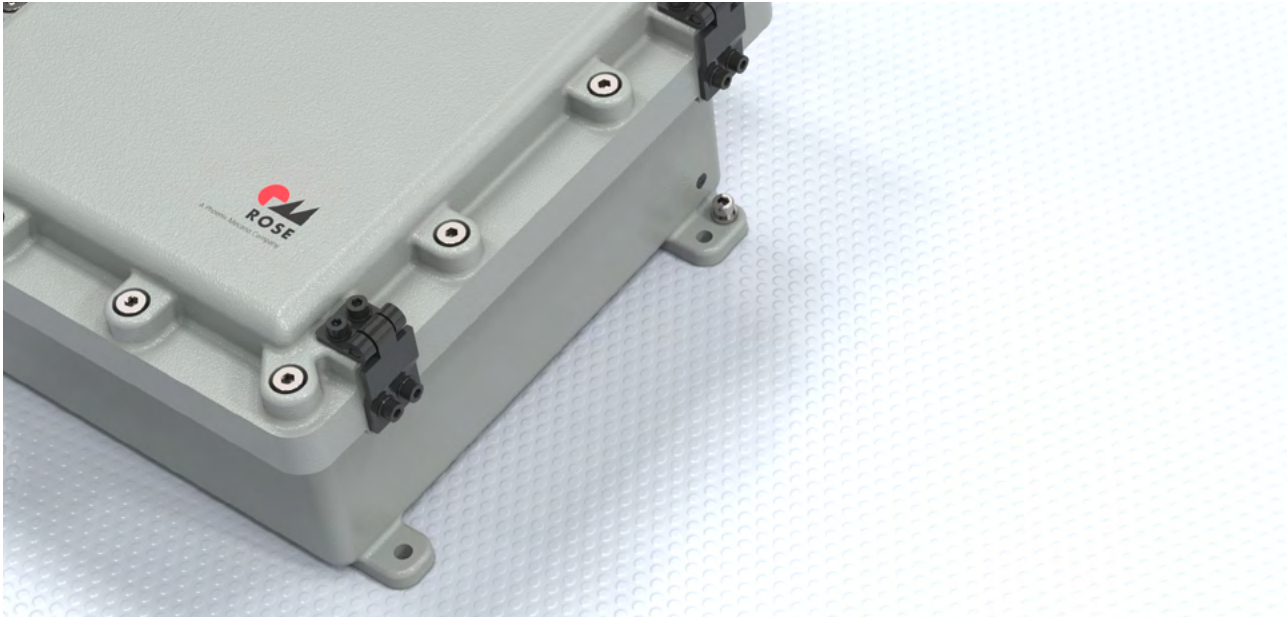
Applications



> Ex d IIB+H2 Enclosure series EJB

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT



> Approvals

- + Pressure-resistant enclosure made of aluminium or stainless steel for the installation of non-Ex certified components and terminals
- + Available as a component (U-approval) or as a fully certified device for the installation of terminals or electronic equipment
- + Optional version with viewing window

Technical data

Material:	Copper-free aluminium Stainless steel 1.4404/316L
Protection class:	IP66 according to EN 60529
Colour:	Aluminium: RAL 7035, light grey Stainless steel: unpainted, painting optional
Impact resistance:	7 Joule according to EN 60079-0
Temperature resistance:	-20 °C up to +75 °C, depending on the enclosure dimensions

Included in delivery

Enclosure system consisting of a base and lid with screws, external earth connection, hinge, and external mounting lugs



3-D data and drawings

> Ex d IIB+H2 Enclosure series EJB

Ex d Enclosures / Ex Enclosures

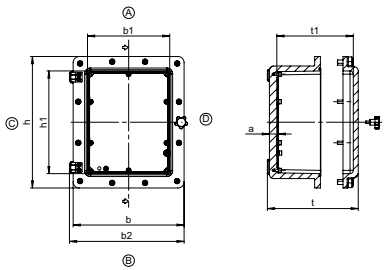
EX EQUIPMENT

Product overview

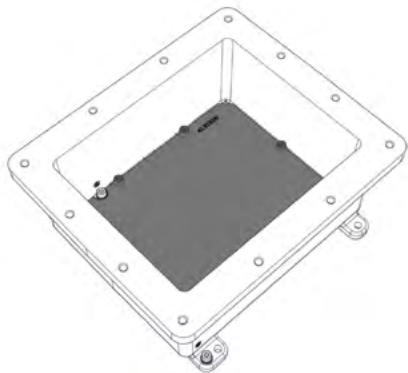
Order no.	Type	External dimensions L x W x H (mm)	Internal dimensions L x W x H (mm)	Weight (kg)
Aluminium				
40 10 30 10 0	EJB 01 AL	220 x 170 x 152	150 x 100 x 119	4,3
40 10 30 20 0	EJB 02 AL	270 x 220 x 158	200 x 150 x 125	6,6
40 10 30 30 0	EJB 03 AL	320 x 270 x 166	250 x 200 x 129	10,1
40 10 30 60 0	EJB 06 AL	490 x 440 x 250	400 x 350 x 195	30,2
40 10 30 90 0	EJB 09 AL	780 x 580 x 440	650 x 450 x 361	115
40 10 31 00 0	EJB 10 AL	980 x 680 x 487	850 x 550 x 387	202
Stainless steel				
40 20 30 10 0	EJB 01 SS	220 x 170 x 152	150 x 100 x 119	12,6
40 20 30 20 0	EJB 02 SS	270 x 220 x 158	200 x 150 x 125	19,6
40 20 30 30 0	EJB 03 SS	320 x 270 x 166	250 x 200 x 129	30,3

Dimensions

Order no.	b	h	t	b1	h1	t1	a	h2
40 10 30 10 0	170	220	152,0	100	150	121	19,5	181
40 10 30 20 0	220	270	158,0	150	200	127	19,5	229
40 10 30 30 0	270	320	161,0	200	250	131	21,5	279
40 10 30 60 0	440	490	250,0	350	400	195	32,5	449
40 10 30 90 0	580	780	440,0	450	650	360	47,5	589
40 10 31 00 0	680	980	487,0	550	850	387	59,5	689
40 20 30 10 0	170	220	152,0	100	150	121	19,5	181
40 20 30 20 0	220	270	158,0	150	200	127	19,5	229
40 20 30 30 0	270	320	161,0	200	250	131	21,5	279



Accessories



Mounting Plates
for mounting electromechanical components

Order no.	Mouting plate	Dimensions L x W x H (mm)
40 10 30 10 0	40 30 30 10 0	142 x 92 x 1,5
40 10 30 20 0	40 30 30 20 0	192 x 142 x 1,5
40 10 30 30 0	40 30 30 30 0	242 x 192 x 1,5
40 10 30 60 0	40 30 30 60 0	375 x 325 x 1,5
40 10 30 90 0	40 30 30 90 0	590 x 390 x 1,5
40 10 31 00 0	40 30 31 00 0	780 x 480 x 1,5
40 20 30 10 0	40 30 30 10 0	142 x 92 x 1,5
40 20 30 20 0	40 30 30 20 0	192 x 142 x 1,5
40 20 30 30 0	40 30 30 30 0	242 x 192 x 1,5

> Ex d IIB+H2 Enclosure series EJB

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

Technical data

Type	Temperature-class	T6					T5					T4									
	max. surface temperature	T80 °C					T95 °C					T130 °C									
	max. ambient temperature	+40 °C	+50°C	+60°C	+40 °C	+50°C	+55°C	+60°C	+65°C	+75°C	+40 °C	+50°C	+60°C	+75°C	+85 °C	+90°C	+95°C	+100°C	+110°C		
EJB 01 AL	max. installation power	60	-	36	-	-	60	-	-	36	-	-	-	-	-	-	-	60	36		
EJB 02 AL		76	-	42	-	-	76	-	-	42	-	-	-	-	-	-	-	76	42		
EJB 03 AL		87	-	60	-	-	87	-	-	60	-	-	-	-	-	-	-	87	60		
EJB 06 AL		209	166	114	338	260	209	206	166	114	584	514	436	338	-	-	-	209	114		
EJB 09 AL		467	319	236	728	555	467	353	319	236	1238	1145	956	728	-	-	-	467	236		
EJB 10 AL		726	568	400	1085	864	726	712	568	400	2038	1709	1454	1085	-	-	-	726	400		
EJB 01 SS		60	-	36	-	-	60	-	-	36	-	-	-	-	-	-	-	60	36		
EJB 02 SS		76	-	42	-	-	76	-	-	42	-	-	-	-	-	-	-	76	42		
EJB 03 SS	87	-	60	-	-	87	-	-	60	-	-	-	-	-	-	-	87	60			

Assembly possibilities

Type	Control equipment	Window (mm)										
		44x44	68x68	92x92	92x140	140x140	140x186	186x186	234x234	280x280	328x376	376x376
EJB 01 AL	4	1										
EJB 02 AL	9	4	1	1								
EJB 03 AL	16	9	4	1	1	1						
EJB 06 AL	49	25	9	4	2	1	1	1	1			
EJB 09 AL	88	56	20	12	6	4	4	2	1	1	1	
EJB 10 AL	140	64	25	16	8	4	4	4	1	1	1	1
EJB 01 SS	4	1										
EJB 02 SS	9	4	1	1								
EJB 03 SS	16	9	4	1	1	1						

Side			Type								
M	NPT		EJB 01 AL	EJB 02 AL	EJB 03 AL	EJB 06 AL	EJB 09 AL	EJB 10 AL	EJB 01 SS	EJB 02 SS	EJB 03 SS
20	1/2"	A/B	4	6	8	21	54	66	4	6	8
20	1/2"	C/D	6	8	10	24	84	108	6	8	10
25	3/4"	A/B	2	4	6	17	33	54	2	4	6
25	3/4"	C/D	4	5	8	20	54	90	4	5	8
32	1"	A/B	1	3	4	11	28	36	1	3	4
32	1"	C/D	2	4	5	12	43	60	2	4	5
40	1 1/4"	A/B		2	3	8	18	28		2	3
40	1 1/4"	C/D		3	3	10	28	44		3	3
50	1 1/2"	A/B			2	4	12	18			2
50	1 1/2"	C/D			3	5	21	28			3
63	2"	A/B				3	11	15			
63	2"	C/D				4	17	24			
75	2 1/2"	A/B				3	6	9			
75	2 1/2"	C/D				3	9	15			
90	3"	A/B					5	7			
90	3"	C/D					8	12			
100	4"	A/B					5	6			
100	4"	C/D					7	10			

Max. options for cable entries

> Ex d IIC Enclosure series GUB

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

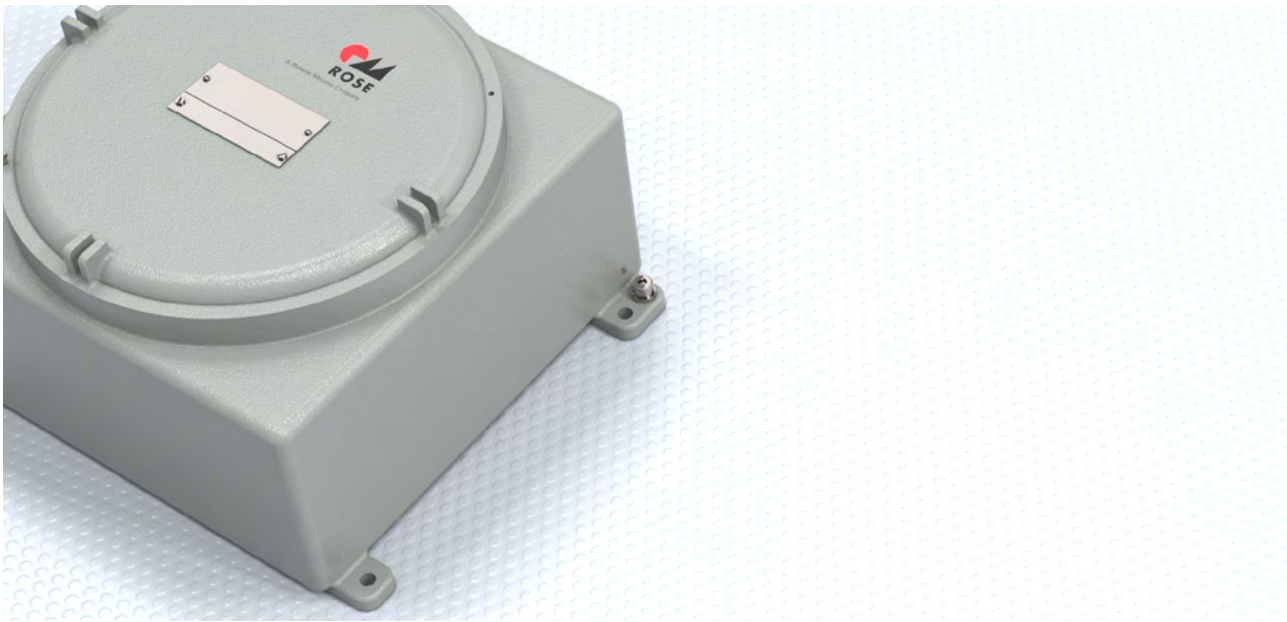
Applications



> Ex d IIC Enclosure series GUB

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT



- + Flameproof housing made of aluminium or stainless steel for the installation of non-Ex-certified components and terminals
- + For gas group IIC

Technical data

Material:	Copper-free aluminium
Ingress protection:	IP66 nach EN 60529
Colour:	RAL 7035, light grey
Impact resistance:	7 Joule nach EN 60079-0
Temperature range:	-20 °C up to +75 °C, depending on the enclosure dimensions

Included in delivery

Enclosure system consisting of a base and a screwed lid, with an external earth connection and external lugs



3-D data
and drawings

> Ex d IIC Enclosure series GUB

Ex d Enclosures / Ex Enclosures

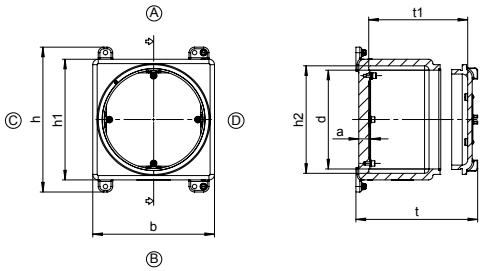
EX EQUIPMENT

Product overview

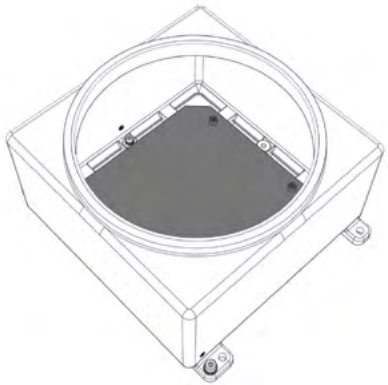
Order no.	Type	External dimensions L x W x H (mm)	Internal dimensions L x W x H (mm)	Weight (kg)
40 10 20 10 0	GUB 01 AL	220 x 220 x 182	196 x 196 x 133	6,2
40 10 20 20 0	GUB 02 AL	270 x 270 x 182	246 x 246 x 128	8,8
40 10 20 30 0	GUB 03 AL	320 x 320 x 211	292 x 292 x 150	15,5
40 10 20 40 0	GUB 04 AL	370 x 370 x 217	342 x 342 x 151	21,0
40 10 20 50 0	GUB 05 AL	420 x 420 x 239	388 x 388 x 170	30,0
40 10 20 60 0	GUB 06 AL	470 x 470 x 247	434 x 434 x 173	39,3

Dimensions

Order no.	b	h	t	h1	t1	h2	a	d
40 10 20 10 0	220	264	180,0	220,0	139	196	21,5	Ø180
40 10 20 20 0	270	314	180,0	270,0	139	246	21,5	Ø226
40 10 20 30 0	320	372	209,0	320,0	161	292	25,5	Ø262
40 10 20 40 0	370	430	216,0	370,0	161	342	27,5	Ø308
40 10 20 50 0	420	480	238,0	420,0	181	388	29,5	Ø344
40 10 20 60 0	470	538	246,0	470	184	434	31,5	Ø394



Accessories



Mounting Plates
for mounting electromechanical components

Order no.	Mouting plate	Dimensions L x W x H (mm)
40 10 20 10 0	40 30 20 10 0	170 x 170 x 1,5
40 10 20 20 0	40 30 20 20 0	205 x 205 x 1,5
40 10 20 30 0	40 30 20 30 0	245 x 245 x 1,5
40 10 20 40 0	40 30 20 40 0	290 x 290 x 1,5
40 10 20 50 0	40 30 20 50 0	330 x 330 x 1,5
40 10 20 60 0	40 30 20 60 0	380 x 380 x 1,5

> Ex d IIC Enclosure series GUB

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

Technical Details

Type	Temperature class	T6					T5				T4				
	max. surface temperature	T85 °C					T100 °C				T135 °C				
	max. ambient temperature	+40 °C	+50 °C	+60 °C	+40 °C	+50 °C	+55 °C	+60 °C	+75 °C	+40 °C	+50 °C	+60 °C	+90 °C	+110 °C	
GUB 01 AL	max. allowed power loss	82	-	38	-	-	82	-	38	-	-	-	82	38	
GUB 02 AL		86	-	45	-	-	86	-	45	-	-	-	86	45	
GUB 03 AL		114	-	64	-	-	114	-	64	-	-	-	114	64	
GUB 04 AL		170	120	70	230	180	170	126	70	410	376	316	170	70	
GUB 05 AL		218	168	91	291	226	218	159	91	491	451	400	218	91	
GUB 06 AL		250	182	150	405	282	250	215	150	723	609	472	250	150	

Side			Type					
M	NPT		GUB 01 AL	GUB 02 AL	GUB 03 AL	GUB 04 AL	GUB 05 AL	GUB 06 AL
20	1/2"	A/B	9	12	18	21,0	24,0	27
20	1/2"	C/D	9	12	18	21,0	24,0	27
25	3/4"	A/B	6	8	12	14,0	20,0	23
25	3/4"	C/D	6	8	12	14,0	20,0	23
32	1"	A/B	5	6	8	9,0	12,0	14
32	1"	C/D	5	6	8	9,0	12	14
40	1 1/4"	A/B	3	4	6	8	9,0	11
40	1 1/4"	C/D	3	4	6	8,0	9,0	11
50	1 1/2"	A/B			3	4,0	6,0	6
50	1 1/2"	C/D			3	4,0	6,0	6
63	2"	A/B				3,0	4,0	5
63	2"	C/D				3,0	4,0	5
75	2 1/2"	A/B						3
75	2 1/2"	C/D						3

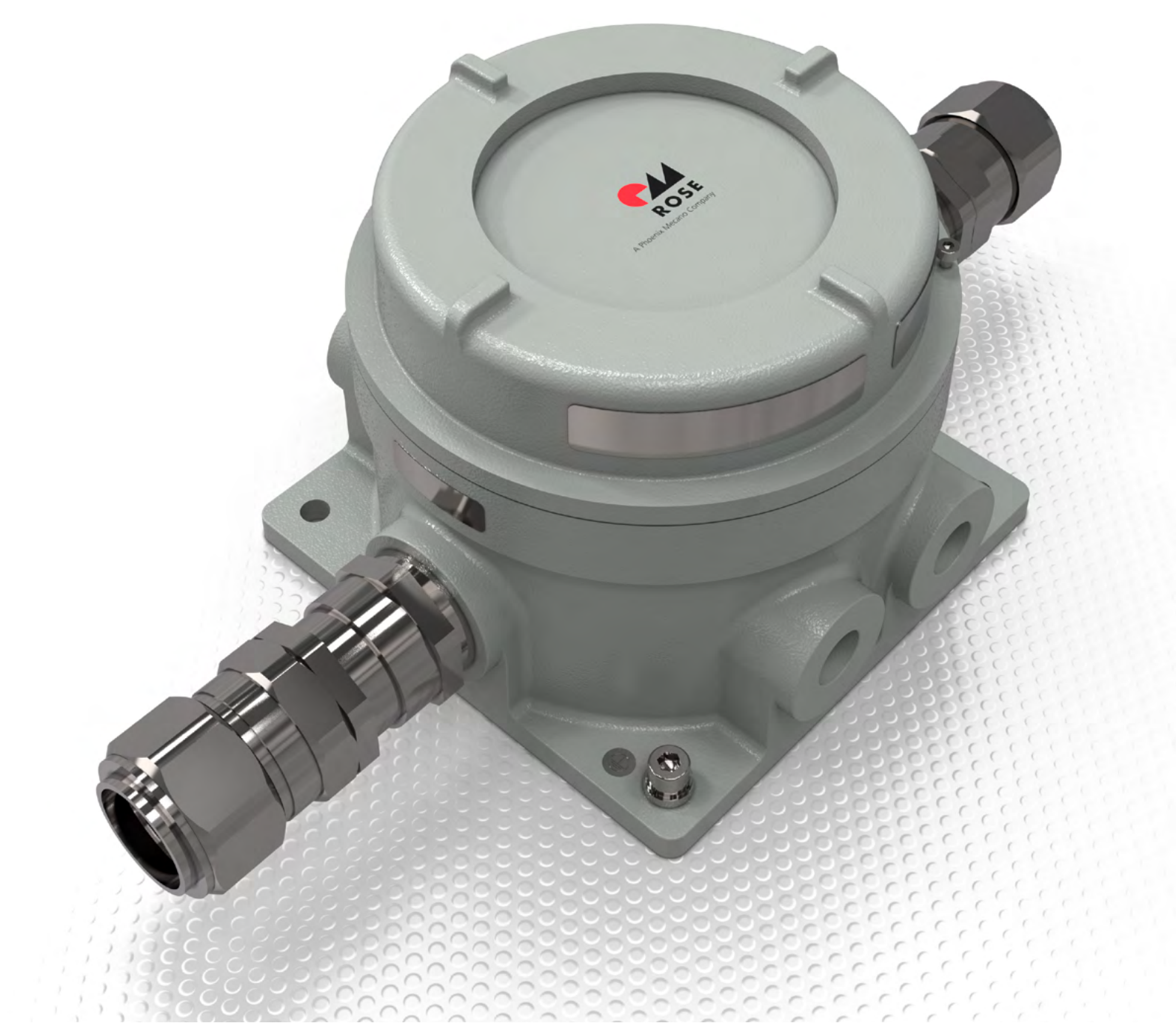
Max. options for cable entries

> Ex d IIC Enclosure series TBE

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

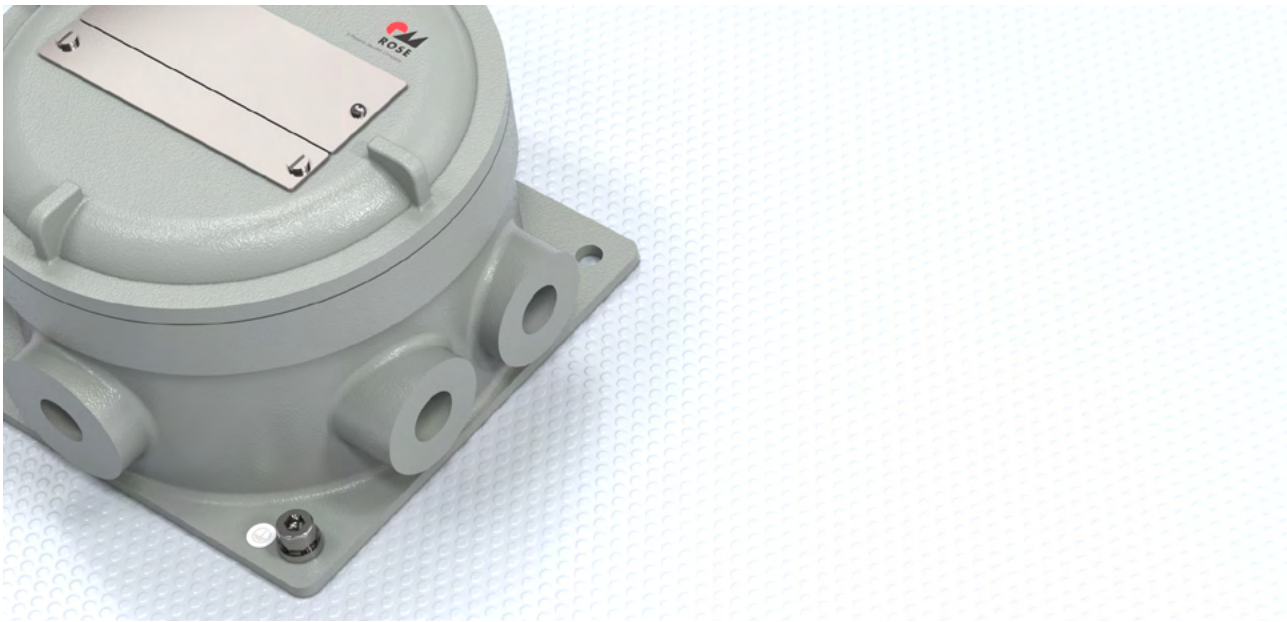
Applications



> Ex d IIC Enclosure series TBE

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT



> Approvals

- + Small distribution enclosure for the installation of terminals and small devices
- + Available in aluminium and stainless steel
- + for gas group IIC
- + Optional version with viewing window

Technical data

Material:	Copper-free aluminium Stainless steel 1.4404/316L
Ingress protection:	IP66 accoding to EN 60529
Colour:	Aluminium: RAL 7035, light grey Stainless steel: unpainted, painting on request
Impact resistance:	7 Joule according to EN 60079-0
Surface:	Powder coating
Temperature range:	-60 °C up to +75 °C, depending on the enclosure dimensions

Included in delivery

Enclosure system consisting of a base and a screwed lid, with an external earth connection and external lugs



3-D data
and drawings

> Ex d IIC Enclosure series TBE

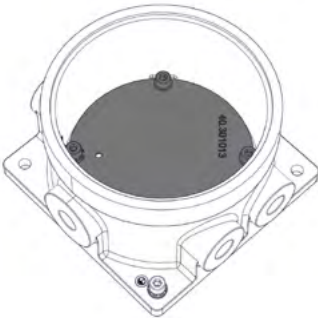
Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

Product overview

Order no.	Type	External dimensions L x W x H (mm)	Internal dimensions L x W x H (mm)	Weight (kg)
<i>Aluminium</i>				
40 10 10 10 0	TBE 100T AL	116 x 116 x 98	98 x 98 x 66	1,1
40 10 10 13 0	TBE 130T AL	148 x 148 x 107	127 x 127 x 71	1,8
40 10 10 16 0	TBE 160T AL	180 x 180 x 116	157 x 157 x 78	2,9
<i>Stainless steel</i>				
40 20 10 10 0	TBE 100T SS	116 x 116 x 98	98 x 98 x 66	3,0
40 20 10 13 0	TBE 130T SS	148 x 148 x 107	127 x 127 x 71	5,2
40 20 10 16 0	TBE 160T SS	180 x 180 x 116	157 x 157 x 78	8,6

Accessories



Mounting Plates
for mounting electromechanical components

Order no.	Mouting plate	Dimensions L x W x H (mm)
40 10 20 10 0	40 30 10 10 0	91 x 1,5
40 10 20 20 0	40 30 10 13 0	125 x 1,5
40 10 20 30 0	40 30 10 16 0	150 x 1,5
40 10 20 40 0	40 30 10 10 0	91 x 1,5
40 10 20 50 0	40 30 10 13 0	120 x 1,5
40 10 20 60 0	40 30 10 16 0	150 x 1,5

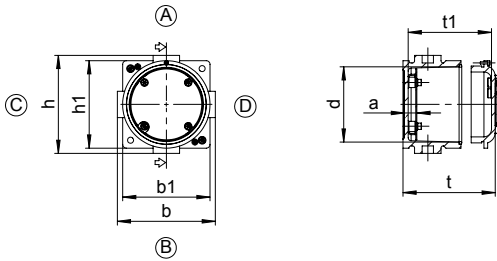
> Ex d IIC Enclosure series TBE

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

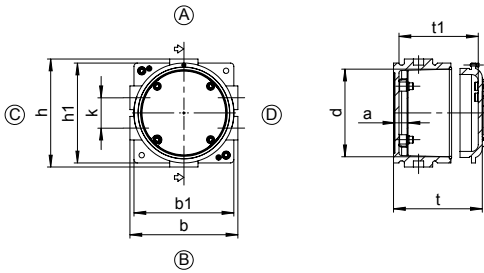
Dimensions

Order no.	b	h	t	b1	h1	t1	a	d
40 10 10 10 0	130	130	97,5	116	116	80,5	17	Ø100
40 20 10 10 0	130	130	97,5	116	116	80,5	17	Ø100



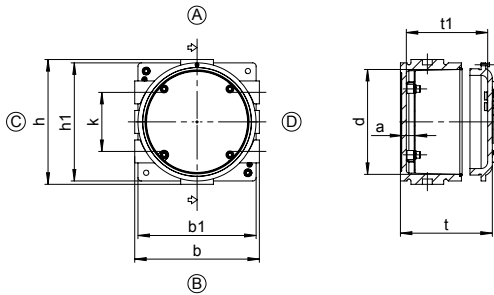
Dimensions

Order no.	b	h	t	b1	h1	t1	a	k	d
40 10 10 13 0	160	160	106,5	148	148	87,5	20	45	Ø130
40 20 10 13 0	160	160	106,5	148	148	87,5	20	45	Ø130



Dimensions

Order no.	b	h	t	b1	h1	t1	a	k	d
40 10 10 16 0	190	190	116	180	180	94	21	90	Ø160
40 20 10 16 0	190	190	116	180	180	94	21	90	Ø160



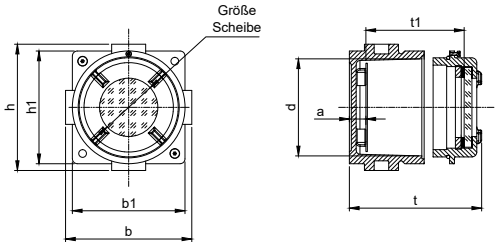
> Ex d IIC Enclosure series TBE TW

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

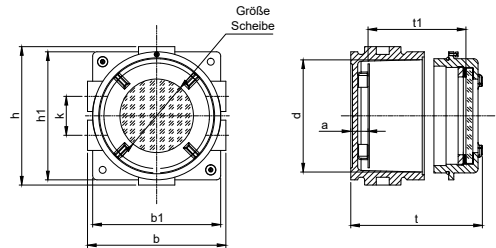
Dimensions

Order no.	b	h	t	b1	h1	t1	a	d	window
40 10 15 10 0	130	130	110	116	116	75	17	Ø100	Ø60
40 10 16 10 0	130	130	110	116	116	71	17	Ø100	Ø60



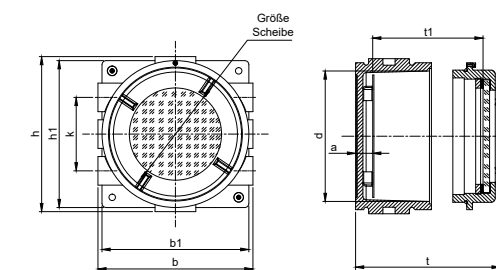
Dimensions

Order no.	b	h	t	b1	h1	t1	a	k	d	window
40 10 15 13 0	160	160	124	148	148	85	20	45	Ø130	Ø85
40 10 16 13 0	160	160	124	148	148	81	20	45	Ø130	Ø85



Dimensions

Order no.	b	h	t	b1	h1	t1	a	k	d	window
40 10 15 16 0	160	160	124	148	148	85	20	45	Ø130	Ø85
40 10 16 16 0	160	160	124	148	148	81	20	45	Ø130	Ø85



> Ex d IIC Enclosure series TBE

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT

Technical Details

Type	Temperature class	T6	T5	T4	T6	T5	T4
	max. surface temperature	T85 °C	T100 °C	T135 °C	T85 °C	T100 °C	T135 °C
	max. ambient temperature	+40 °C	+55°C	+90°C	+60 °C	+75°C	+110°C
TBE 100T AL	max. allowed power loss		20			12	
TBE 130T AL			29			15	
TBE 160T AL			41			24	
TBE 100T SS			20			12	
TBE 130T SS			29			15	
TBE 160T SS			41			24	

Side			Type					
M	NPT		TBE 100T AL	TBE 130T AL	TBE 160T AL	TBE 100T SS	TBE 130T SS	TBE 160T SS
20	1/2"	A/B	1	1	1	1	1	1
20	1/2"	C/D	1	2	3	1	2	3
25	3/4"	A/B	1	1	1	1	1	1
25	3/4"	C/D	1	2	3	1	2	3
32	1"	A/B		1	1		1	1
32	1"	C/D						
40	1 1/4"	A/B			1			1
40	1 1/4"	C/D						

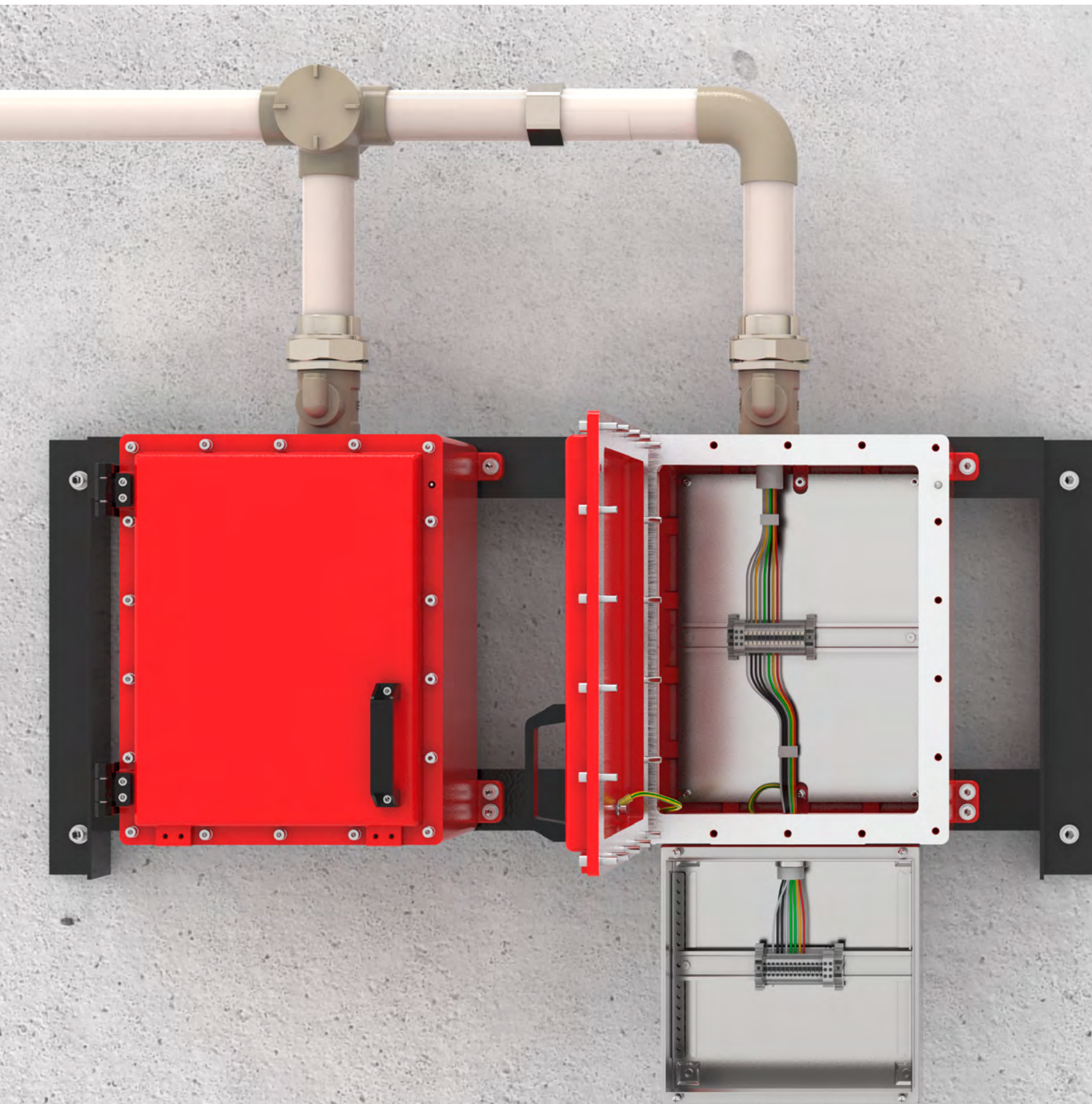
Max. options for cable entries

> Applications

Ex d Enclosures / Ex Enclosures

EX EQUIPMENT





Conduit Fittings & Line Bushings

Our comprehensive product portfolio includes conduit fittings and line bushings specifically designed to meet the highest safety and quality standards.

Conduit Fittings

Conduit fittings are essential components for the protection and routing of electrical cables in hazardous areas. They not only ensure mechanical strength and sealing but also provide optimal protection against external influences such as moisture, dust, and chemical substances. Our conduit fittings are characterised by the following features:

Safety: Developed and certified according to the stringent requirements of ATEX and IECEx directives, our fittings guarantee the highest level of safety in explosive atmospheres.

Robustness: Made from aluminium, our conduit fittings offer outstanding resistance to corrosion and mechanical stresses.

Versatility: Available in various sizes and designs to meet the requirements of a wide range of installations.

Easy Installation: The straightforward and quick assembly saves time and costs without compromising safety.

Line Bushings

Line bushings are specially designed conduits that allow for a secure and tight connection between different enclosures and cables in hazardous areas. The advantages of our line bushings include:

Reliability: Excellent insulation and sealing properties ensure long-term and reliable use in demanding environments.

Flexibility: Available in a variety of sizes and materials to meet the specific requirements of your applications.

Safety Certifications: Our line bushings are certified according to international standards for use in explosive atmospheres, thereby meeting all relevant safety requirements.

Durability: Resistant to extreme temperatures, aggressive chemicals, and mechanical stresses, our bushings guarantee a long service life and reduce maintenance efforts.

Applications

Oil and Gas Industry: For the safe installation and protection of cables in refineries, drilling platforms, and pipelines.

Chemical Industry: In chemical plants where high demands for protection against explosive atmospheres exist.

Pharmaceutical Industry: In clean rooms and production facilities where the highest safety and hygiene standards must be met.

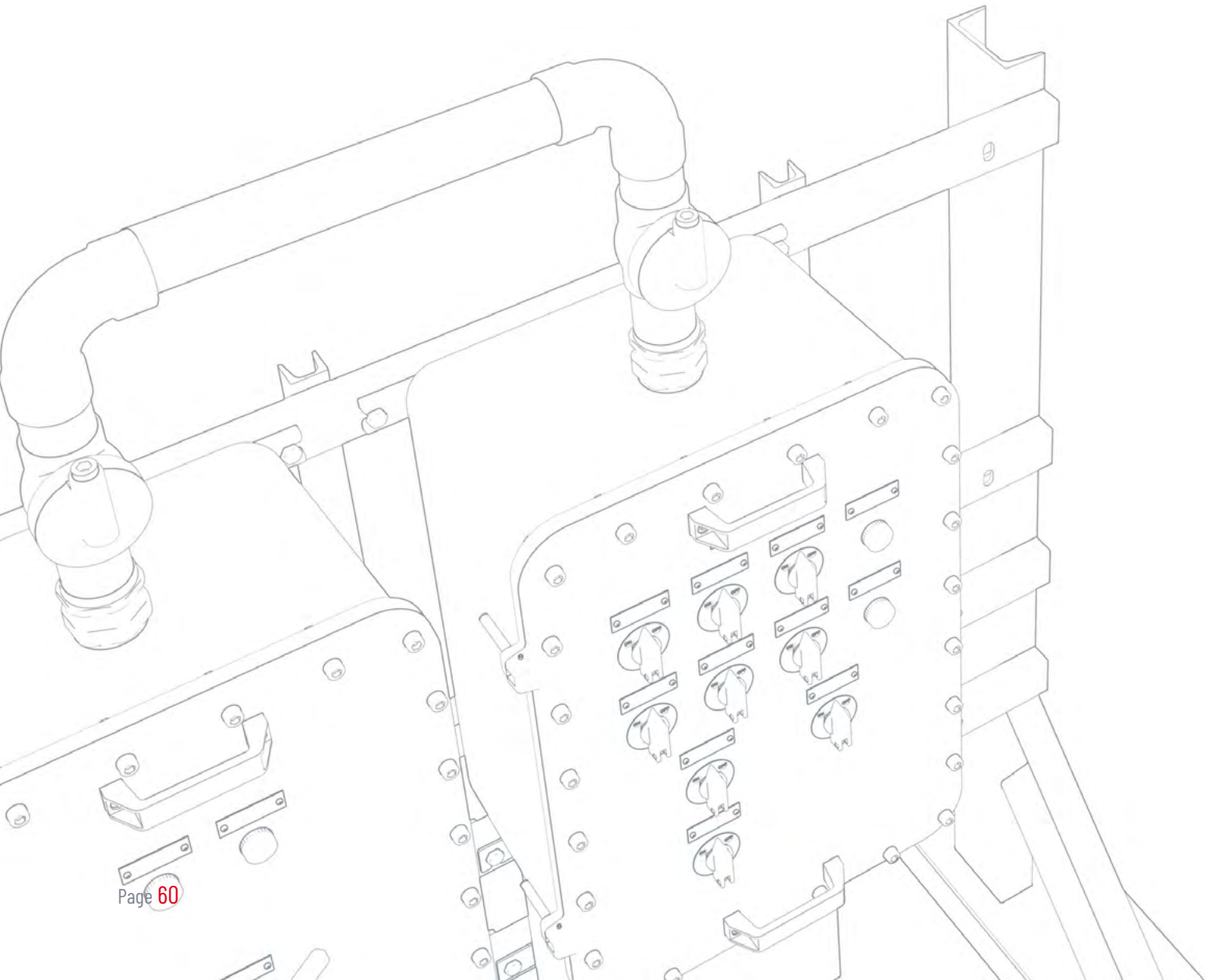
Food Industry: For use in areas with potentially explosive dusts or gases.

With the high-quality conduit fittings and line bushings from Rose Systemtechnik GmbH, you choose safe, reliable, and durable solutions for your electrical installations in hazardous areas. Our products provide optimal protection and significantly contribute to the safety of your facilities. Trust in our expertise and experience in explosion protection technology and benefit from tailored solutions for your specific requirements.

> Ex Field Distribution & Control Panels

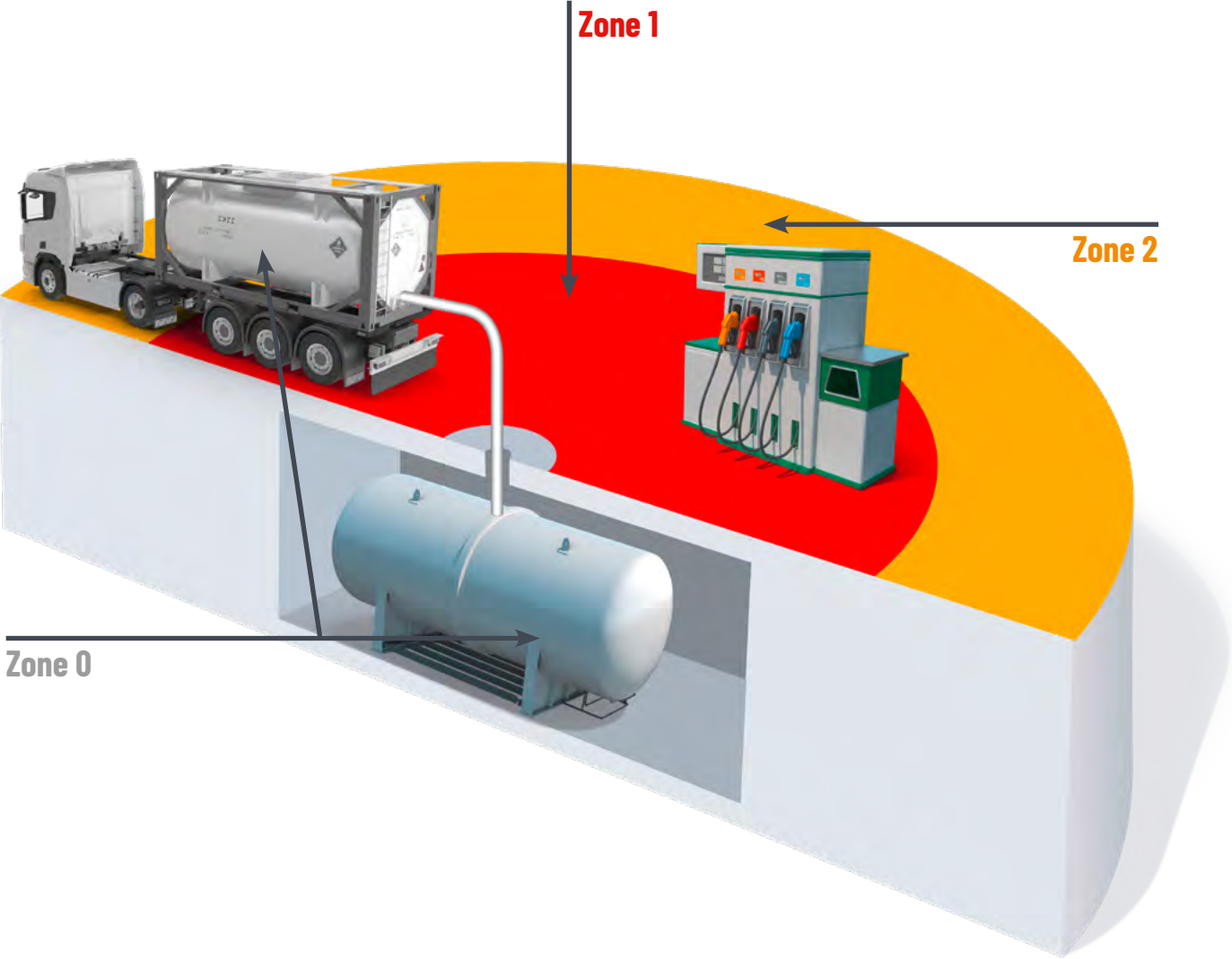
EX EQUIPMENT

- + Ex field distributors and switch panels as integrated units
- + Customised solutions linked with our conduit systems
- + Application-specific development tailored to customer requirements
- + Completely factory-assembled and wired control cabinets
- + Complete assembly in a single order



> Explosive atmospheres

EX EQUIPMENT



Marking in areas with flammable gases



Types of Protection for electrical Apparatus in hazardous Areas					
Protection Method	Symbol	Zone	Protection Concept	IEC Norm	CENELEC Norm
General Requirements					
Increased safety	eb	1	No arcs, sparks or hot surfaces	IEC 60079-0	EN 60079-0
	ec	2		IEC 60079-7	EN 60079-7
Flameproof enclosure	da	0	Parts that can ignite a hazardous atmosphere are installed in flameproof enclosures which prevent the transmission of an explosion to the ambient atmosphere	IEC 60079-1	EN 60079-1
	db	1			
	dc	2			
Intrinsic safety	ia	0	Energy limitation of sparks and temperatures	IEC 60079-11	EN 60079-11
	ib	1			
	ic	2			
Type of protection n	nC	2	hermetically sealed	IEC 60079-15	EN 60079-15
	nR	2	fume-resistant enclosures		
Encapsulation	ma	0	The explosive atmosphere is kept away from the ignition source	IEC 60079-18	EN 60079-18
	mb	1			
	mc	2			
Pressurized enclosure	pxb	1	The explosive atmosphere is kept away from the ignition source	IEC 60079-2	EN 60079-2
	pyb	1			
	pzc	2			
Sand Encapsulation	q	1	The explosive atmosphere is kept away from the ignition source	IEC 60079-5	EN 60079-5
Optical radiation	op is	0	Avoid or limit the transfer of energy from optical radiation op is = inherently safe optical radiation op pr = protected optical radiation op sh = optical radiation interlock	IEC 60079-28	EN 60079-28
	op pr	1			
	op sh	0			
Fluid Encapsulation	ob	1	The explosive atmosphere is kept away from the ignition source	IEC 60079-6	EN 60079-6
	oc	2			

Symbol IIA, IIB or IIC for electrical apparatus in hazardous gas areas

Temperature Classification						
Gas Group	T1 450 °C	T2 300 °C	T3 200 °C	T4 135 °C	T5 100 °C	T6 85 °C
IIA	Ammonia 630 °C	1,2-Dichlorethane 440 °C	Benzine 220-300 °C	Acetaldehyde 140 °C		
	Carbon Monoxide 605 °C	Ethylbenzene 431 °C	Diesel Fuel 220-300 °	Trimethylamine 190 °C		
	Phenol 595 °C	Ethanol 400 °C	Fuel Oil 220-300 °C			
	Methane 595 °C	Nitromethane 415 °C	Jetfoil 220-300 °C			
	Benzol 555 °C	Trichlorethylene 410 °C	Naphthalene 540 °C			
	Acetone 535 °C	Methylamine 408 °C	Petroleum 288 °C			
	Toluene 535 °C	n-Propanoll 385 °C	Pentane 288 °C			
	Ethane 515 °C	Ethylene-Diamin 385 °C	Turpentine 254 °C			
	Acetic Acid 485 °C	i-Amyl Acetat 380 °C	n-Hexane 230 °C			
	Propane 470 °C	n-Butane 365 °C	Heptane 215 °C			
IIB	Xylene 464 °C	1-Butanol 340 °C	Octane 205 °C			
	Ethylacetate 470 °C	Pentanol 300 °C	Nonane 205 °C			
	Methanol 440 °C					
IIC	City Gas ca. 560 °C	Ethylene Oxide 435 °C	Hydrosulphide 270 °C	Dibutylaether 185 °C		
	Hydrogen-Cynaid 538 °C	Ethylene 440 °C	Ethylenglycol 235 °C	Ethylaether 175 °C		
		Formaldehyde 424 °C	Tetrahydrofuran 224 °C	Dipropylaether 170 °C		
	Hydrogene 560 °C	Acetylene 305 °C				Carbon Disulphide 95 °C

Marking in areas with combustable dust

Marking in accordance to
ATEX guideline 2014/34/EU

Marking in accordance to
IEC 60079-0/EN 60079-0

⚡

II

2 D

Equipment Group

I: Mining

II: other hazardous areas

Equipment category according to ATEX-Directive 2014/34/EU	EPL (Equipment Protection Level)	Zone	Type of danger	
Dust	1 D	Da	20	Continuous, long, frequent
	2 D	Db	21	Occasional
	3 D	Dc	22	Not usually present, short periods only
Mining	M1	Ma		Continuous, long, frequent
	M2	Mb		Occasional

Ex

tb

IIIC

T85 °C

Db

Classification of Dusts		
Permitted Equip. Groups	Groups	Dusts
IIIA, IIIB, IIIC	IIIA	combustible lint
IIIB, IIIC	IIIB	non-conductive
IIIC	IIIC	conductive

Maximum Permissible Surface Temperature

Ignition Temperature for Combustible Dusts

Typical Ignition Temperature (°C)	
Dust	Mist
Aluminium	590
Coal dust (lignite)	380
Flour	490
Grain dust	510
Methylzellulose	420
Phenolic resin	530
Polythene	420
PVC	700
Soot	810
Starch	460
Sugar	490

Types of Protection for electrical apparatus in areas with combustible dust					
Protection Type Against Ignition	Symbol	Zone	Protection concept	IEC Norm	CENELEC Norm
General Requirements					
Protection by enclosure	ta	20	Ex atmosphere is kept apart from ignition source and temperature limitation old marking: tD A21 = under procedure A for Zone 21 tD B21 = under procedure B for Zone 21	IEC 60079-0	EN 60079-0
	tb	21		IEC 60079-31	EN 60079-31
	tc	22			
Intrinsic Safety	ia	20	Energy limitation of sparks and high temperatures	IEC 60079-11	EN 60079-11
	ib	21			
	ic	22			
Encapsulation	ma	20	Ex atmosphere is kept apart from ignition source	IEC 60079-18	EN 60079-18
	mb	21			
	mc	22			
Pressurized Encapsulation	pxb	21	Ex atmosphere is kept apart from ignition source	IEC 60079-2	EN 60079-2
	pyb	21			
	pzc	22			
Optical Radiation	op is	20	Avoid or limit energy transfer from optical radiation op is = intrinsically safe optical radiation op pr = protected optical radiation op sh = optical radiation blocking	IEC 60079-28	EN 60079-28
	op pr	21			
	op sh	20			



> Protection Classes and Tightening Torques

IP AND NEMA PROTECTION CLASSES

EX EQUIPMENT

On request, ROSE Systemtechnik develops and manufactures enclosures in accordance with protection classes IP and NEMA (dust and water resistance) as well as IK (impact resistance). All enclosures can be tested for compliance with the guidelines in our in-house laboratory.

Meaning of the NEMA protection class:	Code number												
Indoor/outdoor environmental conditions	1	2	3	3R	S	4	4X	5	6	6P	12	12K	13
Incidental contact with devices	x	x				x	x	x	x	x	x	x	x
Falling dirt	x	x				x	x	x	x	x	x	x	x
Falling and slightly splashing liquids		x				x	x	x	x	x	x	x	x
Flying dust, fluff and fibres						x	x	x	x	x	x	x	x
Splash and jet water						x	x		x	x			
Seeping oil and coolant										x	x	x	x
Spraying and splashing oil or coolant													x
Corrosive agents							x		x				
Occasional temporary submersion								x	x				
Occasional permanent submersion									x				
Incidental contact with devices			x	x	x	x	x		x	x			
Rain, snow and sleet			x	x	x	x	x		x	x			
Sleet				x	x	x	x		x	x			
Flying dust					x	x	x		x	x			
Jet water					x	x			x	x			
Corrosive agents										x			
Occasional temporary submersion									x	x			
Occasional permanent submersion										x			

Protection classes and tightening torques

NEMA protection classes	IP protection classes
1	IP20
2	IP21
3	IP54
3R	IP24
3S	IP54
4, 4x	IP56
5	IP52
6, 6P	IP67 (IP 68)
12, 12K	IP52
13	IP54

Degrees of protection for contact and foreign body protection in accordance with EN 60529

First digit	Naming
0	No protection
1	Protection against large foreign bodies
2	Protection against medium-sized foreign bodies
3	Protection against small foreign bodies
4	Protection against granular foreign bodies
5	Protection against dust deposits
6	Protection against dust ingress

Degrees of protection for water protection

Second digit	Naming
0	No protection
1	Protection against vertically falling dripping water
2	Protection against dripping water falling at an angle
3	Protection against water spray
4	Protection against splash water
5	Protection against water jets
6	Protection against flooding
7	Protection during immersion
8	Protection during submersion
9K	Protection against water during high-pressure/steam jet cleaning

> Protection Classes and Tightening Torques

IP AND NEMA PROTECTION CLASSES

EX EQUIPMENT

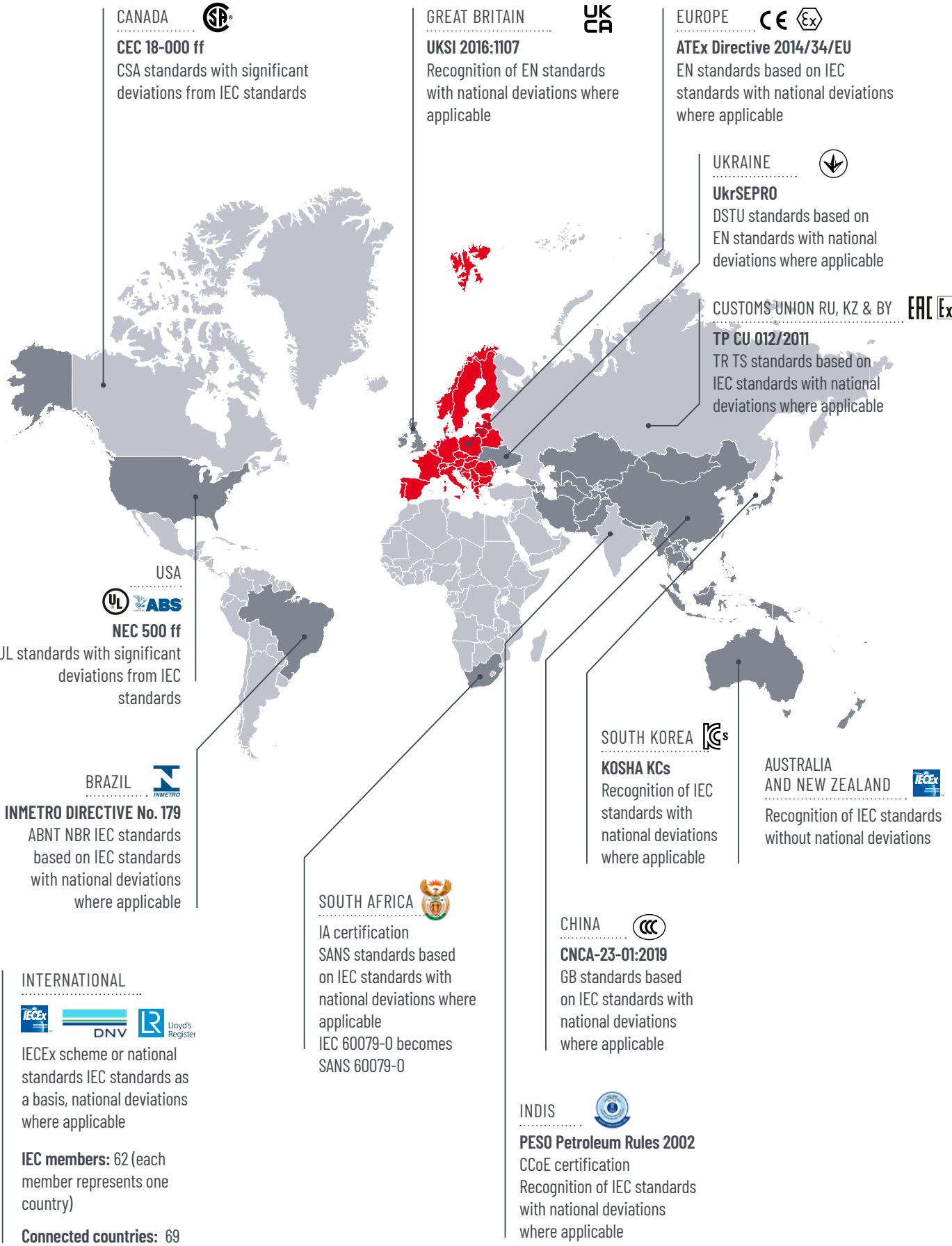
IK protection classes

IK code	Protection against mechanical impact
IK00	No protection
IK01-05	Impact < 1 joule
IK06	Blow 1 joule (500 g from 20 cm)
IK07	IK07 Impact 2 joule (500 g from 40 cm)
IK08	Impact 5 joules (1.7 kg from 29.5 cm)
IK09	Impact 10 joules (5 kg from 20 cm)
IK10	Impact 20 joules (5 kg from 40 cm)

To ensure that enclosures provide optimum protection, they should be fitted and sealed correctly. ROSE Systemtechnik recommends the following tightening torques for fastening the required fixtures and the lid:

Product group	Description	Size of the lid screw	Tightening torque in Nm
01/05/15/25	AL - enclosures	M4	1 – 2,5
01/05/15/25	AL - enclosures	M6	1 – 3,0
02/06/16/26	Polyester enclosures	M4	1 – 1,5
02/06/16/26	Polyester enclosures	M6	1 – 3,0
03	PC- enclosures	M4	1 – 2,0
03	PC- enclosures	M6	1 – 2,5
04	AluForm enclosures	M4	1 – 2,0
04	AluForm enclosures	M6	1 – 2,5
37/34/35/36	Stainless steel enclosures	M5	1,2 – 1,5

Productgroup	ATEX (Europe)	CCC (China)	CCOE (India)	DNV (Maritime)	EAC/TRTS (EAWU States)	IA (Southafrica)	IECEx (international)	INMETRO (Brasil)	KTL (Korea)	LR (Lloyd's Register)	UKCA (England)	UkrSEPRO (Ukraine)	UL Ex(IEC E203312)	UL 508A (File E66473)	ABS (American Buerau of Shipping)	ECAS (United Arab Emirates)
01										X				X		
02										X				X		
04										X				X		
05	X	X		X	X	X	X	X	X		X	X	X	X	X	
06	X	X		X	X	X	X	X			X	X	X	X	X	X
15	X	X		X	X	X	X	X			X	X		X	X	
16	X	X		X	X	X	X	X			X	X		X	X	X
19														X		
21														X		
25	X	X	X	X	X		X	X		X	X	X	X	X	X	
26	X	X	X	X	X		X	X		X	X	X	X	X	X	
34	X	X	X	X	X		X	X		X	X	X	X	X	X	
35	X	X		X	X	X	X	X	X		X	X	X	X	X	X
36	X	X		X	X	X	X	X			X	X		X	X	X
37										X				X		
38														X		
40-EJB	X	X	X	X	X		X	X			X					
40-EFJB	X						X									
40-ELJB	X						X									
40-EJS	X						X									
40-GUB	X	X	X		X		X	X			X					
40-IJB	X	X	X		X		X	X			X					
40-IFJB	X						X									
40-TBE	X	X	X		X		X	X			X					
40-CA	X		X		X		X	X								
46	X		X		X		X									
64														X		
68							X									
90	X		X				X									
91	X		X				X									
92	X		X				X									



The path to the right enclosure

- There are various criteria to consider when selecting an enclosure:
- > the installation location (indoor/outdoor area, hazardous area, seawater area, etc.)
 - > the size (depends on the fixtures)
 - > the protective function (protection class, EMC resistance, Ex)

The following lists will help you select the right enclosure for your specific application.

I. Enclosure material specifications

Aluminium enclosure

- > lightweight, robust metal enclosure
- > good chemical resistance (see table)
- > Can be used in a wide temperature range
- > EMC basic shielding (optional full shielding)
- > Good processing options
- > Areas of application:
Suitable for indoor and outdoor use, special version or Ex version for outdoor use in aggressive or seawater-containing atmospheres

Polyester enclosure

- > plastic enclosure for rough environments
- > good chemical resistance (see table)
- > use in a wide temperature range
- > good insulation properties
- > V-0 version (according to UL)
- > Areas of application: suitable for indoor and outdoor use; standard industrial enclosures

Polycarbonate enclosure

- > lightweight plastic enclosure
- > good chemical resistance (see table)
- > use in a wide temperature range
- > good insulation properties
- > good processing options
- > transparent versions possible (lid)
- > areas of application: suitable for indoor and outdoor use

ABS enclosure

- > plastic enclosure with low weight
- > good chemical resistance (see table)
- > use in standard temperature ranges

Polystyrene enclosure

- > plastic enclosure with low weight
- > good chemical resistance (see table)

Stainless steel enclosures

- > robust metal enclosure
- > very good resistance to chemicals
- > can be used in a wide temperature range up to 200°C
- > EMC basic shielding (optional full shielding)
- > special sizes possible
- > areas of application:
Suitable for indoor and outdoor use, special version or Ex version for outdoor use in aggressive or seawater-containing atmospheres

Chemical resistance

Chemicals	Aluminium	ABS	Polycarbonate	Polyester	Polystyrene	Polyamide	Chloroprene	EPDM	NBR	Pocan	Polyurethane	PVC	Silicone
Acetone	+	-	-	-	-	•	+	+	-	+	-	-	•
Formic acid	•	-	30 %	10 %	•	-	+	+	-	10 %	/	<50 %	•
Ammonia	-	-	-	-	+	20 %	+	+	+	10 %	/	•	+
Petrol	+	-	•	+	•	+	+	•	+	+	+	+	+
Benzene	+	-	-	+	-	-	-	-	-	+	+	-	-
Brake fluid	/	/	-	+	/	60°	•	-	/	+	/	/	+
Butane	+	/	+	/	-	+	+	/	+	+	/	50 %	-
Butanol	/	/	/	+	/	+	+	/	-	+	/	•	-
Calcium chloride	+	/	+	-	+	+	/	/	/	10 %	/	+	/
Chlorobenzene	+	-	-	+	-	•	-	-	-	-	-	-	-
Diesel oil	/	+	•	+	•	/	•	•	/	+	+	•	•
Acetic acid	+	10 %	10 %	40 %	+ max. 50 %	-	-	/	-	10 %	/	25 %	-
Formaldehyde	+	+	/	30 %	+ max. 40 %	+	-	/	+	/	/	40 %	+
Frigen 113	/	/	+	+	/	/	+	/	+	+	/	/	/
Fruit juice	/	/	+	-	/	+	+	-	/	-	+	+	+
Glycerine	+	+	•	+	+	+	+	+	+	+	+	+	+
Heating oil	+	•	•	+	•	+	•	•	+	+	+	•	•
Hydraulic oil	/	/	+	+	•	+	+	/	/	+	/	/	•
Potassium hydroxide solution	/	/	-	-	+ max. 50 %	-	+	/	/	10 %	/	+	/
Potassium chloride	•	/	+	+	+	+	+	+	+	10 %	+	+	+
Potassium hydroxide	-	+	/	-	+	/	+	+	+	-	-	/	•
Linseed oil	+	/	+	+	+	+	+	+	+	+	+	+	•
Methanol	+	/	-	-	+	•	+	/	•	+	/	/	+
Methylene chloride	+	/	-	-	-	-	-	/	-	-	-	-	-
Lactic acid	+	+	10 %	+	+ max. 80 %	10 %	+	+	+	/	/	10 %	/
Mineral oils	/	+	+	+	+	+	•	•	+	+	+	+	+
Engine oils	/	/	+	+	+	+	•	•	+	+	+	/	+
Sodium carbonate	•	/	+	+	+	+	/	/	/	10 %	/	/	/
Sodium chloride	•	+	+	+	+	10 %	+	+	+	10 %	+	+	+
Sodium hydroxide	+	+	/	-	/	/	+	+	+	-	-	•	•
Caustic soda	/	-	-	40 %	+ max. 50 %	10 %	50 %	/	-	/	/	60 %	-
Nitric acid	+	30 %	10 %	10 %	+ max. 25 %	-	•	+	•	10 %	-	30 %	-
Hydrochloric acid	/	10 %	20 %	+	+ max. 10 %	-	+	+	< 65 %	10 %	-	30 %	/
Lubricating oil	+	/	+	+	/	+	•	•	+	+	+	+	+
Carbon disulphide	+	/	-	-	-	•	-	/	-	+	/	•	-
Sulphuric acid	•	30 %	50 %	70 %	+ max. 50 %	-	50 %	/	25 %	10 %	/	80 %	25 %
Soap suds	/	/	•	+	/	+	+	/	+	10 %	•	•	+
Washing-up liquid	/	/	+	/	/	/	+	•	/	+	•	/	+
Turpentine oil	/	/	/	+	-	+	-	/	+	+	/	+	-
Carbon tetrachloride	+	-	/	+	-	•	-	-	-	+	-	•	-
Toluene	+	-	-	+	-	+	-	-	-	•	-	-	-
Trichloroethylene	+	-	/	-	-	-	-	-	-	•	-	-	-
Water (distilled water, river water, tap water, sea water)	/	+	+	+	+	+	+	+	80 C°	+	+	40 C°	+
Tartaric acid	/	/	10 %	+	+	+	+	+	+	/	+	10 %	+
Xylene	+	-	-	+	-	+	-	-	-	•	-	-	-
Zinc sulphate	•	/	+	+	+	/	+	+	+	/	/	40 %	+
Citric acid	+	10 %	10 %	+	+	10 %	+	+	+	10 %	/	10 %	+

Explanation of symbols

- + resistant to all concentrations
- % resistant to maximum % concentration
- C° resistant up to maximum C°

- conditionally resistant
- unstable
- / without specification

Unless otherwise stated, the tests were carried out at room temperature. If different media come into contact with each other, the resistances may change. Therefore, we cannot accept any liability for the information provided.

> EX EQUIPMENT



A Phoenix Mecano Company



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ROSE Systemtechnik GmbH
Erbeweg 13 – 15
D-32457 Porta Westfalica

✉ enclosuresystems@rose-pw.de
🌐 www.rose-systemtechnik.com
☎ +49 571 5041 0

