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ROSE
A Phoenix Mecano Company

# PRODUCT OVERVIEW

Industrial Enclosures
Operating and Display Enclosures
Ex Equipment



www.rose-systemtechnik.com

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Phoenix Mecano India
Pune, Indien



Phoenix Mecano Kft.
Kecskemét, Ungarn



Mecano Components Co. Ltd
Shanghai, China

In 1969 ROSE Systemtechnik GmbH was founded in Porta Westfalica, Germany. Today ROSE is one of the world's leading and innovative providers of industrial enclosure system engineering, employing over 350 people at the German headquarter.
In association with Phoenix Mecano AG, Switzerland, we develop and manufacture high-quality industrial enclosures and system solutions for areas such as mechanical and plant engineering, automation engineering, potentially explosive atmospheres, instrumentation, control and automation technology, as well as the foodstuff and beverage industry.

## Our product range comprises the following:

- Standard industrial enclosures made of aluminium, stainless steel and plastics for individual installations of electrical connection technology and electronic components.
- Operating and display enclosures based on aluminium profile systems and stainless steel materials for HMI applications with industrial PCs, PLC control systems and visualization units, including suspension systems.
- Components for explosion protection with junction boxes and control stations for worldwide use in potentially explosive atmospheres, as well as the petrochemical and chemical industry in both onshore and offshore environments.

Our business success is based on a wide range of products, a high quality standard, constant innovation and an exceptional level of service. You decide the condition of delivery – the unmachined enclosure, a partial assembly or a completely assembled and tested customized system solution.

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## Machining potentials



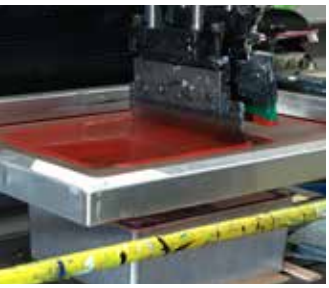
We can perform the most diverse range of machining operations for our metal and plastic enclosures, including, for example:

**Milling:**
We mill industrial, operating and display enclosures individually to conform to our customers' specifications. Our modern CNC machines permit ultra-precise filigree machining. The machine scans the enclosure and permits extremely fine milling of the surface, for preparatory accommodation of a membrane keypad with no projection, for example.



**Drilling, thread-cutting and back countersinking:**
We have a broad range of machining options, in order to adapt our enclosures precisely to our customers' requirements: from standard thread-cutting, up to and including more complex back countersinking using special tools.

**Engraving:**
Another important design option for our enclosures and operating and control equipment is individual engraving to the customer's requirements. Engraving can be performed simultaneously with machining. We can engrave images or texts in various typefaces, shapes and colours.



**Laser machining:**
We use the latest technologies – including laser machining of our enclosures, for example – to assure best possible service for our customers.

## Surface finishing technology

Our customers' satisfaction and excellent service are our top priority at ROSE Systemtechnik. We can, on request, supply customised enclosures which harmonise with your company's Corporate Design. This will enable you to position your industrial enclosure conspicuously for PR effect. Our range of services includes:



- Painting, coating or wet painting
- Engraving
- Printing with screen or pad printing
- Special coatings

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## Main installation

ROSE Systemtechnik performs the equipping of all industrial enclosures and control cabinets as a standard procedure: this includes, on the one hand, installation of the lid, the cable connectorisation and the earthing (grounding) screws. Our services also include assembly and fitting of rating plates to our Ex and Ex d enclosures.



We also provide, in addition to our standard range, customised assembly and equipping of our polyester, stainless-steel and aluminium enclosures.

- All types of cable glands
- Fitting of/equipping with terminals
- Assembly of mounting plates
- Fitting of membrane keypads and final electrical testing



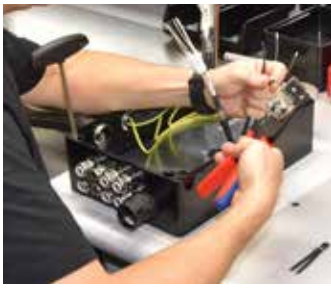
In order to provide our customers with optimum service down to the last detail, we also perform all wiring operations for terminal enclosures, electronics enclosures, and also for display and operating enclosures. Our range of services also includes the assembly of control cabinets, equipping of boards/cards, followed by functional testing.

**All-in or partial wiring:**
We can, on request, also perform for our customers, after pre-wiring, the connection of all cables to the mounting rails, operating and display elements.



**Control-cabinet installation:**
If required, we can also assemble our standard electronics or stainless-steel enclosures as control cabinets, wiring them correspondingly.

**Equipping of boards/cards:**
Equipping of boards/cards at ROSE Systemtechnik is conducted in accordance with customers' specifications and includes, for example, LEDs, plug connectors and soldering work.



**Testing:**
We can perform not only assembly/installation of membrane keypads, but also subsequent testing of these devices for complete functionality, including, in particular, display and operating enclosures.

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## Laboratory



ROSE Systemtechnik manufactures robust industrial enclosures in which sensitive electronics are optimally protected even under the most adverse conditions. The high quality of our enclosures is assured by means of regular tests, including, for example, IP degree of protection tests, and environmental tests.
The environmental tests indicate how external influences affect ageing of the enclosure.
ROSE Systemtechnik has its own laboratory with a diverse range of test equipment in order to permit the performance of all IP degree-of-protection tests and environmental tests under standardised conditions. This equipment includes, inter alia



- Thermal and dust chamber
- Corrosion-testing instrument
- Climatic cabinets
- Immersion pool

Our tests are based on the following relevant standards:

- DIN EN 60529
- DIN EN 60068
- DIN EN 60079
- DIN EN ISO 9227



### Environmental tests: Climate, corrosion and ESD

ROSE uses standardised procedures to determine how other influences affect ageing of its enclosures.
We submit our products to the following tests:

- Exposure to heat
- Temperature measurements (in order, for example, to eliminate spontaneous ignition of dust/gas)
- Exposure to cold
- Exposure to climatic effects
- Exposure to salt spray (DIN EN ISO 9227)
- Outdoor exposure tests
- ESD electrostatic dissipation test



### Mechanical loading test

Not only moisture, dust, extreme temperatures and corrosion can reduce the service-life of technological enclosures: mechanical loads are also a factor which should not be underestimated. We can simulate these stresses on a test system specially designed for this purpose.

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ROSE supplies products and services that perform significantly better than the regular standard. These include, for example, an electronic ordering system, assistance in prototyping, and first article inspection at your site.

We also attach great importance to comprehensive advice and are pleased to evolve special solutions for your particular application. And why do we do all this? Because we want you to be a satisfied customer. And because satisfied customers are the best customers.

### Order management

You rightly expect that your order will be processed quickly and correctly. For us, this is a matter of course: we guarantee for you short delivery times and consistent high quality. Our colleagues in Order Management can give you information on the status of your order at any time, and are always receptive to your wishes and your suggestions.

### Chang e management

If something changes at short notice in your order, we will modify it to meet the new circumstances without any fuss. Our technicians, engineers and product managers are available to you at any time and are pleased to provide advice and assistance.

### EDI digital ordering system: Fast and efficient

An individually configured EDI interface enables you to order our entire range of products directly from us from your ERP and/or stock management system. It couldn't be easier!

### On-site first article inspection: See for yourself

Nothing can replace your own personal impression. This is why we will, if you wish, be pleased to come to you with selected enclosure or supporting-arm systems! Our Sales team members will then present the products to you in detail, explain all their properties and options, and note your wishes. You can then be certain of getting the ideal solution for your application.

### Tailor-made for you: our prototyping service

Do you need a special enclosure for your application? Our design engineers and Sales team members will develop together with you the right solution. You can modify the prototype until it is ready for series production.

### Extremely efficient: Our project management

We implement every order and every prototyping development using precisely defined procedures. You, the customer, benefit from this in the form of short delivery times and maximum planning certainty.

### Extreme accuracy: Our inspections

We thoroughly inspect every single one of our products prior to delivery for fulfilment of the customer's specifications and for adherence to our own high quality standards.

### Optimally networked: Audio-visual customer support

Some things need to be discussed in person. But not all the relevant people are always at the same place at the same time. In such cases, we can hold video conferences with our customers.

### Total individuality: ROSE Key Account Management

We deploy employees to specifically support our major customers. These people know these customers' needs precisely and can therefore provide them with optimum advice.

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**Special enclosures are your guarantee for your individual application**

You have not found the right standard enclosure? Do you have specific requirements for installation space, material, coloring, fixtures, CI-compliant design or function?
Then ask us - our design team will be happy to develop the right special enclosure solution with you.

We offer:

**Production**

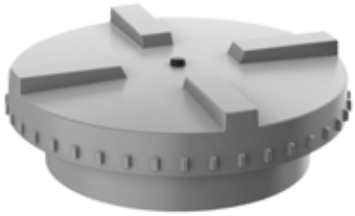
Own production plants with expertise in the processing of:

- Aluminium, plastics, polyester and stainless steel



**Construction**

- Tool-compatible construction of the required housing elements
- Adaptation of different materials
- Development / design according to certification parameters



**Electronics / input units**

- Integration of custom electronics / EMS
- Complete solution with membrane keyboard and display
- Pre-assembled system solutions



**Certification / Laboratory**

To carry out all IP protection type tests and environmental tests under standardized conditions ROSE Systemtechnik has a laboratory with a variety of test facilities.

These include:

- Heat and dust chamber
- corrosion test
- climate cabinets
- plunge pool





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## Applications of industrial enclosures

Our enclosure systems are used wherever sensitive electronics and other vulnerable extensions need reliable protection against external influences.

Our metal and plastic products have proven their capabilities in all industrial sectors, including mechanical engineering, transport technology and energy systems, and also in automation, for 50 years now.

Their applications are manifold. In many cases, they are used in the most diverse sectors of mechanical engineering, where they assure production operations as classical terminal enclosures, or assist in achieving trouble-free production processes.

For installation of sensitive and complex electronics, our enclosures provide customers' products, in the field of control and instrumentation, for example, with an individual appearance.

Practically all applications have one thing in common: they make high demands on the quality and technical properties of the enclosures.

Our comprehensive range of products includes enclosure systems in the most diverse materials and sizes, enabling us to provide our customers with a solution for every application.

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| |  |  |
|---|---|---|
| | **Aluminium Standard**<br>(PG 01) | **Aluform**<br>(PG 04) |
| Product highlights | • Robust aluminium enclosure for mechanical engineering and automation technology<br>• Fixing options for DIN rails and mounting plates<br>• Usable in wide temperature area | • Aluminium diecast enclosure for MCR and automation technology<br>• Prepared for acceptance for front membranes and keypads<br>• Rectangular dome sequence in lid and base |
| Technical data | | |
| Material | DIN EN 1706 EN AC-AlSi 12 (Fe) | DIN EN 1706 EN AC-AlSi 12 (Fe) |
| Ingress protection | IP66 to EN 60529<br>higher protection on request | IP66 to EN 60529<br>higher protection on request |
| Impact resistance | IK09 to DIN EN 60068-2-75 | IK09 to DIN EN 60068-2-75 |
| Painting | Powder coating | Powder coating |
| Colour | RAL 7001, silver grey<br>Special colour on request | RAL 7038, agate grey<br>Special colour on request |
| Temperature range | PU-(Polyurethane) seal: -40 °C to +90 °C | PU-(Polyurethane) seal: -40 °C to +90 °C |
| Other versions on request | EMC<br>SBG, SBGL, SWB<br>Silicone lid seal (-60 °C to +130 °C)<br>CR lid seal (-40°C to +100°C) | EMC<br>SBG, SBGL, SWB<br>Silicone lid seal (-60 °C to +130 °C)<br>CR lid seal (-40°C to +100°C) |
| Approvals | c UL us LISTED, Lloyd's Register | c UL us LISTED, Lloyd's Register |
| Dimensions (H x W x D) | 50 x 45 x 30 mm to<br>600 x 600 x 202 mm | 80 x 80 x 81 mm to<br>280 x 280 x 111 mm |
| Accessories | Mounting plate<br>DIN rail<br>External mounting brackets<br>External and internal hinges | Mounting plate<br>DIN rail<br>External mounting brackets<br>External and internal hinges |
| Included in delivery | Aluminium enclosure consisting of<br>lid,<br>seal incl. captive +/-stainless steel screws,<br>base with 2 or 4 earthing screws | Aluminium enclosure consisting of<br>lid,<br>seal incl. captive +/-stainless steel screws,<br>base with 2 or 4 earthing screws |

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## AluFormPlus

(PG 64)

**Product highlights**

- Aluminium die-cast enclosure for electronic applications
- Integrated hinge and covered lid screws
- Rectangular arrangement of the bosses in the base and lid

**Technical data**

| | |
|---|---|
| Material | DIN EN 1706 EN AC-AlSi 12 (Fe) |
| Ingress protection | IP66 to EN 60529<br>higher protection on request |
| Impact resistance | |
| Painting | Powder coating |
| Colour | Enclosure RAL 7035, light grey<br>Profile RAL 7015, slate grey<br>Special colour on request |
| Temperature range | PU-(Polyurethane) seal: -40 °C to +90 °C |
| Other versions on request | EMC<br>SWB<br>Silicone lid seal (-60 °C to +130 °C) |
| Approvals | |
| Dimensions (H x W x D) | 86 x 121 x 60 mm to<br>173 x 299 x 90 mm |
| Accessories | Mounting plate<br>DIN rail<br>Wall holder |
| Included in delivery | Aluminium enclosure consisting of<br>lid incl. seals and stainless-steel lid screws,<br>base including earthing screws. |

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| | **Poyester Standard**<br>(PG 02) | **Polyester Flange**<br>(PG 14) |
|---|---|---|
| Product highlights | • Robust plastic enclosure for automation technology and mechanical engineering<br>• Fixing options for DIN rails and mounting plates<br>• Universal configuration | • Plastic enclosure with flange openings for automation technology<br>• Combination options with other polyester flange enclosures<br>• Snap lock technology |
| Technical data | | |
| Material | glass fibre reinforced thermoset polyester | glass fibre reinforced thermoset polyester |
| Ingress protection | IP66 to EN 60529<br>higher protection on request | IP65 to EN 60529 |
| Impact resistance | from IK07 - IK09 to DIN EN 60068-2-75 | |
| Disruptive strength | 18 KV/mm, IEC 60243-1 | Enclosure: 24 KV/mm, IEC 60243-1 |
| Insulation | fully insulated to VDE 0100 | fully insulated to VDE 0100 |
| Flammability | self extinguishing, UL 94 V-0 | Enclosure: self extinguishing, UL 94 V-0 |
| Surface resistance | $>10^{12}$ Ohm, IEC 60093 | Enclosure: $>10^{11}$ Ohm / IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 7000, squirrel grey<br>Special colour on request | RAL 7032, pebble grey |
| Temperature range | CR-(Chloroprene) seal: -40 °C to +100 °C | CR-(Chloroprene) seal: -40 °C to +100 °C |
| Other versions on request | EMC<br>Silicone lid seal (-60 °C to +130 °C)<br>PU-(Polyurethan) Seal (-40 °C to +90 °C) | Silicone lid seal (-60 °C to +130 °C)<br>PU-(Polyurethans) seal (-40 °C to +90 °C) |
| Approvals | c UL us LISTED, Lloyd's Register | |
| Dimensions (H x W x D) | 55 x 55 x 37 mm to<br>406 x 401 x 201 mm | 170 x 270 x 136 mm to<br>270 x 540 x 150 mm |
| Accessories | Mounting plate<br>DIN rail<br>External mounting brackets<br>Wall holder | Mounting plate<br>DIN rail<br>External mounting brackets<br>Threaded flange, blind flange |
| Included in delivery | Plastic enclosure in glass fibre reinforced polyester consisting of lid,<br>seal, incl. captive +/-stainless steel screws,<br>base with 2 or 4 earthing screws | Plastic enclosure in glass fibre reinforced polyester, consisting of lid, seal,<br>plastic quick-release fastener screws,<br>base with flange openings<br>(Please order flange plate separately),<br>Threaded insert set (4 pcs.) |

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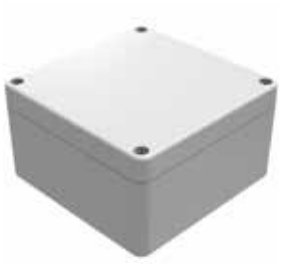


| | **Polyglas/Polycase**<br>(PG 21/22/23/24) | **Mini-Polyglas**<br>(PG 21/22) |
|---|---|---|
| Product highlights | • Enclosure system with hidden external hinge<br>• Standard version or with window<br>• Polycase version with integrated handle | • Mini polyglas enclosure with hidden external hinge for MCR technology<br>• Standard version or with window |
| **Technical data** | | |
| Material | glass fibre reinforced thermoset polyester | glass fibre reinforced thermoset polyester |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Impact resistance | | |
| Disruptive strength | 18 KV/mm, IEC 60243-1 | 18 KV/mm, IEC 60243-1 |
| Insulation | fully insulated to VDE 0100 | fully insulated to VDE 0100 |
| Flammability | self extinguishing, UL 94 V-0 | self extinguishing, UL 94 V-0 |
| Surface resistance | $>10^{12}$ Ohm, IEC 60093 | $>10^{12}$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 7038, agate grey<br>Special colour on request | RAL 7038, agate grey<br>Special colour on request |
| Temperature range | -40°C to +100°C<br>with transparent window -40°C to +80°C | 40°C to +100°C<br>with transparent window -40°C to +80°C |
| Approvals | c UL us LISTED | c UL us LISTED |
| Dimensions (H x W x D) | 300 x 400 x 200 mm to<br>400 x 600 x 250 mm | 120 x 200 x 100 mm to<br>200 x 300 x 170 mm |
| Accessories | Mounting plate<br>External mounting brackets<br>Locks<br>Socket wrench | Mounting plate<br>External mounting brackets<br>Locks<br>Socket wrench |
| Included in delivery | Enclosure consisting of base and door;<br>please order door lock separately,<br>press-in inserts in base for internal and external mounting | Enclosure consisting of base and door;<br>please order door lock separately,<br>press-in inserts in base for internal mounting |

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| |  |  |
|---|---|---|
| | **Polyester cabinets**<br>(PG 21/22) | **CombiBox**<br>(PG 02) |
| Product highlights | • Enclosure system with hinged lid for MCR technology<br>• Standard version or with window panel | • Polyester GRP enclosure systems of polyester resin for industrial application<br>• Two level fitting possibility<br>• Combination of several enclosures by connecting flange |
| Technical data | | |
| Material | glass fibre reinforced thermoset polyester | glass fibre reinforced thermoset polyester |
| Ingress protection | IP65 to EN 60529 | IP66 to EN 60529 |
| Impact resistance | | |
| Disruptive strength | 26 KV/mm, IEC 60243-1 | 18 KV/mm, IEC 60243-1 |
| Insulation | fully insulated to VDE 0100 | fully insulated to VDE 0100 |
| Flammability | self extinguishing, UL 94 V-0 | self extinguishing, UL 94 V-0 |
| Surface resistance | $4x10^{15}$ Ohm, IEC 60093 | $>10^{12}$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 7032, pebble grey<br>Special colour on request | RAL 7000, squirrel grey<br>Special colour on request |
| Temperature range | -55 °C to +90 °C<br>mit Sichtscheibe: -55 °C to +80 °C | CR-(Chloroprene) seal: -40 °C to +100 °C |
| Other versions on request | Silicone lid seal (-60 °C to +130 °C) | Silicone lid seal (-60 °C to +130 °C)<br>PU-(Polyurethane) seal (-40 °C to +90 °C) |
| Approvals | | |
| Dimensions (H x W x D) | 200 x 250 x 150 mm to<br>250 x 300 x 170 mm | 177 x 177 x 145 mm to<br>360 x 360 x 145 mm |
| Accessories | Front plate<br>Mounting plate<br>External mounting brackets<br>Locks, socket wrench | Lid safety strip<br>Mounting plate<br>Mounting frame<br>Connecting flange |
| Included in delivery | Enclosure consisting of base and door;<br>please order door lock separately,<br>press-in inserts in base for internal and external mounting | Plastic enclosure consisting of lid ans base with screws, individual system and height adjustment of mounting frame and mounting plate by 4 fixing elements |

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| | Polyester railway enclosure (PG 62) | E30 Fire protection enclosures (PG E30) |
|---|---|---|
| Product highlights | • Robust plastic enclosure for railway industry<br>• Universal construction for multifunctional use<br>• Certificated acc. to EN 45545 | • Fire protection enclosure from special halogen free polyester material<br>• Enclosure system with general certification to DIN 4102 part 12<br>• Individual modification with special approval ceramic terminal blocks and cable glands |
| **Technical data** | | |
| Material | glass fibre reinforced thermoset polyester | glass fibre reinforced thermoset polyester |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Impact resistance | IK07 to IEC 60068-2-75 | |
| Seal | $>10^{12}$ Ohm, IEC 600 | CR round seal |
| Toxicity | halogen free | halogen free |
| Colour | RAL 7047, telegrey 4 | RAL 2004, orange |
| Temperature range | -40°C to +130°C with silicone seal | -40°C to +90°C with CR round seal |
| Approvals | HL 2 / HL 3 acc. to EN 45545-2 | E30 acc. to DIN 4102-12 |
| Dimensions (H x W x D) | 75 x 80 x 56 mm to<br>250 x 400 x 161 mm | 120 x 120 x 90 mm to<br>250 x 260 x 120 mm |
| Accessories | Mounting plate<br>DIN rail, earth rail<br>External mounting brackets<br>External hinge | Cable glands<br>Clamps |
| Included in delivery | Plastic enclosure in glass fibre reinforced polyester consisting of lid, seal, incl. captive +/-stainless steel screws, base with 2 or 4 earthing screws | Enclosure system with DIN rail and external brackets. Optinal with maching and for the enclosure system with approved terminals and cable glands. |

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| | Polycarbonate Standard<br>(PG 03/33) | Polycarbonate Flange<br>(PG 17) |
|---|---|---|
| Product highlights | • Light plastic enclosure for industrial applications<br>• Polycarbonate enclosure with standard (03) or transparent lid (33)<br>• Optional: EMC version coated | • Light plastic enclosure for industrial applications with flange pre-embossing<br>• Combination options with other polycarbonate flange enclosures<br>• Snap lock technology and flange quick-fixing-system<br>• Standard and transparent lid options |
| Technical data | | |
| Material | Polycarbonate | Polycarbonate |
| Ingress protection | IP66 to EN 60529 (03.08 23 09: IP 65) | IP65 to EN 60529 |
| Impact resistance | IK07 to IEC 62262 | |
| Disruptive strength | >30 KV/mm, IEC 60243-1 | Enclosure: 18 KV/mm, IEC 60243-1 |
| Insulation | fully insulated to VDE 0100 | fully insulated to VDE 0100 |
| Flammability | UL 94 V-2 | Enclosure: self-extinguishing, UL 94 V-0<br>Transparent lid: UL 94 V-2 |
| Surface resistance | $10^{15}$ Ohm, IEC 60093 | $>10^{15}$ Ohm, IEC 60093 |
| Toxicity | halogen free | low-halogen |
| Colour | RAL 7035, light grey<br>Special colour on request | RAL 7000, pebble grey<br>Special colour on request |
| Temperature range | CR-(Chloroprene) seal: -40 °C to +100 °C | CR-(Chloroprene) seal: -40 °C to +100 °C |
| Other versions on request | EMC<br>Silicone lid seal (-60 °C to +130 °C) | |
| Approvals | | |
| Dimensions (H x W x D) | 50 x 52 x 35 mm to<br>230 x 300 x 110 mm | 134 x 170 x 130 mm to<br>269 x 441 x 130 mm |
| Accessories | Mounting plate<br>DIN rail<br>External mounting brackets<br>External hinge | Mounting plate<br>DIN rail<br>External mounting brackets<br>various flanges |
| Included in delivery | Plastic enclosure consisting of lid,<br>seal, incl. captive +/- stainless steel screws,<br>base with 2 self-tapping fastening screws for internal mounting | Complete closed enclosure body with<br>flange break-out points,<br>lid with plastic quick release fastener;<br>4 threaded inserts for internal fixing |

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| |  |  |
|---|---|---|
| | **ABS Standard**<br>(PG 09) | **ABS cabinets**<br>(PG 21/22) |
| Product highlights | • Light plastic enclosure for industrial applications<br>• ABS enclosure with standard lid<br>• Optional: EMC version coated | • Enclosure system with hinged lid for MCR technology<br>• Standard version or with transparent door |
| Technical data | | |
| Material | ABS | ABS |
| Ingress protection | IP66 to EN 60529 (09.08 23 09: IP 65) | IP65 to EN 60529 |
| Impact resistance | | |
| Disruptive strength | 24 KV/mm, IEC 60243-1 | ABS: 24 KV/mm, IEC 60243-1 |
| Insulation | fully insulated to VDE 0100 | fully insulated to VDE 0100 |
| Flammability | UL 94 HB | ABS: UL 94 HB |
| Surface resistance | $4x10^{14}$ Ohm, IEC 60093 | ABS: $4x10^{14}$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 7035, light grey<br>Special colour on request | RAL 7000, squirrel grey<br>Special colour on request |
| Temperature range | CR-(Chloropren) Seal: -40 °C to +60 °C | CR-(Chloroprene) seal: -40 °C to +60 °C |
| Other versions on request | EMC<br>Silicone lid seal (-60 °C to +130 °C) | |
| Approvals | | |
| Dimensions (H x W x D) | 50 x 52 x 35 mm to<br>400 x 360 x 150 mm | 260 x 250 x 150 mm to<br>250 x 300 x 170 mm |
| Accessories | Mounting plate<br>DIN rail<br>External mounting brackets<br>External hinge | Mounting plate<br>Front plate<br>External mounting brackets |
| Included in delivery | Plastic enclosure consisting of<br>lid,<br>seal, incl. captive +/- stainless steel screws,<br>base with 2 self-tapping fastening screws for internal mounting | Enclosure consisting of<br>base and door; please order door lock separately,<br>press-in inserts in base for internal and external mounting |

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| |  |  |
|---|---|---|
| | **Compact enclosures ECO**<br>(PG 60) | **Compact enclosures PCI**<br>(PG 60) |
| Product highlights | • Thermoplastic enclosure for industrial applications<br>• Base with smooth side walls, lid version standard or transparent | • Thermoplastic enclosure for industrial applications<br>• Base with knock-outs for cable glands |
| Technical data | | |
| Material | PS thermoplastic | PS thermoplastic |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Impact resistance | | IK08 |
| Disruptive strength | >30 KV/mm, IEC 60243-1 | >30 KV/mm, IEC 60243-1 |
| Insulation | Protection class II to VDE 0140 | Protection class II to VDE 0140 |
| Flammability | UL 94 HB | UL 94 HB |
| Toxicity | low-halogen | low-halogen |
| Colour | RAL 7035, light grey<br>Special colour on request | RAL 7035, light grey<br>Special colour on request |
| Temperature range | -25 °C to +40 °C | -25 °C to +40 °C |
| Approvals | | |
| Dimensions (H x W x D) | 65 x 65 x 57 mm to<br>254 x 361 x 165 mm | 65 x 65 x 57 mm to<br>254 x 361 x 111 mm |
| Accessories | Mounting plate<br>DIN rail<br>External mounting brackets<br>External hinge | Mounting plate<br>DIN rail<br>External mounting brackets<br>External hinge<br>Double membrane connecting piece |
| Included in delivery | Enclosure consisting of lid,<br>seal, incl. captive +/-lid screws,<br>set of screws for fastening incl. sealing caps | Enclosure consisting of lid,<br>seal, incl. captive +/-lid screws,<br>set of screws for fastening incl. sealing caps |

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## Polyamide enclosures CS Box

(PG 31)

**Product highlights**

- Break proof polyamide enclosure for individual fitting of 22,5 mm control switches (lid mounting or base mounting) and pilote lamps
- Execution with 22.5 mm lid holes or without lid holes
- Gland holes M20 / M25 on two sides

**Technical data**

| | |
|---|---|
| Material | Polyamide 6 |
| Ingress protection | IP65 to EN 60529 |
| Impact resistance | |
| Flammability | UL 94 V-2 |
| Surface resistance | >$10^{12}$ Ohm, IEC 60093 |
| Toxicity | halogen free |
| Colour | Base: RAL 9005, jet black<br>Top: RAL 7035, light grey |
| Temperature range | CR-(Chloroprene) seal: -20 °C to +60 °C |
| Approvals | |
| Dimensions (H x W x D) | 110 x 110 x 85 mm to<br>110 x 230 x 85 mm |
| Accessories | DIN rail<br>Bearer plate<br>Lid safety strip<br>Blind plug set |
| Included in delivery | Enclosure consisting of<br>lid and base with screws base with M20 and M25 hole for cable entry;<br>mounting possibility of TS 35/7,5, DIN rails and adaption plates of serveral manufacturer |

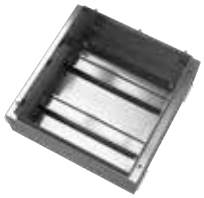
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# Stainless steel RMS

## The ROSE Modular System



Highly variable due to 25 base sizes
with over 40,000 possible combinations



- Flexible mounting options in the base and mounting holes for wall mounting
- Optional screwed or hinged lid design
- Take advantage of our extensive product services:
  - mechanical machining
  - Surface finishing
  - Assembly



| | |
|---|---|
| Material | 1.4301/304 |
| Surface | grain 320, grinded |
| Ingress protection | screwed IP66 / IP69<br>hinged IP66 |
| Accessories | External mounting bracket<br>Flanges<br>Mounting plates<br>DIN rails |





**Dimensions**

| W x H x D (mm) | W x H x D (mm) | W x H x D (mm) |
|---|---|---|
| 200 x 200 x 80 | 300 x 300 x 160 | 300 x 600 x 200 |
| 300 x 200 x 80 | 400 x 300 x 160 | 400 x 500 x 200 |
| 200 x 200 x 120 | 300 x 500 x 160 | 400 x 600 x 200 |
| 300 x 200 x 120 | 400 x 400 x 160 | 500 x 500 x 200 |
| 400 x 200 x 120 | 300 x 600 x 160 | 500 x 600 x 200 |
| 300 x 300 x 120 | 300 x 300 x 200 | 500 x 500 x 260 |
| 400 x 300 x 120 | 400 x 300 x 200 | 600 x 600 x 260 |
| 300 x 500 x 120 | 500 x 300 x 200 | |
| 300 x 600 x 120 | 400 x 400 x 200 | |





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| | **Multitronic**<br>(PG 77) | **Multitronic TS/TS-F**<br>(PG 77) |
|---|---|---|
| Product highlights | • Aluminium EMC mounting enclosure for MCR-technology<br>• Integrated guide grooves for PCB´s<br>• External mounting slots with spring nuts | • Aluminium electronic enclosure for MCR technology<br>• Variable length version using profile technology<br>• Single or clam-shell enclosure construction with heat sink option |
| Technical data | | |
| Material | DIN EN 573 EN AW-AlMgSi | DIN EN 573 EN AW-AlMgSi |
| Ingress protection | IP40 to EN 60529 | IP40 to EN 60529 |
| Painting | Powder coating | Powder coating |
| Colour | RAL 9005, jet black | RAL 9005, jet black |
| Temperature range | -40 °C to +100 °C | -40 °C to +100 °C |
| Approvals | | |
| Dimensions (H x W x D) | 105 x 185 x 36 mm to<br>208 x 185 x 54 mm | 46 x 105 x 72 mm to<br>105 x 185 x 87 mm |
| Accessories | Mounting feet<br>Table feet<br>Snap foot | Mounting feet<br>Table feet<br>Snap foot |
| Included in delivery | Enclosure with two aluminium lids, screwed. | Enclosure with two aluminium lids, screwed. |

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| | **Multitronic SE**<br>(PG 77) | **Panel mounting enclosure SE 200**<br>(PG 65) |
|---|---|---|
| Product highlights | • Aluminium electronic enclosure for MCR-technology<br>• Variable depth version using profile technology | • Aluminium enclosure for MCR-technology<br>• Variable width and height version using<br>• Constant profile depths 85 and 175 mm |
| Technical data | | |
| Material | DIN EN 573 EN AW-AlMgSi | DIN EN 573 EN AW-AlMgSi |
| Ingress protection | Front side: IP65 to EN 60529<br>Mounting side: IP40 to EN 60529 | Front side: IP65 to EN 60529<br>Mounting side: IP40 to EN 60529 |
| Painting | Powder coating | Powder coating |
| Colour | RAL 9005, jet black | RAL 9005, jet black |
| Temperature range | -30 °C to +80 °C<br>by front cover frame: -20 °C to +80 °C | -40°C to +80°C |
| Approvals | | |
| Dimensions (H x W x D) | 96 x 82 x 48 mm to<br>96 x 138 x 96 mm | 96 x 72 x 85 mm to<br>192 x 336 x 175 mm |
| Accessories | Front plate<br>Front cover frame | Front plate<br>External fixing set<br>PCB holder |
| Included in delivery | Enclosure with seal (for front plate and for panel mounting) rear panel lid and mounting bracket (2x) | Enclosure with screwed rear panel;<br>front plate and fixing elements please order separately |

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| |  |  |
|---|---|---|
| | **NoVoTronic**<br>(PG 07) | **NoVoTronic 19**<br>(PG 07) |
| Product highlights | • Aluminium profile enclosure system in 5 dimensions for data, PC and MCR technology<br>• External screw channels guarantee internal area without splinter<br>• Integrated guide grooves for PCB's<br>• Variable length by profile system | • Variable possibility of combine connection compartment and profile<br>• 2 enclosure sizes 28HP and 42HP<br>• Optional with transparent cover<br>• Variable length by profile technic |
| Technical data | | |
| Material | Lid: DIN EN 1706 EN AC-AlSi 12 (Fe)<br>Enclosure profile: DIN EN 573 EN AW-AlMgSi | Enclosure profile: DIN EN 573 EN AW-AlMgSi<br>Connection compartment: DIN EN 1706 EN AC-AlSi 12 (Fe) |
| Ingress protection | IP65 to EN 60529<br>higher protection on request | IP 65 to EN 60529<br>Outdoor application on request |
| Painting | Powder coating | Powder coating |
| Colour | RAL 3003, ruby red for the multi-functional profile, RAL 9005, jet black | RAL 7043, traffic grey B |
| Temperature range | -40 °C to +90 °C<br>with transparent cover: -40 °C to +60 °C | -40°C to +90°C<br>with transparent cover: -40°C to +60°C |
| Approvals | | |
| Dimensions (H x W x D) | 106 x 49 x 120 mm to<br>233 x 121 x 350 mm<br>other profile length optional | 256 x 270 x 110 mm to<br>327 x 270 x 326 mm<br>other profile length optional |
| Accessories | Wall holder, wall profile<br>foot / connection element<br>PCB profile adjustable<br>Battery insert unit<br>Transparent cover | Board guides<br>Locks, External mounting brackets<br>19" mounting frame<br>Mouting feet, table feet |
| Included in delivery | Enclosure with 2 Aluminium diecast lids and 2 multi-function profiles, not screwed | Enclosure system - depending on version either with connection compartment, swivel intermediate frame, profile and screwed lid. |

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| |  |  |
|---|---|---|
| | **Profitronic I**<br>(PG 07) | **Profitronic I/F**<br>(PG 07) |
| Product highlights | • Aluminium electronic enclosure for telecommunication and MCR technology<br>• Variable length version using profile technology<br>• Different lid versions depending on enclosure type<br>• Integrated guide grooves for PCBs | • Aluminium electronic enclosures for MCR technology and automation engineering<br>• Variable length version using profile technology<br>• Enclosure system with different front lid and rear panel versions<br>• Integrated guide grooves for PCB's |
| Technical data | | |
| Material | DIN EN 573 EN AW-AlMgSi | DIN EN 573 EN AW-AlMgSi |
| Ingress protection | with aluminium cast lid: IP65 to EN 60529<br>with sheet lid: IP40 to EN 60529 | with aluminium cast lid: IP65 to EN 60529<br>with sheet lid: IP40 to EN 60529 |
| Painting | Powder coating | Powder coating |
| Colour | RAL 9005, jet black | Enclosure lid: RAL 7030, stone grey<br>Enclosure profile: RAL 7035, light grey |
| Temperature range | -30 °C to +80 °C | -40°C to +80°C |
| Other versions on request | EMC | EMC |
| Approvals | | |
| Dimensions (H x W x D) | 105 x 175 x 45 mm to<br>105 x 195 x 49 mm<br>other profile length optional | 105 x 129 x 84,5 mm to<br>204 x 227 x 166,5 mm<br>other profile length optional |
| Accessories | | Mounting feet<br>Table feet<br>Transparent cover |
| Included in delivery | Enclosure with two sheet aluminium or cast lids, screwed | Enclosure with two sheet aluminium or cast lids, screwed; version with protective collar lid have self-adhesive anodized aluminium front panel is added separate |

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| |  |  |
|---|---|---|
| | **Profitronic 19, 19U**<br>(PG 07) | **Pult-Profitronic**<br>(PG 07) |
| Product highlights | • Aluminium electronic enclosure for 19" fittings in 3 sizes (height 3HU) 19, 28 and 42 HP<br>• Variable length version using profile technology<br>• Standard construction or version with connection compartment<br>• Optional polycarbonate transparent cover | • Aluminium electronic enclosure for console applications<br>• Variable length version using profile technology<br>• Enclosure with integrated guide grooves for PCBs |
| Technical data | | |
| Material | Enclosure profile: DIN EN 573 EN AW-AlMgSi<br>Connection compartment: DIN EN 1706 EN AC-AlSi 12 (Fe) | DIN EN 573 EN AW-AlMgSi |
| Ingress protection | IP65 to EN 60529<br>Outdoor application on request | IP65 to EN 60529 |
| Painting | Powder coating | Powder coating |
| Colour | Enclosure body and connection compartment:<br>RAL 7035, lightgrey<br>Enclosure lid and external brackets:<br>RAL 7030, stone grey | RAL 7035, light grey |
| Temperature range | Lid seals: -40°C to +80°C<br>Transparent cover: -40°C to +70°C | -40°C to +80°C |
| Other versions on request | EMC | EMC |
| Approvals | | |
| Dimensions (H x W x D) | 148 x 236 x 241 mm to<br>265 x 276 x 241 mm<br>other profile length optional | 201 x 241 x 121 mm to<br>201 x 483 x 121 mm<br>other profile length optional |
| Accessories | Board guides<br>Locks, external mounting brackets<br>Insulating strip<br>Mounting feet, table feet | Clamps |
| Included in delivery | Enclosure system - depending on version either with cast aluminium lids, connection compartment or transparent cover, fixing elements please order separately | Enclosure system with 2 cast aluminium lids and front plate screwed |

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## Wavetronic

(PG 07)

**Product highlights**

- Aluminium desktop enclosure for MCR technology
- Individual height versions by profile technology
- Stacking capability using special foot shape
- Contact-uninsulated internal enclosure walls

**Technical data**

| | |
|---|---|
| Material | Half shell: DIN EN 1706 EN AC-AlSi 12 (Fe)<br>Side profiles: DIN EN 573 EN AW-AlMgSi |
| Ingress protection | IP40 to EN 60529 |
| Painting | Powder coating |
| Colour | Enclosure RAL 7035, light grey, foot element: RAL 7024, graphite grey, or<br>enclosure RAL 9005, jet black, foot element: RAL 3003, ruby red |
| Temperature range | -40°C to +80°C |
| Other versions on request | EMC |
| Approvals | |
| Dimensions (H x W x D) | 324 x 268 x 55 mm to<br>324 x 268 x 193,5 mm<br>other profile length optional |
| Accessories | Front plate<br>19" insert set<br>Mounting feet<br>Carrying handle |
| Included in delivery | Enclosure system with foot/head elements,<br>front plate/rear wall please order separately |

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## Operating and display enclosures for many different applications

Every day we, as a premium supplier of operating and display enclosures, and also of supporting-arm systems, are working on individual solutions with, at the same time, short delivery times, market-orientated prices and reliable supply capability for standard components.

ROSE has also developed an extremely broad range of control enclosure and supporting-arm products.

In the field of supporting arms, customers can select from nine different systems, covering a load range from 0 to 200 kg and with a maximum reach of 3 m.

Six different control enclosures are available to accommodate machine control systems, and can be supplied individually machined for you from batch sizes of one and upward. The range is augmented by our Moterm II mobile and height-adjustable stand system.

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| |  |  |
|---|---|---|
| | **SL 4000**<br>(PG 20) | **SL 3000**<br>(PG 20) |
| Product highlights | • Modern enclosure system for control and display systems<br>• Flexible size variability in height and width, 3 enclosure depths<br>• Easy mounting of door hinge<br>• Integrated handle system | • Universal control enclosure for automation engineering<br>• Variable size in height, width and depth<br>• Hinged door profile at front and rear<br>• Front panel insertion from front and rear |
| Technical data | | |
| Material | Profile: DIN EN 573 EN AW-AlMgSi<br>Cast corners: DIN EN AC-AlSi 12 Cu 1 (Fe) | Profile: DIN EN 573 EN AW-AlMgSi<br>Cast corners: DIN EN 1706 EN AC-AlSi 12 Cu 1 (Fe) |
| Ingress protection | IP65 to EN 60529 | IP65 to EN 60529 |
| Seal | CR or PU foam | CR or PU foam |
| Painting | Powder coating or natural anodised | Powder coating or natural anodised |
| Colour | Profile: optional RAL 7035, light grey, or natural anodised<br>Corner element: optional RAL 7035, light grey, or RAL 9007, grey aluminium<br>Special colour on request | RAL 7035, light grey |
| Temperature range | -30 °C to +80 °C | -30 °C to +80 °C |
| Approvals | c UL us LISTED | c UL us LISTED |
| Mounting depth | 55 mm to 270 mm | 125 mm to 375 mm |
| Accessories | Handles<br>Wall holder<br>Aerator set<br>Keyboard drawer<br>Data interfaces | Handles<br>Coupling flange<br>Adapter plate<br>Locking plate<br>Keyboard drawer<br>Data interfaces |
| Included in delivery | Complete enclosure system incl. corners, seals, fixing elements, rear panel or door, front panel fixing set. | Enclosure body with rear wall, fixing elements, cover profile with corners |

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| |  |  |
|---|---|---|
| | **SL 2000**<br>(PG 19) | **ComTronic**<br>(PG 20) |
| Product highlights | • Enclosure system for control and display fittings<br>• Variable size available in width and depth<br>• All-round adaption capabilities for accessories<br>• Front panel insertion from front and rear | • Aluminium profile compact commander in 2 widths<br>• Applications: Compact control equipment and display systems<br>• Standard integrated cooling system<br>• Variable length execution by profile technology |
| Technical data | | |
| Material | Profile: DIN EN 573 EN AW-AlMgSi<br>Front plate, rear wall: DIN EN 573 EN AW-AlMg3<br>Corner: DIN EN 1706 EN AC-AlSi 12 (Fe) | Enclosure profile: DIN EN 573 EN AW-AlMgSi<br>Lid: DIN EN 1706 EN AC-AlSi 12 (Fe) |
| Ingress protection | IP65 to EN 60529 | IP65 to EN 60529 |
| Seal | CR seal | |
| Painting | Powder coating | Powder coating |
| Colour | RAL 7035, light grey<br>Handle tube: powdered RAL 3003, ruby red | Lid and base: RAL 7035, light grey<br>Multi-functional profile: RAL 9005, jet black |
| Temperature range | -30 °C to +80 °C | -30 °C to +65 °C |
| Approvals | c UL us LISTED | c UL us LISTED |
| Dimensions (H x W x D) | 155 x 483 mm to 267 x 483 mm<br>in 3 enclosure depth: 90 mm, 120 mm, 195 mm | 442 x 365 x 118 mm to<br>612 x 453 x 153 mm |
| Mounting depth | 65 mm, 95 mm, 170 mm | |
| Accessories | Handle set<br>Coupling flange<br>Control attachment set | Handle set<br>Front plate<br>Wall holder<br>Locking plate |
| Included in delivery | Enclosure body with rear panel or door, front panel fixing set, cover profile and T-groove cover | Profile enclosure body, on rear side door or screwed wall, fastening elements for front panel. Please order front panel separately |

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| |  |  |
|---|---|---|
| | **Commander 1**<br>(PG 13) | **Commander 1F**<br>(PG 13) |
| Product highlights | • Small control enclosure in aluminium with protective bumper bars<br>• Robust aluminium diecast enclosure body with front plate<br>• Transparent cover and handle set (optional) | • Small control enclosure in aluminium with front frame for front panels and keypads<br>• Robust aluminium diecast enclosure body<br>• Handle set (optional) |
| Technical data | | |
| Material | DIN EN 1706 EN AC-AlSi 12 (Fe) | DIN EN 1706 EN AC-AlSi 12 (Fe) |
| Ingress protection | IP65 to EN 60529<br>with transparent cover IP54 | IP65 to EN 60529 |
| Painting | Powder coating | Powder coating |
| Colour | Body: RAL 7038, agate grey<br>Front frame: RAL 7043, traffic grey B<br>Special colour on request | Body: RAL 7038, agate grey<br>Front frame: RAL 7043, traffic grey B<br>Special colour on request |
| Temperature range | PU-(Polyurethane) seal: -40 °C to +90 °C<br>Transparent cover -10 °C to +50 °C | PU-(Polyurethane) seal: -40 °C to +90 °C |
| Other versions on request | Silicone lid seal (-60 °C to +130 °C)<br>CR-(Chloroprene) seal (-40 °C to +100 °C) | Silicone lid seal (-60 °C to +130 °C)<br>CR-(Chloroprene) seal (-40 °C to +100 °C) |
| Approvals | | |
| Dimensions (H x W x D) | 230 x 100 x 128 mm to<br>310 x 400 x 158 mm | 260 x 160 x 108 mm to<br>310 x 400 x 158 mm |
| Accessories | Front plate<br>Internal hinge<br>External hinge<br>Locks | Front plate<br>Internal hinge<br>External hinge<br>Locks |
| Included in delivery | Enclosure body with front frame and fastening screws (2 or 4 pcs.). Please order front panel separately | Enclosure body with two-part front frame, enclosure and fastening screws (2 or 4 pcs.). Please order front panel separately |

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| |  |  |
|---|---|---|
| | **Commander KSSC**<br>(PG 37) | **Commander 410**<br>(PG 56) |
| Product highlights | • Stainless steel control enclosure based on switch gear cabinet KSS<br>• Including reinforcement plate and drill hole for ROSE GTH suspension system<br>• Optional individual sizes and versions from 25 off | • Stainless steel Commander with screwed rear wall<br>• Droop<br>• High material quality |
| Technical data | | |
| Material | Stainless steel 1,25 mm bzw. 1,5 mm; 1.4301/304 | Stainless steel 1.4404/316L |
| Ingress protection | IP65 to EN 60529 | IP66 / IP69K to EN 60529 |
| Surface | grinded, grain 240 | grinded, grain 240 |
| Temperature range | VMQ-(Silicone) seal: -40°C to +80°C | VMQ-(Silicone) seal: -40°C to +80°C |
| Dimensions (H x W x D) | 200 x 300 x 155 mm to<br>600 x 760 x 210 mm | 250 x 380 x 150 mm to<br>450 x 440 x 220 mm |
| Accessories | | Mounting set |
| Included in delivery | Enclosure system including reinforcement plate and GTH coupling hole with door, double ward lock | Enclosure with screwed rear wall, silicone seal - depending on version with closed or individual manufactured front, internal fixing and coupling hole for suspension system GTH 48 |

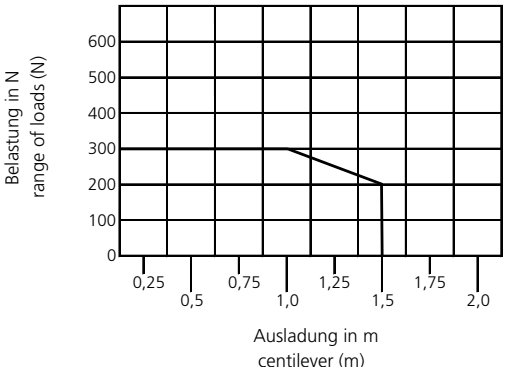
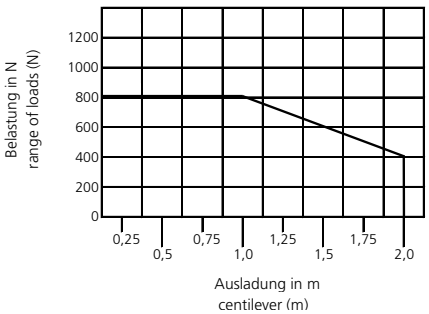
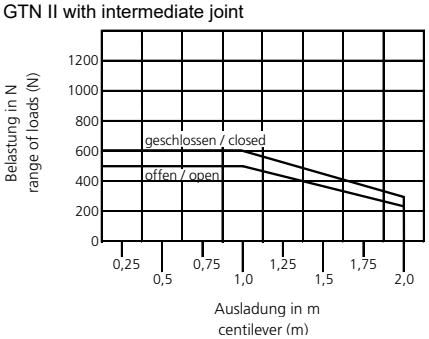
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| |  |  |
|---|---|---|
| | **Commander 420**<br>(PG 56) | **Commander 450**<br>(PG 56) |
| Product highlights | • Stainless steel Commander with door for industrial applications<br>• High material quality<br>• Optional handle set | • Stainless steel Commander for industrial controls<br>• Outstanding price / performance ratio<br>• Individual handle systems |
| Technical data | | |
| Material | Stainless steel 1.4301/304<br>other materials on request | Stainless steel 1.4301/304<br>other materials on request |
| Ingress protection | IP65 to EN 60529 | IP65 to EN 60529 |
| Surface | grinded, grain 240 | grinded, grain 240 |
| Temperature range | VMQ-(Silicone) seal: -40°C to +80°C | VMQ-(Silicone) seal: -40°C to +80°C |
| Approvals | | |
| Dimensions (H x W x D) | 250 x 380 x 150 mm to<br>450 x 500 x 220 mm | 400 x 300 x 120 mm to<br>500 x 500 x 200 mm |
| Accessories | Handle set<br>Mounting set | Handle / handle set |
| Included in delivery | Enclosure with door, rect angle, silicone seal - depending on version with closed or individual manufactured front, internal fixing and coupling hole for suspension system GTH 48 | Enclosure with door, handles (order separately) and individual machining for installation and suspension system |

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| | GTS<br>(PG 49.44) | GTN II<br>(PG 49.47) |
|---|---|---|
| Product highlights | • Aluminium profile suspension system for light/ medium loads up to 30 kg<br>• Product family GTN / GTS / GTL<br>• Combined with all Commander systems<br>• Adjustable version for individual loads | • Design aluminium suspension system<br>• Closed profile system / profile with free accessible cable duct<br>• Can be combined with all control enclosures |
| Technical data | | |
| Material | Connecting tube: DIN EN 573 EN AW-AlMgSi<br>Components: DIN EN 1706 EN AC-AlSi 12 (Fe) | Connecting tube: DIN EN 573 EN AW-AlMgSi<br>Components: DIN EN 1706 EN AC-AlSi 12 (Fe)<br>Cover profile: TPE |
| Ingress protection | IP54 to EN 60529 | IP54 to EN 60529 |
| Seal | CR or PU foam | CR or PU foam |
| Painting | Powder coating | Powder coating |
| Colour | Tube, components: RAL 7035, light grey | Tube, components: RAL 7035, light grey<br>Cover profile: RAL 9005, jet black |
| Free cable passage | Connecting tube: 53 x 19 mm<br>System components: 53 x 19 mm | Connecting tube: open 51 x 34 mm<br>Connecting tube: closed 55 x 56 mm<br>System components: 53 x 48 mm |
| Max. statische Belastung | 30 kg | 80 kg |
| Load diagram |  | GTN II without intermediate joint<br><br>GTN II with intermediate joint<br> |

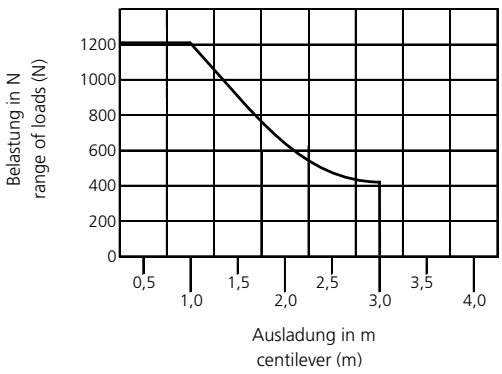
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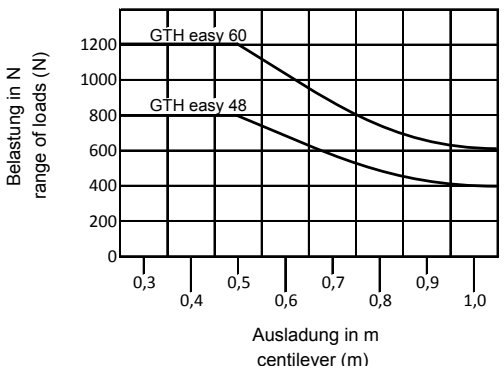




| | GTL<br>(PG 49.62) | GTH 48 easy / GTH 60 easy<br>(PG 57) |
|---|---|---|
| Product highlights | • Aluminium profile suspension system for heavy loads<br>• Can be combined with GTN II suspension system/ heightadjustment system GTV and control enclosures<br>• Optional adjustment for horizontal alignment of the profile | • Increased load range compared to GTH 48/60<br>• Significantly reduced assembly effort<br>• Reduction of edges and columns of the system and less dead space<br>• Alternative to self-made construction solutions<br>- More sturdy<br>- Safer<br>- More cost efficient |
| Technical data | | |
| Material | Connecting tube: DIN EN 573 EN AW-AlMgSi<br>Components: DIN EN 1706 EN AC-AlSi 12 (Fe) | Tube: Stainless steel 1.4301<br>System components: Stainless steel 1.4301 |
| Ingress protection | IP54 to EN 60529 | IP69 to EN 60529 |
| Seal | CR or PU foam | CR or PU foam |
| Painting | Powder coating | |
| Colour | Tube an components: RAL 7035, light grey<br>Cover profile: RAL 9005, jet black | |
| Surface | | Tube: grinded, grain 240 |
| Free cable passage | Tube and components: Ø 70 mm | GTH 48: 41 mm<br>GTH 60: 53 mm |
| Temperature range | | -25 °C to +60 °C |
| Max. static load | 125 kg | |

Load diagram



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| |  |  |
|---|---|---|
| | **GTV light**<br>(PG 49.84) | **GTV**<br>(PG 49.85) |
| Product highlights | • Step less adjustment<br>• Adjustable end stops<br>• Adjustable load range<br>• Possible subsequent integration into existing GTN II system | • Height adjustment system for making work-place ergonomic<br>• Can be combined with GTL / GTN II suspension system and control enclosures<br>• Option of lockable or freely positioned version |
| Technical data | | |
| Material | | Connecting plates: EN 10088-2, Stainless steel 1.4301<br>Components: AC 44300, DIN EN 1706 (AlSi12)<br>Cable channel cover sheet: Polystyrol |
| Ingress protection | IP54 to EN 60529 | IP40 to EN 60529 |
| Load range | 5 - 25 kg | 20 - 60 kg |
| Life time | 20.000 double strokes | |
| Painting | | Powdered |
| Colour | Diecast components: RAL 7035, light grey<br>Profile: natural anodised<br>Caps: RAL 7016, anthracite<br>Other colours on request | Connecting plates: RAL 7035<br>Cast parts: RAL 7035 / RAL 9007<br>Cable channel cover sheet: RAL 9005 |
| Free cable passage | approx. 40 x 20 mm | approx. 40 x 30 mm |
| Temperature range | up to ca. 80 °C | up to ca. 80 °C |
| System length | 454 mm, 573 mm, 714 mm<br>(depending on weight classes) | 1001 mm |
| System stroke | 400 mm, 600 mm, 800 mm | 400 - 944 mm |

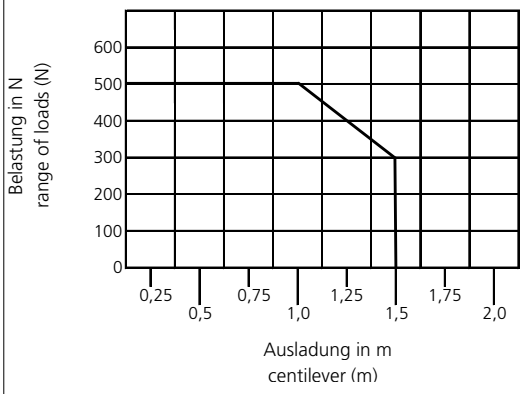
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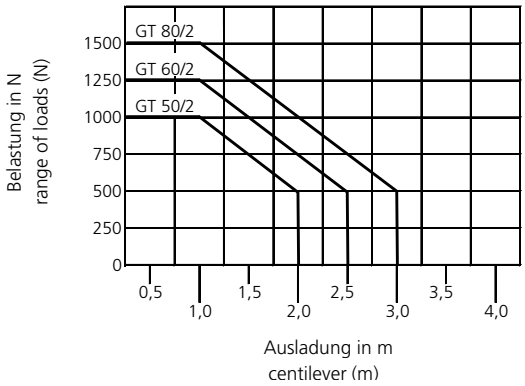




| | GT 48/2<br>(PG 49.49) | GT 50/2 / GT 60/2 / GT 80/2<br>(PG 49.51 / 49.61 / 49.81) |
|---|---|---|
| Product highlights | • Industrial circular tube system for control enclosures<br>• Modular construction for individual components<br>• Protected internal cable routing | • Robust industrial square suspension arm system for system components<br>• Modular construction for individual components<br>• High loading capacity, large extention |
| **Technical data** | | |
| Material | Connecting tube: Steel 48 x 4 mm DIN 2393-St. 37<br>Components: DIN EN 1706 EN AC-AlSi 12 (Fe) | Connecting tube: square steel tube similar to DIN EN 10305-5<br>Wall thickness 5 mm<br>Components: Cast iron with spheroidal graphite or cast aluminum |
| Ingress protection | IP54 to EN 60529 | IP65 to EN 60529 |
| Surface | CR or NBR | CR or NBR |
| Painting | Powder coating | Powder coating |
| Colour | Tube: galvanized<br>Components: RAL 7043, traffic grey B<br>Special colour on request | Tube: galvanized<br>Components: RAL 7043, traffic grey B<br>Special colour on request |
| Free cable passage | Connection tube: 40 mm diameter<br>System elements: 40 mm diameter | GT 50/2: 16 cm² (40 x 40 mm)<br>GT 60/2: 25 cm² (50 x 50 mm)<br>GT 80/2: 49 cm² (70 x 70 mm) |

Load diagram



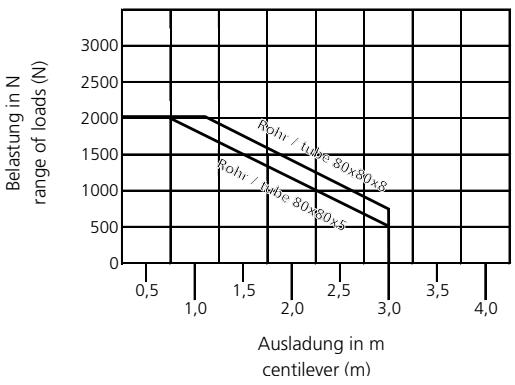
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| | **GTK 80**<br>(PG 49.90) | **Flat Panel Adapter**<br>(PG 50) |
|---|---|---|
| Product highlights | • Industrial square suspension system with open cable duct for heavy loads<br>• Modular construction with cable channel<br>• Floor, top-mounting or wall exit options | • Turn-tilt coupling for the individual connection between enclosure and ROSE suspension system<br>• Optional with angle adjustment +/- 20°<br>• Processing of the adapter is possible, for example drill holes on the sides of the terminal compartment, e.g. for cable glands |
| Technical data | | |
| Material | Connecting tube: square ST 37 similar to DIN EN 10305-5<br>Wall thickness 5 mm or 8 mm<br>Components: spheroidal graphite cast iron and/or cast aluminium<br>Cable duct / cover: aluminium extruded profile<br>Bearing: ball bearing,<br>Bellow: textile fabric | Connection compartment: stainless steel 304<br>Angle adjustment: stainless steel 304<br>Lid: ABS |
| Ingress protection | with top-mounting flange: IP65 to EN 60529 | With GTS coupling: IP 54<br>With GTN II coupling: IP 54<br>With GTH coupling: IP 65 |
| Seal | CR or NBR | CR and/or NBR |
| Painting | Powder coating | Powder coating |
| Colour | Cable duct / cover: RAL 7035, light grey<br>Components: RAL 7043, traffic grey B<br>Special colour on request | Connection compartment: RAL 7035, optional special colour<br>Angle adjustment: RAL 7035 , optional special colour<br>Lid: RAL 7021 |
| Max. static load | | 25 kg |
| Free cable passage | 57 cm² | GTS: 53x19mm<br>GTH: Ø 41 mm |

Load diagram



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| | Incling adapter<br>(PG 50) | Moterm II<br>(PG 50) |
|---|---|---|
| Product highlights | • Inclining adapter for individual connection between enclosure and ROSE suspension systems or for wall mounting<br>• Simply handling by open design<br>• Stepped adjuster allows inclination to suit your application | • Mobile stand system for control components<br>• Version with 4 rollers or with foot stand<br>• Fixed or height-adjustable version with pneumatic spring<br>• Optionally foot stand for anchoring |
| Technical data | | |
| Material | Stainless steel 1.4301<br>Sheet steel 2,5 mm | Base and stand profile: Aluminium profile system<br>DIN EN 573 EN AW-AlMgSi |
| Ingress protection | IP54 to EN 60529 | IP54 to EN 60529 |
| Painting | Powder coating | Stand profile: plain anodised, power-coated optional |
| Colour | RAL 9005, jet black | Foot: RAL 9005, jet black |
| Max. static load | 8 or 10 kg | 8 - 80 kg |
| System height | | 908 - 1149 mm (depending on type) |
| Stroke | | up to 242 mm (depending on type) |
| Version | Mounting onto walls<br>Mounting on GT 48/2<br>Mounting on GTK electronic<br>Mounting on GTN II | |

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| | **Taguan**<br>(PG 27) | **Beluga**<br>(PG 27) |
|---|---|---|
| Product highlights | • ABS hand held enclosure for data aquisition and measurement<br>• With integrated battery compartment<br>• Version with or without display opening<br>• Optional EMC version with internal coating | • Polyamide hand held enclosure for MCR- and automation engineering<br>• Version with or without display opening<br>• Prepared for acceptance of keypads/silicone switch mats<br>• Optional EMC version with internal coating and EMC-seal |
| Technical data | | |
| Material | ABS | Polyamide |
| Ingress protection | IP40 to EN 60529 | IP65 to EN 60529 |
| Flammability | UL 94 HB | UL 94 V-2 |
| Surface resistance | $4x10^{14}$ Ohm, IEC 60093 | $10^{12}$ Ohm, IEC 60093 |
| Colour | Top-/ bottom part, batterie compartment lid, head-/ shaft cover: RAL 5020, ocean blue,<br>keyboard panel, battery compartment/battery pack: RAL 7024 | RAL 7021, black grey |
| Temperature range | -40 °C to +80 °C | -40 °C to +60 °C |
| Dimensions (H x W x D) | 80 / 70 x 125 x 36,7 / 28,5 mm to<br>97 / 70 x 229 x 52,5 / 37,5 mm | 106/75 x 187 x 50 mm to<br>380 x 117 x 68 mm |
| Accessories | Cover<br>Switch mat set<br>Battery compartment empty<br>Wrist strap | Cable gland with bending protection<br>Wall holder<br>Battery holder<br>Hand strap |
| Included in delivery | 5-part enclosure with top and base, battery compartment, battery compartment cover, head and shaft cover, fixing and enclosure screws. Open version incl. display screen and punched seal. | Double-skinned enclosure with top and base unit, each with fixing domes, fastening and enclosure screws. |

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| |  |  |
|---|---|---|
| | **Limanda**<br>(PG 27) | **Pilot 250**<br>(PG 29) |
| Product highlights | • Polyamide hand held enclosure for MCR, automation engineering and data acquisition<br>• For installations and command devices mobile and stationary applicable<br>• Variable mounting depths | • Polyamide hand held enclosure for MCR- and automation engineering<br>• Large fitting space<br>• Version with closed or front frame lid<br>• Rear battery compartment |
| Technical data | | |
| Material | Enclosure: Polyamide<br>border profile: NBR | Polyamide |
| Ingress protection | IP65 to EN 60529 | IP65 to EN 60529 |
| Flammability | UL 94 V-2 | UL 94 HB |
| Surface resistance | $10^{12}$ Ohm, IEC 60093 | |
| Colour | RAL 7021, black grey<br>border profile: RAL 9005, jet black | Base and lid: RAL 7021, black grey<br>rear cover: RAL 5003, sapphire blue |
| Temperature range | -20°C to +60°C | -40 °C to +60 °C |
| Other versions on request | EMC | EMC |
| Approvals | | |
| Dimensions (H x W x D) | 270 x 248 x 64 mm to<br>311 x 281 x 97 mm | 140/120 x 280 x 86 mm |
| Accessories | Holder<br>Carrying strap<br>Quiver<br>Front plate<br>Intermediate frame<br>Inclining adapter | Cable gland with bending protection<br>Magnet holder<br>Battery holder<br>Wall holder |
| Included in delivery | Clam sheel enclosure with top and base, each with fixing domes incl. seals and border profile,<br>3 cover flaps for interface garages, screws and fixing materials for front panel mounting. | Double-skinned enclosure with top and base unit, each with fixing domes, battery compartment lid, fastening and enclosure screws |

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| | **Pilot 50**<br>(PG 29) | **Pilot 10/20/30**<br>(PG 29) |
|---|---|---|
| Product highlights | • Polyamide / PVC hand held enclosure for MCR and automation engineering<br>• Large fitting space<br>• Variable length using profile technology<br>• Robust design | • Hand held enclosure for MCR- and automation engineering<br>• Robust design (Polyamide or polyester)<br>• Version with handle and integrated cable entry (Pilot 10, 20 standard) |
| Technical data | | |
| Material | Polyamide 6<br>PVC | Pilot 10 and Pilot 20: Polyamide<br>Pilot 30: Polyester |
| Ingress protection | IP65 to EN 60529 | IP65 to EN 60529 |
| Flammability | End covers: UL 94 HB | Pilot 10 and Pilot 20: UL 94 HB<br>Pilot 30: self-estinguishing UL 94 V-0 |
| Colour | End covers: RAL 1003, signal yellow<br>PVC profiles: RAL 9005, jet black | Pilot 10 and 20: RAL 1003, signal yellow<br>Pilot 30: RAL 1021, rape yellow |
| Temperature range | -20 °C to +70 °C | -40 °C to +60 °C |
| Dimensions (H x W x D) | 191 x 280 x 76 mm to<br>191 x 440 x 76 mm<br>other profile length on request | 115/75 x 93 x 200 mm to<br>164/75 x 116 x 295 mm |
| Accessories | Wall holder<br>Cable gland reduction<br>PCB fixing set<br>Front plate, rear wall | Cable gland with bending protection<br>Wall holder<br>Mounting plate |
| Included in delivery | Enclosure system consisting of polyamide internal enclosure with end covers, two side PVC cover profiles, Alucobond composite front plate, rear wall, 2 external end covers, with M 25 x 1,5 threaded hole for cable gland | Pilot 10/20: enclosure with handle, including cable gland M 20 x 1,5, front plate with fastening screw and wall holder<br>Pilot 30: two-part Polyester enclosure with self-adhesive aluminium front plate, enclosure screws and wall holder |

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## Pilot 110-150

(PG 29)

Product highlights

- Polyamide hand enclosure for automation and control engineering
- Version with handle and integrated cable entry
- Large fitting space

Technical data

| | |
|---|---|
| Material | Polyamide<br>Front plate: Polystyrol |
| Ingress protection | IP65 to EN 60529 |
| Flammability | UL 94 HB |
| Colour | RAL 1003, signal yellow |
| Temperature range | -40°C to +60°C |
| Dimensions (H x W x D) | 85/75 x 85 x 191 mm to<br>105/75 x 85 x 266 mm |
| Accessories | Wall holder |
| Included in delivery | Enclosure with handle, including cable gland M 20 x 1.5, front plate, enclosure and front panel screws, and wall holder |

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## Fields of application of the ROSE Ex equipment

In all areas where explosive atmospheres occur, special safety guidelines are effective which prescribe the use of specially tested components. Within the EU, the ATEX directive, which determines the safe operation of plants and systems in potentially explosive atmospheres, is effective for this purpose.

Other countries and continents have different safety guidelines in this area (IECEx, TR-TS, NEC etc.) – often these are derivatives of European ATEX legislation.

ROSE Ex enclosures made of aluminum, polyester and stainless steel, as well as Control Stations, provide reliable protection for electrical distribution systems in hazardous areas. The products are used for gas explosion protection in zones 1 and 2 and for dust explosion protection in zones 21 and 22:

- Ex eb Increased safety
- Ex ia Intrinsic safety
- Ex db Flameproof enclosure
- Ex tb Protection through enclosures

Typical areas of application are:

- Chemical and petrochemical industry
- Process industry
- Paint processing industry
- Mining
- Silos

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| | Ex Stainless steel IG<br>(PG 34/35/36) | Ex Stainless steel flange ProtEx<br>(PG 34/35/36) |
|---|---|---|
| Product highlights | • Stainless steel enclosure system for use in hazardous areas<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment<br>• With window optional | • High-quality stainless steel flange enclosure system for use in hazardous areas<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment<br>• With window optional |
| Technical data | | |
| Explosion protection | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85 °C/T100 °C/T135 °C Db IP66 | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85 °C/T100 °C/T135 °C Db IP66 |
| Material | Stainless steel 1,25 mm bzw. 1,5 mm; 1.4404 / 316L | Enclosure: stainless steel 1,5 mm, 1.4404/316L<br>Flange plate: stainless steel 3,0 mm, 1.4404/316L |
| Certificates | PTB 00 ATEX 1101U; PTB 00 ATEX 1052<br>IECEx PTB 07.0059U; IECEx PTB 07.0060U<br>EAC № TC RU C-DE.AA87.B.00971 | PTB 00 ATEX 1101U; PTB 00 ATEX 1052<br>IECEx PTB 07.0059U; IECEx PTB 07.0060U<br>EAC № TC RU C-DE.AA87.B.00971 |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Surface | grinded, grain 240 | grinded, grain 240 |
| Impact resistance | 7 Joule to EN 60079-0 | 7 Joule to EN 60079-0 |
| Temperature range | -55°C to +135°C | -55°C to +135°C |
| Other versions on request | EMC | EMC, electropolished |
| Approvals | | |
| Dimensions (H x W x D) | 100 x 100 x 61 mm to<br>200 x 600 x 121 mm<br>Further dimensions on request | 260 x 260 x 205 mm to<br>980 x 740 x 205 mm<br>Further dimensions on request |
| Accessories | Mounting plate<br>External mounting brackets<br>DIN rail<br>PE bar<br>External hinge | Mounting plate<br>Blind flange |
| Included in delivery | Empty enclosure, terminal enclosure or control station according to the valid Ex standard | Empty enclosure, terminal enclosure or control station according to the valid Ex standard<br>standard with 1 flange; optional up to 4 flanges |

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## Ex Stainless steel with hinged lid IGS

(PG 34/35/36)

Product highlights

- Stainless steel enclosure system for use in hazardous areas
- Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment
- With window optional
- With covered hinges and double ward lock

Technical data

| | |
|---|---|
| Explosion protection | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85 °C/T100 °C/T135 °C Db IP66 |
| Material | Stainless steel 1,25 mm or 1,5 mm; 1.4301/304<br>1.4404/316L on request |
| Certificates | PTB 00 ATEX 1101U; PTB 00 ATEX 1052<br>IECEx PTB 07.0059U; IECEx PTB 07.0060U<br>EAC № TC RU C-DE.AA87.B.00971 |
| Ingress protection | IP 66 to EN 60529 |
| Surface | grinded, grain 240 |
| Impact resistance | 7 Joule to EN 60079-0 |
| Temperature range | -55°C to +135°C |
| Other versions on request | EMC |
| Approvals | |
| Dimensions (H x W x D) | 250 x 200 x 97 mm to<br>380 x 600 x 217 mm<br>Further dimensions on request |
| Accessories | Front plate<br>Mounting plate<br>PE bar<br>External mounting brackets |
| Included in delivery | Empty enclosure, terminal enclosure or control station according to the valid Ex standard |

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| |  |  |
|---|---|---|
| | **Ex Polyester**<br>(PG 06/16/26) | **Ex CombiBox**<br>(PG 06/16/26) |
| Product highlights | • Glass fibre reinforced enclosure system of polyester-resin for use in hazardous areas<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment<br>• With window optional | • Glass fibre reinforced enclosure system of polyester-resin for use in hazardous areas<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment<br>• With window optional<br>• Two level fitting possibility |
| Technical data | | |
| Explosion protection | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85 °C/T100 °C/T135 °C Db IP66 | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85 °C/T100 °C/T135 °C Db IP66 |
| Material | glass fibre reinforced thermoset polyester, graphite added | glass fibre reinforced thermoset polyester, graphite added |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Certificates | PTB 00 ATEX 1002; PTB 00 ATEX 1061U<br>IECEx PTB 08.0004; IECEx PTB 08.0003U<br>EAC № TC RU C-DE.AA87.B.00971 | PTB 00 ATEX 1002; PTB 00 ATEX 1061U<br>IECEx PTB 08.0004; IECEx PTB 08.0003U<br>EAC № TC RU C-DE.AA87.B.00971 |
| Impact resistance | 7 Joule to EN 60079-0 | 7 Joule to EN 60079-0 |
| Flammability | self-extinguishing, UL 94 V-0 | self-extinguishing, UL 94 V-0 |
| Surface resistance | >$10^9$ Ohm, IEC 60093 | >$10^9$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 9011, graphite black | RAL 9011, graphite black |
| Temperature range | -55 °C to +135 °C | -55 °C to +135 °C |
| Other versions on request | EMC | EMC |
| Approvals | ATEX, CCOE, EAC, EXPLOLABS, IECEx, INMETRO, NEC 505 (UL Ex), cULus LISTED | ATEX, CCOE, EAC, EXPLOLABS, IECEx, INMETRO, cULus LISTED |
| Dimensions (H x W x D) | 75 x 80 x 56 mm to<br>405 x 400 x 201 mm | 177 x 177 x 145 mm to<br>360 x 360 x 145 mm |
| Accessories | Mounting plate<br>DIN rail<br>External mounting brackets<br>External hinges<br>PE busbar<br>Continuity plate | Mounting plate<br>DIN rail<br>PE bar<br>Continuity plate<br>Connecting flange |
| Included in delivery | Empty enclosure, terminal enclosure or control station according to the valid Ex standard | Empty enclosure, terminal enclosure or control station according to the valid Ex standard |

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| | Ex Polyester Flange<br>(PG 06/16/26) | Ex Okta-Box<br>(PG 06/16/26) |
|---|---|---|
| Product highlights | • Glass fibre reinforced enclosure system of polyester-resin for use in hazardous areas<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment<br>• With window optional<br>• Combination with other polyester flange enclosures possible | • Glass fibre reinforced enclosure system of polyester-resin for use in hazardous areas<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment<br>• Enclosures with external brackets |
| Technical data | | |
| Explosion protection | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85°C/T100°C Db IP65 | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85°C/T100°C/T135°C Db IP66 |
| Material | glass fibre reinforced thermoset polyester, graphite added | glass fibre reinforced thermoset polyester, graphite added |
| Ingress protection | IP65 to EN 60529 | IP65 to EN 60529 |
| Certificates | PTB 00 ATEX 1002; PTB 00 ATEX 1061U<br>IECEx PTB 08.0004; IECEx PTB 08.0003U<br>EAC № TC RU C-DE.AA87.B.00971 | PTB 00 ATEX 1002; PTB 00 ATEX 1061U<br>IECEx PTB 08.0004; IECEx PTB 08.0003U<br>EAC № TC RU C-DE.AA87.B.00971 |
| Impact resistance | 7 Joule to EN 60079-0 | 7 Joule to EN 60079-0 |
| Flammability | self-extinguishing, UL 94 V-0 | self-extinguishing, UL 94 V-0 |
| Surface resistance | <$10^9$ Ohm, IEC 60093 | <$10^9$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 9011, graphite black | RAL 9011, graphite black |
| Temperature range | -55 °C to +135 °C | -55 °C to +135 °C |
| Other versions on request | EMC | EMC |
| Approvals | | NEC 505 (UL Ex) |
| Dimensions (H x W x D) | 170 x 270 x 136 mm to<br>270 x 541 x 136 mm | 81 x 81 x 75 mm to<br>200 x 200 x 125 mm |
| Accessories | Mounting plate<br>External mounting brackets<br>PE bar<br>Continuity plate | Mounting plate<br>DIN rail<br>PE busbar<br>Continuity plate |
| Included in delivery | Empty enclosure, terminal enclosure or control station according to the valid Ex standard | Empty enclosure, terminal enclosure or control station according to the valid Ex standard |

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| |  |  |
|---|---|---|
| | **Ex Polyglas**<br>(PG 06/16/26) | **Ex Polyester for mining industry**<br>(PG 48) |
| Product highlights | • Polyester Ex enclosure with hinged lid<br>• Easy fitting of Ex components<br>• Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment | • Polyester enclosures with impact resistance of 20 Joule<br>• Available as a component (U approval) for individual fittings<br>• Silicone seal and allen lid screws |
| Technical data | | |
| Explosion protection | II 2G Ex eb IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex db eb ia [ia] mb IIC T6/T5/T4 Gb<br>II 3 G Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85°C/T100°C Db IP66 | I M2 Ex e I<br>I M1 Ex ia I |
| Material | glass fibre reinforced thermoset polyester, graphite added | glass fibre reinforced thermoset polyester, graphite added |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Certificates | PTB 00 ATEX 1002; PTB 00 ATEX 1061U<br>IECEx PTB 08.0004; IECEx PTB 08.0003U<br>EAC № TC RU C-DE.AA87.B.00971 | IBExU06ATEX1065U |
| Impact resistance | 7 Joule to EN 60079-0 | 20 Joule to EN 60079-0 |
| Flammability | self-extinguishing, UL 94 V-0 | self-extinguishing, UL 94 V-0 |
| Surface resistance | >$10^9$ Ohm, IEC 60093 | >$10^9$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 9011, graphite black | RAL 9011, graphite black |
| Temperature range | -55 °C to +135 °C | -55 °C to +100 °C |
| Other versions on request | EMC | EMC |
| Approvals | ATEX, CCOE, EAC, EXPLOLABS, IECEx, NEMKO, UL | ATEX |
| Dimensions (H x W x D) | 200 x 200 x 168 mm to<br>605 x 405 x 252 mm | 75 x 110 x 56 mm to<br>250 x 600 x 121 mm |
| Accessories | Mounting plate<br>External mounting brackets<br>Locks<br>Sockets | Mounting plate<br>DIN rail<br>External mounting brackets<br>External hinges |
| Included in delivery | Empty enclosure, terminal enclosure or control station according to the valid Ex standard | Empty enclosure, terminal enclosure or control station according to the valid Ex standard |

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| |  |  |
|---|---|---|
| | **PExcom - pre-assembled Ex polyester connecting enclosures**<br>(PG 06) | **Beluga Ex**<br>(PG 28) |
| Product highlights | • Ready to install<br>• Available within 48 h<br>• Pre-assembled: Fitting with terminals and cable glands | • Hand held enclosures as empty enclosures for Ex-applications<br>• 3 enclosure sizes<br>• Optional version with display openings |
| Technical data | | |
| Explosion protection | II 2G Ex eb IIC T6 Gb<br>II 2D Ex tb IIIC T 70°C | II 2G Ex e IIC Gb<br>II 2D Ex tb IIIC Db |
| Material | glass fibre reinforced thermoset polyester, graphite added | Polyamide 12 |
| Ingress protection | IP66 to EN 60529 | IP65 to EN 60529 |
| Certificates | PTB 00 ATEX 1002<br>IECEx PTB 08.0004 | IECEx PTB 09.0019U<br>PTB 02 ATEX 1076U |
| Impact resistance | 7 Joule to EN 60079-0 | 7 Joule to EN 60079-0 |
| Flammability | self-extinguishing, UL 94 V-0 | UL 94 HB |
| Surface resistance | <$10^9$ Ohm, IEC 60093 | <$10^9$ Ohm, IEC 60093 |
| Toxicity | halogen free | halogen free |
| Colour | RAL 9011, graphite black | RAL 9005, jet black |
| Temperature range | -55 °C to +85 °C | -20 °C to +60 °C |
| Other versions on request | | EMC |
| Approvals | ATEX IECEx | ATEX IECEx |
| Dimensions (H x W x D) | 75 x 80 x 56 mm to<br>160 x 260 x 91 mm | 106/75 x 187 x 50 mm to<br>380 x 117 x 68 mm |
| Accessories | External mounting brackets | Hook set<br>Hand strap |
| Included in delivery | Ex polyester enclosure with DIN rail and terminals (Phoenix Contact MUT 4 or UT 4) and plastic glands with ATEX and IECEx approval. | Enclosure system consisting of top and base with seal. O version = open: with display screen and mounting material for window |

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## Ex Aluminium

(PG 05/15/25)

Product highlights

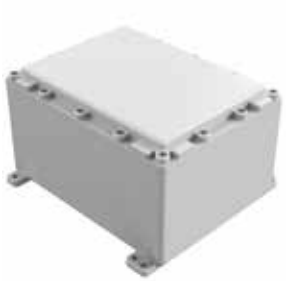
- Enclosure systems of diecast aluminium usable in all Ex-areas
- Available as a component (U approval) or as a fully certified device including the installation of terminals or electronic equipment
- With window optional

Technical data

| | |
|---|---|
| Explosion protection | II 2G Ex e IIC T6/T5/T4 Gb<br>II 2G Ex ia IIC T6/T5/T4 Gb<br>II 2G Ex d e ia [ia] mb IIC T6/T5/T4 Gb<br>II 3G Ex e d mb ia [ia] nA nC [op is] IIC T6, T5, T4 Gc<br>II 2D Ex tb IIIC T85°C/T100°C/T135°C Db IP66 |
| Material | DIN EN 1706 EN AC-AlSi 12 (Fe) |
| Ingress protection | IP66 to EN 60529 |
| Certificates | PTB 00 ATEX 1063; PTB 00 ATEX 3101U<br>IECEx PTB 08.0006; IECEx PTB 08.0005U<br>EAC № TC RU C-DE.AA87.B.00971 |
| Impact resistance | 7 Joule to EN 60079-0 |
| Painting | Powder coating |
| Colour | RAL 7001, silver grey |
| Temperature range | -55 °C to +135 °C |
| Other versions on request | EMC<br>SBG, SBGL, SWB |
| Approvals | ATEX, CCOE, EAC, EXPLOLABS, IECEx, NEMKO, KTL, Lloyd's Register, cULus LISTED, NEC 505 (UL Ex) |
| Dimensions (H x W x D) | 64 x 58 x 34 mm to<br>600 x 600 x 202 mm |
| Accessories | Mounting plate<br>External mounting bracket<br>DIN rail<br>External hinges, internal hinges<br>PE bar |
| Included in delivery | Empty enclosure, terminal enclosure or control station according to the valid Ex standard |

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| | Ex d IIB+$H_2$ Enclosure Series EJB (PG 40) | Ex d IIB+$H_2$ Enclosure Series IJB (PG 40) |
|---|---|---|
| Product highlights | • Flameproof aluminium or stainless steel enclosure system suitable for assembly of terminals, switches and components<br>• With window optional<br>• External flameproof joint<br>• For gas group IIB + $H_2$ | • Flameproof aluminium enclosure system suitable for assembly of terminals, switches and components<br>• Combination of several enclosures possible due to internal flameproof joint<br>• With window optional<br>• For gas group IIB + $H_2$ |
| **Technical data** | | |
| Explosion protection | II 2G Ex db IIB + $H_2$ T6/T5 Gb<br>II 2D Ex tb IIIC T80 °C...T95 °C Db | II 2G Ex db IIB + H2 T6/T5/T4 Gb<br>II 2D Ex tb IIIC T80 °C...T130 °C Db |
| Material | Copper free aluminium or stainless steel 1.4404/316L | Copper free aluminium |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Certificates | ITS 15 ATEX 18302X<br>IECEx ITS 15.0041X | ITS 15 ATEX 18301X<br>IECEx ITS 15.0043X |
| Impact resistance | 7 Joule to EN 60079-0 | 7 Joule to EN 60079-0 |
| Colour | Aluminium: RAL 7035, light grey<br>Stainless steel: unpainted, painting on request | RAL 7035, light grey |
| Temperature range | -20 °C to +75 °C | -20 °C to +75 °C |
| Approvals | ATEX IECEx | ATEX IECEx |
| Dimensions (H x W x D) | 220 x 170 x 152 mm to<br>980 x 680 x 487 mm (Aluminium) bzw.<br>320 x 270 x 166 mm (Stainless steel) | 320 x 220 x 223 mm to<br>630 x 530 x 288 mm |
| Accessories | Mounting plate | Mounting plate |
| Included in delivery | Enclosure system consisting of base and lid with screws, external earth connection, hinge and external brackets | Enclosure system consisting of base and lid with screws, external earth connection, hinge and external brackets |

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| | Ex d IIC Enclosure Series GUB (PG 40) | Ex d IIC Enclosure Series TBE (PG 40) |
|---|---|---|
| Product highlights | • Flameproof enclosure system suitable for assembly of terminals, switches and components<br>• For gas group IIC | • Flameproof enclosure system suitable for assembly of terminals and industrial type components<br>• Available in aluminium or stainless steel<br>• For gas group IIC |
| Technical data | | |
| Explosion protection | II 2G Ex db IIC T6/T5/T4 Gb<br>II 2D Ex tb IIIC T80 °C...T130 °C Db | II 2G Ex db IIC T6/T5 Gb<br>II 2D Ex tb IIIC T80 °C...T95 °C Db |
| Material | Copper free aluminium | Copper free aluminium or<br>stainless steel1.4404/316L |
| Ingress protection | IP66 to EN 60529 | IP66 to EN 60529 |
| Certificates | ITS 15 ATEX 18212X<br>IECEx ITS 15.0011X | ITS 14 ATEX 18169X<br>IECEx ITS 14.0070X<br>EAC № TC RU C-DE.MIO62.B.03099 |
| Impact resistance | 7 Joule to EN 60079-0 | 7 Joule to EN 60079-0 |
| Colour | RAL 7035, light grey | Aluminium: RAL 7035, light grey<br>Stainless steel: unpainted, painting on request |
| Temperature range | -20 °C to +75 °C | -60 °C to +75 °C |
| Approvals | ATEX IECEx | ATEX IECEx EAC |
| Dimensions (H x W x D) | 220 x 220 x 182 mm to<br>470 x 470 x 247 mm | 116 x 116 x 98 mm to<br>180 x 180 x 116 mm |
| Accessories | Mounting plate | Mounting plate |
| Included in delivery | Enclosure system consisting of base and lid with screws, external earth connection and external brackets | Enclosure system consisting of base and lid with screws, external earth connection and external brackets |

## Chemical resistance

When assessing whether or not a enclosure is resistant to the influence of chemical substances, not only the enclosure material, but also the type of seals has to be taken into consideration.
The following tables only list the most important basic materials used for ROSE enclosures, and the most common chemical substances. These tables only contain information as to how far materials are typically resistant to such substances. Both the concentration and the ambient temperature must also be taken into account.
If several chemicals are encountered at the same time, we recommend to carry out an exact investigation to be able to correctly assess the chemical resistance of a material.

**Chemical resistance of enclosure materials and seals**

| Chemicals | Alumi-nium | ABS | Poly-carbonate | Polyester | Polysterol | Polyami-de | Chloro-pren | EPDM | NBR | Pocan | Polyure-thane | PVC | Silicone |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | + | - | - | - | - | • | + | + | - | + | - | - | • |
| Formic acid | • | - | 30 % | 10 % | • | - | + | + | - | 10 % | / | < 50 % | • |
| Ammonia | + | - | - | - | + | 20 % | + | + | + | 10 % | / | • | + |
| Petrol | + | - | • | + | • | + | + | • | + | + | + | + | + |
| Benzene | + | - | - | + | - | - | - | - | - | + | + | - | - |
| Brake fluid | / | / | - | + | / | 60° | • | - | / | + | / | / | + |
| Butane | + | / | + | / | - | + | + | / | + | + | / | 50 % | - |
| Butanol | / | / | / | + | / | + | + | / | - | + | / | • | - |
| Calcium chloride | + | / | + | + | + | + | / | / | / | 10 % | / | + | / |
| Chloral benzene | + | - | - | + | - | • | - | - | - | - | - | - | - |
| Diesel oil | / | + | • | + | • | / | • | • | / | + | + | • | • |
| Acetic acid | + | 10 % • | 10 % | 40 % | + max. 50 % | - | - | / | - | 10 % | / | 25 % | - |
| Formaldehyde | + | + | / | 30 % | + max. 40 % | + | - | / | + | / | / | 40 % | + |
| Freon 113 | / | / | + | + | / | / | + | / | + | + | / | / | / |
| Fruit juice | / | / | + | + | / | + | + | + | / | + | + | + | + |
| Glycerine | + | + | • | + | + | + | + | + | + | + | + | + | + |
| Fuel oil | + | • | • | + | • | + | • | • | + | + | + | • | • |
| Hydraulic oil | / | / | + | + | • | + | + | / | / | + | / | / | • |
| Caustic potash solution | / | / | - | - | + max. 50 % | - | + | / | / | 10 % | / | + | / |
| Potassium chloride | • | / | + | + | + | + | + | + | + | 10 % | + | + | + |
| Potassium hydroxide | - | + | / | - | + | / | + | + | + | - | - | / | • |
| Linseed oil | + | / | + | + | + | + | + | + | + | + | + | + | • |
| Methane | + | / | - | - | + | • | + | / | • | + | / | / | + |
| Methylene chloride | + | / | - | - | - | - | - | / | - | - | - | - | - |
| Lactic acid | + | + | 10 % | + | + max. 80 % | 10 % | + | + | + | / | / | 10 % | / |
| Mineral oils | / | + | + | + | + | + | • | • | + | + | + | + | + |
| Motor oils | / | / | + | + | + | + | • | • | + | + | + | / | + |
| Sodium carbonate | • | / | + | + | + | + | / | / | / | 10 % | / | / | / |
| Sodium chloride | • | / | + | + | + | 10 % | + | + | + | 10 % | + | + | + |
| Sodium hydroxide | + | + | / | - | / | / | + | + | • | - | - | • | • |
| Soda lye | / | - | - | 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 bisulphide | + | / | - | - | - | • | - | / | - | + | / | • | - |
| Sulphuric acid | • | 30 % | 50 % | 70 % | + max. 50 % | - | 50 % | / | 25 % | 10 % | / | 80 % | 25 % |
| Suds | / | / | • | + | / | + | + | / | + | 10 % | • | • | + |
| Cleansing agent | / | / | + | / | / | / | + | • | / | + | • | / | + |
| Terpentine oil | / | / | / | + | - | + | - | / | + | + | / | + | - |
| Carbon tetrachloride | + | - | / | + | - | • | - | - | - | + | - | • | - |
| Toluene | + | - | - | + | - | + | - | - | - | • | - | - | - |
| Trichlorethylene | + | - | / | - | - | - | - | - | - | • | - | - | - |
| Water (dest. water, river, tap or seawater) | / | + | + | + | + | + | + | + | 80 C° | + | + | 40 C° | + |
| Tartaric acid | / | / | 10 % | + | + | + | + | + | + | / | + | 10 % | + |
| Xylene | + | - | - | + | - | + | - | - | - | • | - | - | - |
| Zinc sulfate | • | / | + | + | + | / | + | + | + | / | / | 40 % | + |
| Citric acid | + | 10 % | 10 % | + | + | 10 % | + | + | + | 10 % | / | 10 % | + |

**Explanation of symbols**

+ resistant against all concentrations
% resistant against maximum % concentration
C° resistant to maximum C°
• limited resistance
- not resistant
/ no information

Unless otherwise quoted, the investigation was conducted at ambient temperature. If several substances are encountered, the resistance factors could change. For this reason, we do not assume any liability for the above information.

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## All-in-one solutions from a single source, 'Made in Germany'

The ROSE Systemtechnik product portfolio not only offers you individual enclosure solutions, but also rob and reliable panel PCs, industrial PCs and industrial monitors, but also comprehensive solutions for drive, trol and safety technology up to visualization and process control. Trust in our specialists and enjoy peace mind on our shared journey towards Industry 4.0!

We equip our industrial PC systems with high-quality components with guaranteed long-term availability. Our stringent quality control incudes burn-in endurance testing with full record-keeping and quality management with end-to-end documentation as standard – for each and every panel PC or industrial monitor.

Service

- perfectly coordinated, integrated solution models
- software integration
- hardware upgrade as needed
- 24-hour burn-in endurance testing
- completion of or help with your device certification
- everything from a single source, 'Made in Germany'

Support

- direct contact to a service technician
- fast and friendly assistance for technical problems
- professional hardware support
- straightforward, no-quibble repair policy
- personalised customer after-sales service



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## Why ROSE Systemtechnik GmbH

From planning and advice to turnkey delivery – we are your trusty travelling companion on the road to Industry 4.0.

- professional, expert advice and assistance – from the idea to installation
- immediate, on-site requirements/solution analysis
- expertise born of long experience
- a shared approach to solution development
- in-house development unit – for rapid implementation of your individual solution
- cutting-edge technologies and long-term availability of all components
- flexibility – quick and reliable
- one-stop service provision – including on-site installation if required

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812010 110/2021

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