








**ROSE**







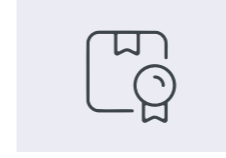

A Phoenix Mecano Company



# INDUSTRIAL ENCLOSURES CATALOGUE

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

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

The 37,000 m<sup>2</sup> site in Porta Westfalica is home to the headquarters with around 350 employees who work in production, sales, marketing and development. In addition to the site on the edge of the Wiehengebirge, ROSE Systemtechnik has another plant in Finow. Industrial and control enclosures, device carriers and accessories are assembled there. The development and production of our HMI solutions is located in Hohenlockstedt.

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

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

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





## Overview of our services:

### Machining:

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



### Surface engineering:

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



### Equipment:

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



### Mounting of HMI Solutions:

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



### Laboratory:

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



### Traffic engineering

#### Enclosure solutions for traffic engineering

Traffic engineering includes transportation of people and goods

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

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

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

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



## eMobility

### Enclosure solutions for eMobility

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

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

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

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

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



## Automotive

### Enclosure solutions for the automotive industry

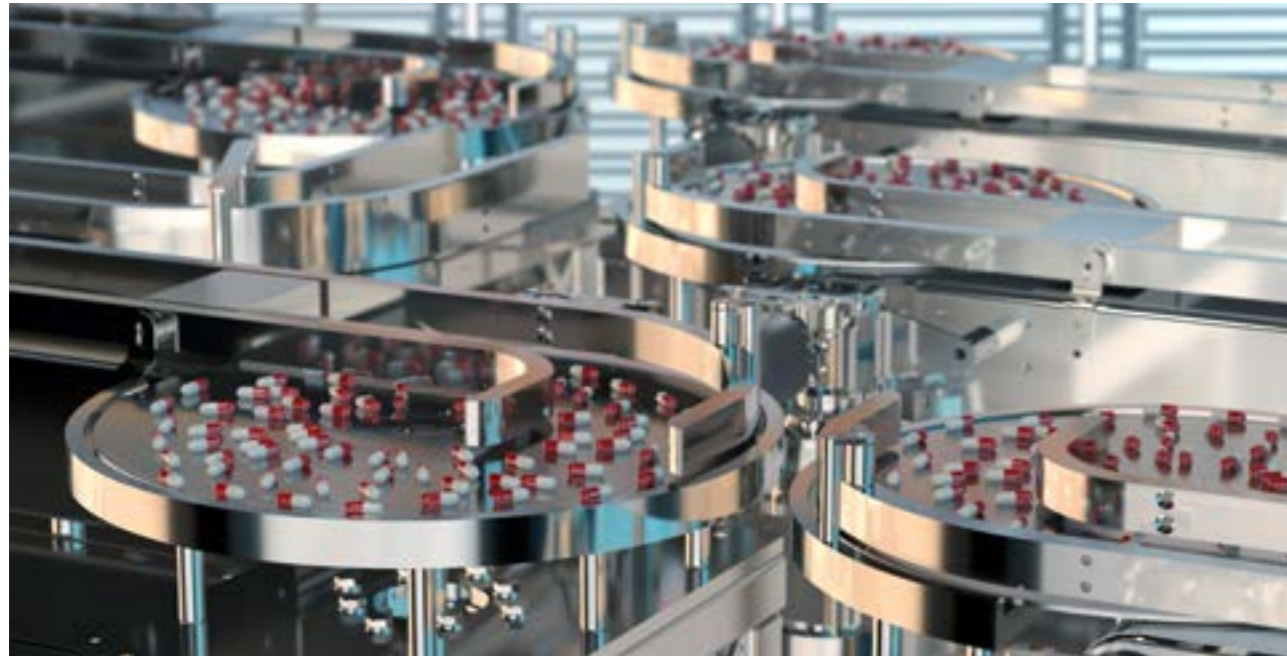
Assembly lines in the automotive industry are leading when it comes to all things regarding automation and advancements. Currently this sector is facing several challenges:

- > eMobility
- > Digitization
- > Shorter model cycles

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

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

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



## Chemistry

### Enclosure solutions for the chemistry industry

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

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

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

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

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



## Oil and gas

### Industry solutions for the Oil- and gas industry

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

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

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

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

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



## Machine and plant construction

### Industry solutions for the machine- and plant construction

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

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

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

- > Chemical cleaning
- > Water
- > Food residues

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



## Agricultural technology

### Industry solutions for agricultural technology

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

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

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

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

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





## Wind energy

### Industry solutions for wind turbines

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

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

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

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

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



## Shipbuilding

### Industry solutions for shipbuilding

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

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

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

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

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



### Vehicle construction

#### Industry solutions for construction vehicles

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

- > Due to high braking energy vehicles can charge themselves.
- > Considerable reduction of diesel usage and CO<sup>2</sup> emissions.
- > The vehicles are almost silent.
- > Maintenance costs are lower.
- > There are no restrictions due to environmental zones.

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

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

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

### Application



# > Aluminium Standard

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Robust aluminium enclosure for mechanical engineering and automation technology
- + Fastening options for mounting rails and mounting plates
- + Applicable in wide temperature ranges



## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | DIN EN 1706 AC-AISI12 (Fe)<br>DIN EN 1706 AC - AISI12 (a)   |
| <b>Surface:</b>                | Powder coating, silk gloss structure  |
| <b>Colour:</b>                 | RAL 7001, silver-grey<br>Special paint finish on request  |
| <b>Ingress protection:</b>     | IP66 according to EN 60529  |
| <b>Impact resistance:</b>      | IK09 according to DIN EN 60068-2-75   |
| <b>Temperature resistance:</b> | PU (polyurethane) seal (standard): -40 °C to +80 °C<br>CR (chloroprene) seal (optional): -30 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +175 °C<br>EMC (silicone) seal (optional): -55 °C to +125 °C |



3-D data  
and drawings

### Included in delivery

Aluminium enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, bottom part with 2 or 4 earthing screws

# > Aluminium Standard

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

| Standard enclosure Order no. | W x L x H (mm)  | Mounting rails for terminals | Earthing rails Clamping piece | Mounting plates Thickness in mm | External fixing brackets Pair | External hinges Pair | Hinges inside Pair | Turning latchlock |
|------------------------------|-----------------|------------------------------|-------------------------------|---------------------------------|-------------------------------|----------------------|--------------------|-------------------|
|                              |                 | 1)                           | 1)                            | 1)                              | 2)                            | 3) 4)                | 2) 4)              | 4)                |
| 01 05 05 03 0                | 45 x 50 x 30    |                              |                               |                                 |                               |                      |                    |                   |
| 01 06 06 03 0                | 64 x 58 x 34    |                              |                               |                                 |                               |                      |                    |                   |
| 01 06 10 03 0                | 64 x 98 x 34    | *                            |                               |                                 |                               |                      |                    |                   |
| 01 06 12 00 0                | 64 x 115 x 34   | *                            |                               |                                 |                               |                      |                    |                   |
| 01 06 19 00 0                | 64 x 185 x 34   | *                            |                               |                                 |                               |                      |                    |                   |
| 01 06 15 03 0                | 64 x 150 x 34   | *                            |                               |                                 |                               |                      |                    |                   |
| 01 06 19 03 0                | 64 x 185 x 34   | *                            |                               |                                 |                               |                      |                    |                   |
| 01 08 08 06 0                | 80 x 75 x 57    | *                            |                               | 1,5                             | *                             |                      |                    |                   |
| 01 08 13 06 0                | 80 x 125 x 57   | *                            |                               | 1,5                             | *                             |                      |                    |                   |
| 01 08 18 06 0                | 80 x 175 x 57   | *                            |                               | 1,5                             | *                             |                      |                    |                   |
| 01 08 25 05 0                | 80 x 250 x 52   | *                            |                               |                                 | *                             |                      |                    |                   |
| 01 10 10 08 0                | 100 x 100 x 81  | *                            |                               | 1,5                             | *                             | *                    |                    |                   |
| 01 10 16 08 0                | 100 x 160 x 81  | *                            |                               | 1,5                             | *                             | *                    |                    |                   |
| 01 10 20 08 0                | 100 x 200 x 81  | *                            |                               | 1,5                             | *                             | *                    |                    |                   |
| 01 12 12 08 0                | 120 x 122 x 81  | *                            | 6                             | 1,5                             | *                             | *                    |                    |                   |
| 01 12 12 09 0                | 120 x 122 x 91  | *                            | 6                             | 1,5                             | *                             | *                    |                    |                   |
| 01 12 22 08 0                | 120 x 220 x 81  | *                            | 13                            | 1,5                             | *                             | *                    |                    |                   |
| 01 12 22 09 0                | 120 x 220 x 91  | *                            | 13                            | 1,5                             | *                             | *                    |                    |                   |
| 01 12 22 12 0                | 120 x 220 x 118 | *                            | 13                            | 1,5                             | *                             | *                    |                    |                   |
| 01 12 36 08 0                | 120 x 360 x 81  | *                            | 23                            | 1,5                             | *                             | *                    |                    |                   |
| 01 14 14 09 0                | 140 x 140 x 91  | *                            | 6                             | 1,5                             | *                             | *                    |                    |                   |
| 01 14 20 09 0                | 140 x 200 x 91  | *                            | 11                            | 1,5                             | *                             | *                    |                    | *                 |
| 01 16 16 09 0                | 160 x 160 x 91  | *                            | 8                             | 1,5                             | *                             | *                    | *                  | *                 |
| 01 16 26 09 0                | 160 x 260 x 91  | *                            | 16                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 16 26 16 0                | 160 x 260 x 160 | *                            | 16                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 16 36 09 0                | 160 x 360 x 91  | *                            | 23                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 16 56 09 0                | 160 x 560 x 91  | *                            | 36                            | 2,0                             | *                             | *                    | *                  | *                 |
| 01 18 18 10 0                | 180 x 180 x 101 | *                            | 8                             | 1,5                             | *                             | *                    | *                  | *                 |
| 01 18 28 10 0                | 180 x 280 x 101 | *                            | 17                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 10 11 0                | 230 x 100 x 111 | *                            | 13                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 20 11 0                | 232 x 202 x 111 | *                            | 10                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 20 18 0                | 232 x 202 x 181 | *                            | 10                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 28 11 0                | 230 x 280 x 111 | *                            | 16                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 33 11 0                | 230 x 330 x 111 | *                            | 21                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 33 18 0                | 230 x 330 x 181 | *                            | 21                            | 1,5                             | *                             | *                    | *                  | *                 |
| 01 23 40 11 0                | 230 x 400 x 111 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 23 40 18 0                | 230 x 400 x 181 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 23 40 23 0                | 230 x 400 x 225 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 23 60 11 0                | 230 x 600 x 111 | *                            | 40                            | 2                               | *                             | *                    | *                  | *                 |
| 01 31 40 11 0                | 313 x 404 x 111 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 31 40 14 0                | 312 x 403 x 141 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 31 40 18 0                | 313 x 404 x 181 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 31 40 23 0                | 313 x 404 x 227 | *                            | 25                            | 2                               | *                             | *                    | *                  | *                 |
| 01 31 60 11 0                | 310 x 600 x 111 | *                            | 40                            | 2                               | *                             | *                    | *                  | *                 |
| 01 31 60 18 0                | 310 x 600 x 181 | *                            | 40                            | 2                               | *                             | *                    | *                  | *                 |
| 01 60 60 20 0                | 600 x 600 x 202 | *                            |                               | 2,5                             |                               |                      |                    |                   |

1) Galvanised sheet steel, 2) Stainless steel, 3) Die-cast aluminium, 4) Please state installation side A-D when ordering.

## > Aluminium Standard

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Accessories



**External mounting brackets**  
(Set = 4 pieces)

| Order no.     | for enclosures                |
|---------------|-------------------------------|
| 10 03 11 01 0 | 01 08 08 06 0 - 01 10 20 08 0 |
| 10 03 11 02 0 | 01 12 12 08 0 - 01 31 60 18 0 |



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



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

## > Aluform

Aluminium enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications





- + Aluminium die-cast enclosure for I&C and automation technology
- + Prepared to accommodate front foils and membrane keypads
- + Rectangular dome arrangement in the lid and lower part



## Technical data

|                         |   |
|-------------------------|---|
| Material:               | DIN EN 1706 AC-AISI12 (Fe)  |
| Surface:                | Powder coating, fine structure matt   |
| Colour:                 | RAL 7038, agate grey<br>Special lacquering on request   |
| Protection class:       | IP66 according to EN 60529<br>Higher protection class on request  |
| Impact resistance:      | IK09 according to DIN EN 60068-2-75   |
| Temperature resistance: | PU (polyurethane) seal (standard): -40 °C to +80 °C<br>CR (chloroprene) seal (optional): -40 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +175 °C<br>EMC (silicone) seal (optional): -55 °C to +125 °C |



3-D data  
and drawings

### Included in delivery

Die-cast aluminium enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, lower part with 4 earthing screws.

## Product overview

| Order no.     | W x L x H (mm)  | Mounting plates | Mounting rails TS 15 | Mounting rails TS 35 | External fastening stays (pair) |
|---------------|-----------------|-----------------|----------------------|----------------------|---------------------------------|
| 04 08 08 08 0 | 80 x 80 x 81    | 10 01 10 60 0   | 10 06 10 03 0        |                      |                                 |
| 04 08 12 05 0 | 80 x 120 x 51   | 10 01 10 61 0   |                      |                      | 04 00 00 80 0                   |
| 04 08 12 08 0 | 80 x 120 x 81   | 10 01 10 61 0   | 10 06 10 50 0        |                      | 04 00 00 80 0                   |
| 04 10 10 06 0 | 100 x 100 x 61  | 10 01 10 31 0   | 10 06 10 07 0        | 10 06 14 71 0        | 04 00 01 00 0                   |
| 04 10 16 06 0 | 100 x 160 x 61  | 10 01 10 32 0   | 10 06 10 08 0        | 10 06 14 72 0        | 04 00 01 00 0                   |
| 04 10 20 06 0 | 100 x 200 x 61  | 10 01 10 33 0   | 10 06 10 09 0        | 10 06 14 73 0        | 04 00 01 00 0                   |
| 04 12 12 08 0 | 120 x 120 x 81  | 10 01 10 62 0   | 10 06 10 50 0        | 10 06 14 83 0        | 04 00 01 20 0                   |
| 04 12 16 08 0 | 120 x 160 x 81  | 10 01 10 63 0   | 10 06 10 08 0        | 10 06 14 72 0        | 04 00 01 20 0                   |
| 04 14 14 07 0 | 140 x 140 x 71  | 10 01 10 34 0   | 10 06 10 44 0        | 10 06 14 74 0        | 04 00 01 40 0                   |
| 04 14 18 07 0 | 140 x 180 x 71  | 10 01 10 35 0   | 10 06 10 05 0        | 10 06 14 75 0        | 04 00 01 40 0                   |
| 04 14 22 07 0 | 140 x 220 x 72  | 10 01 10 36 0   | 10 06 10 46 0        | 10 06 14 76 0        | 04 00 01 40 0                   |
| 04 15 18 08 0 | 150 x 180 x 81  | 10 01 10 70 0   | on request           | on request           |                                 |
| 04 16 16 08 0 | 160 x 160 x 81  | 10 01 10 64 0   | 10 06 10 08 0        | 10 06 14 72 0        | 04 00 01 60 0                   |
| 04 16 24 08 0 | 160 x 240 x 81  | 10 01 10 65 0   | 10 06 10 51 0        | 10 06 14 84 0        | 04 00 01 60 0                   |
| 04 20 20 07 0 | 200 x 200 x 72  | 10 01 10 37 0   | 10 06 10 09 0        | 10 06 14 73 0        | 04 00 02 00 0                   |
| 04 20 28 07 0 | 200 x 280 x 72  | 10 01 10 59 0   | 10 06 10 48 0        | 10 06 14 81 0        | 04 00 02 00 0                   |
| 04 28 28 11 0 | 280 x 280 x 111 | 10 01 10 71 0   | 10 06 10 48 0        | 10 06 14 81 0        |                                 |

## Accessories

| Order no.     | Mounting rails for terminals |                     | Mounting plates<br>1) | External fastening bars<br>Pair | Aluminium External hinges<br>Pair | EMC Shielding | SWB/SBG/SBGL<br>Corrosion protection | HEXagon socket cover screws | Silicone lid seal | Sealable Steel cover screws | Cover retaining strap |
|---------------|------------------------------|---------------------|-----------------------|---------------------------------|-----------------------------------|---------------|--------------------------------------|-----------------------------|-------------------|-----------------------------|-----------------------|
|               | TS 15 <sup>5)</sup>          | TS 35 <sup>5)</sup> |                       |                                 |                                   |               |                                      |                             |                   |                             |                       |
| 04 08 08 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 08 12 05 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 08 12 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 10 10 06 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 10 16 06 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 10 20 06 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 12 12 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 12 16 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 14 14 07 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 14 18 07 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 14 22 07 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 15 18 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 16 16 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 16 24 08 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 20 20 07 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 20 28 07 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |
| 04 28 28 11 0 | *                            | *                   | *                     | *                               | *                                 | *             | *                                    | *                           | *                 | *                           | *                     |

1) Hard paper, 2) Non-rusting steel, 3) Die-cast aluminium, 4) Please state installation side A-D when ordering, 5) Galvanised sheet steel

## Accessories



### External fastening bars (set = 2 pieces)

For fastening the enclosures without cover opening

| Order no.     | for type      | Order no.     | for type      |
|---------------|---------------|---------------|---------------|
| 04 00 01 00 0 | 04 10 10 06 0 | 04 00 01 40 0 | 04 14 22 07 0 |
| 04 00 01 00 0 | 04 10 16 06 0 | 04 00 01 60 0 | 04 16 16 08 0 |
| 04 00 01 00 0 | 04 10 20 06 0 | 04 00 01 60 0 | 04 16 24 08 0 |
| 04 00 01 20 0 | 04 12 12 08 0 | 04 00 02 00 0 | 04 20 20 07 0 |
| 04 00 01 20 0 | 04 12 16 08 0 | 04 00 02 00 0 | 04 20 28 07 0 |
| 04 00 01 40 0 | 04 14 14 07 0 |               |               |

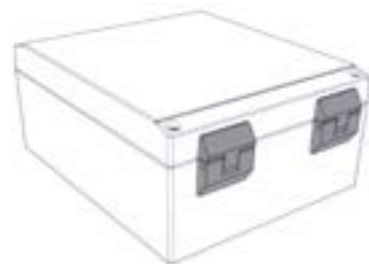


### Desk holder

For upgrading the Aluform enclosure to a multifunctional operating terminal Wall or table mounting

Material Sheet steel; powder coating, RAL 7030, stone grey

| Order no.     | Wide   | for type  |
|---------------|--------|---|
| 04 30 00 09 0 | 98 mm  | 04 10 10 06 0<br>04 10 16 06 0<br>04 10 20 06 0 |
| 04 30 00 14 0 | 138 mm | 04 14 14 07 0<br>04 14 18 07 0<br>04 14 22 07 0 |



### External hinges (Set = 2 pieces)

Order no. 04 00 00 10 0



### Lid safety strip (Set = 2 pieces)

Order no. 04 00 00 20 0

Attention: Machining of the lower part is required for installation. Only possible on side C or D.

## Applications



# > Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



+ Robust plastic enclosure for automation technology and mechanical engineering

+ Fastening options for mounting rails and mounting plates

+ Universal construction



## Technical data

|                      |   |
|----------------------|---|
| Material:            | glass-fibre reinforced, thermoset polyester   |
| Colour:              | RAL 7000, squirrel grey   |
| Protection class:    | IP66 according to EN 60529  |
| Impact resistance:   | from IK07-IK09 according to DIN EN 60068-2-75   |
| Surface resistance:  | >10 <sup>12</sup> Ohm, IEC 60093  |
| Flammability:        | VO/self-Extinguishing, UL 94  |
| Insulation:          | Fully insulated according to VDE 0100   |
| Disruptive strength: | 18 KV/mm, IEC 60243-1   |
| Toxicity:            | halogen-free  |
| Temperatur range:    | CR (chloroprene) seal (standard): -30°C to +90°C<br>VMQ (silicone) seal (optional): -60°C to +165°C |

## Included in delivery

Polyester enclosure consisting of cover, seal, incl. captive +/- stainless steel screws, lower part with 2 or 4 earthing screws.



3-D data and drawings

# > Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

| Order no.     | W x L x H (mm) | Order no.     | W x L x H (mm)  |
|---------------|----------------|---------------|-----------------|
| 02 06 06 03 0 | 55 x 55 x 37   | 02 12 22 09 0 | 120 x 220 x 91  |
| 02 06 06 06 0 | 55 x 55 x 59   | 02 16 16 09 0 | 160 x 160 x 91  |
| 02 08 08 06 0 | 75 x 80 x 56   | 02 16 26 09 0 | 160 x 260 x 91  |
| 02 08 08 08 0 | 75 x 80 x 75   | 02 16 36 09 0 | 160 x 360 x 91  |
| 02 08 11 06 0 | 75 x 110 x 56  | 02 16 56 09 0 | 160 x 560 x 91  |
| 02 08 11 08 0 | 75 x 110 x 75  | 02 25 26 12 0 | 250 x 255 x 121 |
| 02 08 16 06 0 | 75 x 160 x 56  | 02 25 26 16 0 | 250 x 255 x 161 |
| 02 08 16 08 0 | 75 x 160 x 75  | 02 25 40 12 0 | 250 x 400 x 121 |
| 02 08 19 06 0 | 75 x 190 x 56  | 02 25 40 16 0 | 250 x 400 x 161 |
| 02 08 19 08 0 | 75 x 190 x 75  | 02 25 60 12 0 | 250 x 600 x 121 |
| 02 08 23 06 0 | 75 x 230 x 56  | 02 36 36 09 0 | 360 x 360 x 91  |
| 02 08 23 08 0 | 75 x 230 x 75  | 02 41 40 12 0 | 405 x 400 x 121 |
| 02 10 32 08 0 | 100 x 320 x 81 | 02 41 40 20 0 | 406 x 401 x 201 |
| 02 12 12 09 0 | 120 x 122 x 91 |               |                 |

## Accessories

| Order no.     | Mounting rails for terminals |       | External fixing lugs Set | Aluminium External hinges | Hexagon socket cover screws | Silicone lid seal | Sealable lid screws | EMC version |
|---------------|------------------------------|-------|--------------------------|---------------------------|-----------------------------|-------------------|---------------------|-------------|
|               | TS 15                        | TS 35 |                          |                           |                             |                   |                     |             |
| 02 06 06 03 0 |                              |       |                          |                           |                             |                   |                     |             |
| 02 06 06 06 0 |                              |       |                          |                           |                             |                   |                     |             |
| 02 08 08 06 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 08 08 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 11 06 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 11 08 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 16 06 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 16 08 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 19 06 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 19 08 0 | *                            |       | 2 <sup>4)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 08 23 06 0 | *                            |       |                          | *                         | *                           | *                 | *                   | *           |
| 02 08 23 08 0 | *                            |       |                          | *                         | *                           | *                 | *                   | *           |
| 02 10 32 08 0 | *                            |       | 1,5 <sup>1)</sup>        | *                         | *                           | *                 | *                   | *           |
| 02 12 12 09 0 | *                            |       | 1,5 <sup>1)</sup>        | *                         | *                           | *                 | *                   | *           |
| 02 12 22 09 0 | *                            |       | 1,5 <sup>1)</sup>        | *                         | *                           | *                 | *                   | *           |
| 02 16 16 09 0 | *                            |       | 1,5 <sup>1)</sup>        | *                         | *                           | *                 | *                   | *           |
| 02 16 26 09 0 | *                            |       | 1,5 <sup>1)</sup>        | *                         | *                           | *                 | *                   | *           |
| 02 16 36 09 0 | *                            |       | 1,5 <sup>1)</sup>        | *                         | *                           | *                 | *                   | *           |
| 02 16 56 09 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 25 26 12 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 25 26 16 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 25 40 12 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 25 40 16 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 25 60 12 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 36 36 09 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 41 40 12 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |
| 02 41 40 20 0 | *                            |       | 2 <sup>1)</sup>          | *                         | *                           | *                 | *                   | *           |

<sup>1)</sup> Galvanised sheet steel, <sup>2)</sup> Non-rusting steel, <sup>3)</sup> Please state installation side A-D when ordering, <sup>4)</sup> Hard paper, <sup>5)</sup> TS 32 on request

## > Polyester Standard

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Accessories



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



**External mounting brackets**  
(Set = 4 pieces)

| Order no.     | for enclosures                |
|---------------|-------------------------------|
| 10 03 11 01 0 | 01 08 08 06 0 - 01 10 20 08 0 |
| 10 03 11 02 0 | 01 12 12 08 0 - 01 31 60 18 0 |

## > Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications

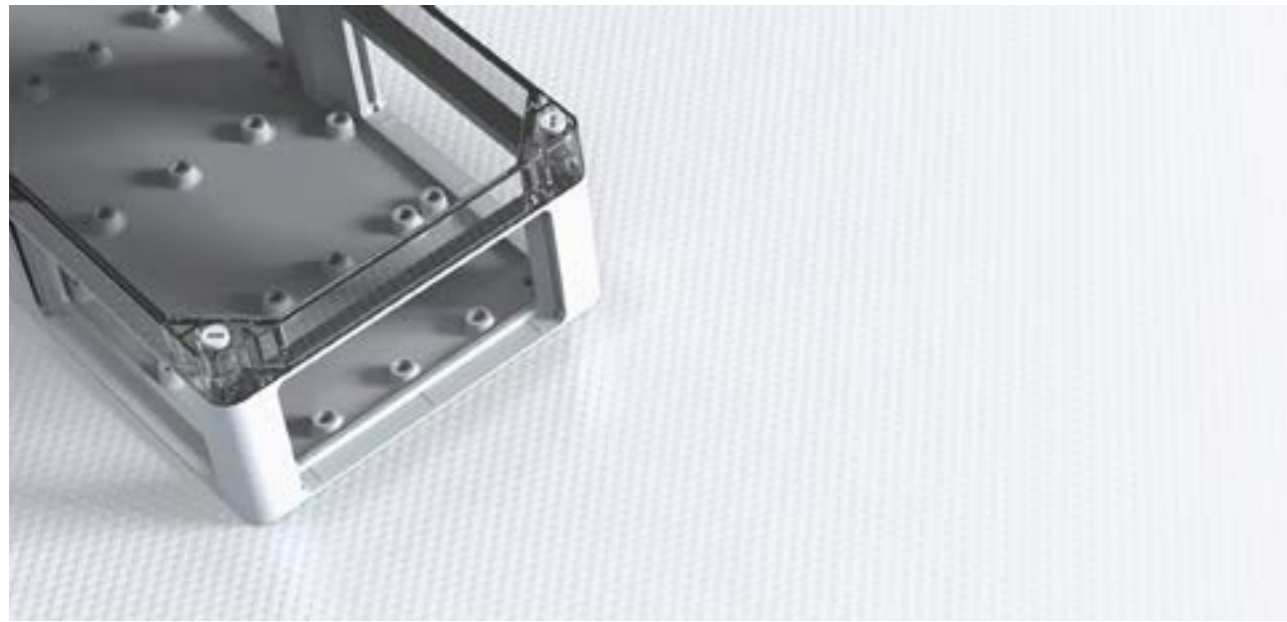




# > Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Plastic enclosure with flange openings for automation technology
- + Possible combinations with other polyester flanged enclosures
- + Quick lock technology



## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | glass-fibre reinforced thermoset polyester<br>Transparent lid: Polycarbonate  |
| <b>Colour:</b>                 | RAL 7032, pebble grey   |
| <b>Protection class:</b>       | IP65 according to EN 60529  |
| <b>Impact resistance:</b>      | IK08 according to DIN EN 60068-2-75   |
| <b>Flammability:</b>           | Enclosure: V0 / self-Extinguishing, UL 94<br>Transparent lid: V2 / UL 94  |
| <b>Insulation:</b>             | Fully insulated according to VDE 0100   |
| <b>Disruptive strength:</b>    | Enclosure: 24 KV/mm, IEC 60243-1<br>Transparent lid: >30 KV/mm, IEC 60243-1   |
| <b>Toxicity:</b>               | halogen-free  |
| <b>Surface resistant:</b>      | Enclosure: 10 <sup>11</sup> Ohm, IEC 60093<br>Transparent lid: 10 <sup>15</sup> Ohm, IEC 60093  |
| <b>Temperature resistance:</b> | Enclosure/lid:<br>CR (chloroprene) seal (standard): -40 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +165 °C<br>Flanges: CR-(chloroprene) gasket (standard): -40 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +165 °C<br>Transparent lid: -30 °C to +125 °C |

### Included in delivery

Plastic enclosure made of glass fibre reinforced polyester consisting of lid, seal, plastic quick-lock screws, lower part with flange openings (please order flange plates separately)  
Threaded bush set (4 pieces)



3-D data and drawings

# > Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

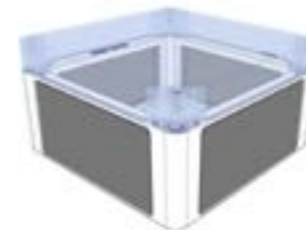
## Product overview

(for all types)

| Order no.   | W x L x H (mm)  | Flange openings | Mounting plates | Front panel on stud bolts | Mounting rails TS 35 | Earth rails   | Silicone seal for lids |
|---|-----------------|-----------------|-----------------|---------------------------|----------------------|---------------|------------------------|
| 14 01 00 00 0                                     | 170 x 270 x 136 | 2               | 14 00 00 11 0   | 14 00 00 27 0             | 10 06 17 21 0        | 10 06 21 01 0 | *                      |
| 14 02 00 00 0                                     | 270 x 270 x 136 | 4               | 14 00 00 12 0   | 14 00 00 28 0             | 10 06 17 22 0        | 10 06 21 01 0 | *                      |
| 14 03 00 00 0                                     | 270 x 541 x 136 | 6               | 14 00 00 13 0   | 14 00 00 29 0             | 10 06 17 23 0        | 10 06 21 02 0 | *                      |
| <b>Version with polycarbonate transparent lid</b> |                 |                 |                 |                           |                      |               |                        |
| 14 01 00 01 0                                     | 170 x 270 x 150 | 2               | 14 00 00 11 0   | 14 00 00 27 0             | 10 06 17 21 0        | 10 06 21 01 0 | *                      |
| 14 02 00 01 0                                     | 270 x 270 x 150 | 4               | 14 00 00 12 0   | 14 00 00 28 0             | 10 06 17 22 0        | 10 06 21 01 0 | *                      |
| 14 03 00 01 0                                     | 270 x 540 x 150 | 6               | 14 00 00 13 0   | 14 00 00 29 0             | 10 06 17 23 0        | 10 06 21 02 0 | *                      |

## Flange, Mounting plate, External brackets and Accessories

|   |               |  |               |
|---|---------------|--|---------------|
| Blind flange (for individual machining) | 14 00 00 20 0 | Lid hinges (2 pcs.) can be retrofitted for all types | 14 00 00 26 0 |
| Connecting flange                       | 14 00 00 25 0 |  |               |



### Blind flange

| Order no.     | Version   |
|---------------|-----------|
| 14 00 00 20 0 | undrilled |



### Connection flange

for connecting two polyester flange enclosures

Order no. 14 00 00 25 0



### Lid hinges

Set = 2 pieces, retrofittable for all polyester flange enclosures

Order no. 14 00 00 26 0

## > Polyester Flange

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Accessories



#### External mounting brackets

Set = 4 Pieces

Order no. 10 03 11 02 0



#### Mounting plates

for mounting electromechanical components

| Order no.     | for enclosures |
|---------------|----------------|
| 14 00 00 11 0 | 14.01          |
| 14 00 00 12 0 | 14.02          |
| 14 00 00 13 0 | 14.03          |



#### Front plate

with stud bolts and fastening screws  
(dimensions see mounting plate)

| Order no.     | for enclosures |
|---------------|----------------|
| 14 00 00 27 0 | 14.01          |
| 14 00 00 28 0 | 14.02          |
| 14 00 00 29 0 | 14.03          |

## > Polycarbonate / ABS

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications



# > Polycarbonate / ABS

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Lightweight plastic enclosures for industrial applications
- + Polycarbonate enclosure with standard or transparent lid
- + ABS enclosure with standard lid
- + Optional EMC version with coating



## Technical Data

|                         |   |
|-------------------------|---|
| Material:               | Polycarbonate, ABS  |
| Colour:                 | RAL 7035, light grey  |
| Protection class:       | IP66 according to EN 60529 (03.08 23 09: IP 65)                                 |
| Surface resistance:     | PC: 10 <sup>15</sup> Ohm, IEC 60093<br>ABS: 4 x 10 <sup>14</sup> Ohm, IEC 60093 |
| Disruptive strength:    | PC: >30 KV/mm, IEC 60243-1<br>ABS: 24 KV/mm, IEC 60243-1                        |
| Impact resistance:      | PC: IK 07 according to IEC 62262  |
| Insulation:             | Fully insulated in accordance with VDE 0100                                     |
| Flammability:           | PC: V2 / UL 94<br>ABS: HB / UL 94   |
| Toxicity:               | halogen-free  |
| Temperature resistance: | PC: -30 °C to +125 °C<br>ABS: -30 °C to +100 °C                                 |

### Included in delivery

Plastic enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, base with 2 self-moulding fixing screws for internal mounting



3-D data and drawings

# > Polycarbonate / ABS

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

| Polycarbonate enclosure<br>Order no. | Polycarbonate enclosure with transparent lid<br>Order no. | ABS enclosure<br>Order no. | Dimensions<br>W x L x H<br>(mm) | Mounting rails |    | External mounting brackets | Pertinax mounting plates<br>Thickness in mm | Silicone lid seal | Rubber table feet | PC External hinge approx 150° <sup>1)</sup> | Sealable lid screws <sup>2)</sup> | EMC version with aluminium vapour deposition |
|--------------------------------------|---|----------------------------|---------------------------------|----------------|----|----------------------------|---|-------------------|-------------------|---|-----------------------------------|--|
|                                      |   |                            |                                 | TS             | TS |                            |   |                   |                   |   |                                   |  |
| 03 05 05 04 0                        | 33 05 05 04 0   | 09 05 05 04 0              | 50 x 52 x 35                    |                |    |                            | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 05 07 04 0                        | 33 05 07 04 0   | 09 05 07 04 0              | 50 x 65 x 35                    | *              | *  |                            | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 08 06 0                        | 33 08 08 06 0   | 09 08 08 06 0              | 80 x 82 x 55                    | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 08 09 0                        | 33 08 08 09 0   | 09 08 08 09 0              | 80 x 82 x 85                    | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 12 06 0                        | 33 08 12 06 0   | 09 08 12 06 0              | 80 x 120 x 55                   | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 12 09 0                        | 33 08 12 09 0   | 09 08 12 09 0              | 80 x 120 x 85                   | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 16 06 0                        | 33 08 16 06 0   | 09 08 16 06 0              | 80 x 160 x 55                   | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 16 09 0                        | 33 08 16 09 0   | 09 08 16 09 0              | 80 x 160 x 85                   | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 08 23 09 0                        | -   | 09 08 23 09 0              | 80 x 230 x 85                   | *              | *  | *                          | 1,5   | *                 | *                 | *   | *                                 | *  |
| 03 12 12 06 0                        | 33 12 12 06 0   | 09 12 12 06 0              | 120 x 122 x 55                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 12 09 0                        | 33 12 12 09 0   | 09 12 12 09 0              | 120 x 122 x 85                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 12 11 0                        | 33 12 12 11 0   | 09 12 12 11 0              | 120 x 122 x 105                 | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 16 09 0                        | 33 12 16 09 0   | 09 12 16 09 0              | 120 x 160 x 90                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 16 14 0                        | 33 12 16 14 0   | 09 12 16 14 0              | 120 x 160 x 140                 | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 20 08 0                        | 33 12 20 08 0   | 09 12 20 08 0              | 120 x 200 x 75                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 20 09 0                        | 33 12 20 09 0   | 09 12 20 09 0              | 120 x 200 x 90                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 12 24 10 0                        | 33 12 24 10 0   | 09 12 24 10 0              | 120 x 240 x 100                 | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 15 20 08 0                        | 33 15 20 08 0   | 09 15 20 08 0              | 150 x 200 x 75                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 16 24 09 0                        | 33 16 24 09 0   | 09 16 24 09 0              | 160 x 240 x 90                  | *              | *  | *                          | 2,5 <sup>3)</sup>                           | *                 | *                 | *   | *                                 | *  |
| 03 16 24 12 0                        | 33 16 24 12 0   | 09 16 24 12 0              | 160 x 240 x 120                 | *              | *  | *                          | 2,5   | *                 | *                 | *   | *                                 | *  |
| 03 16 36 10 0                        | -   | 09 16 36 10 0              | 160 x 360 x 100                 | *              | *  | *                          | 2,5   | *                 | *                 | *   | *                                 | *  |
| 03 20 36 15 0                        | 33 20 36 15 0   | 09 20 36 15 0              | 200 x 360 x 149                 | *              | *  | *                          | 2,5   | *                 | *                 | *   | *                                 | *  |
| 03 23 30 09 0                        | 33 23 30 09 0   | 09 23 30 09 0              | 230 x 300 x 85                  | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| 03 23 30 11 0                        | 33 23 30 11 0   | 09 23 30 11 0              | 230 x 300 x 110                 | *              | *  | *                          | 2   | *                 | *                 | *   | *                                 | *  |
| -                                    | -   | 09 40 36 15 0              | 400 x 360 x 150                 | *              | *  | *                          | 2,5 <sup>3)</sup>                           | *                 | *                 | *   | *                                 | *  |

## Accessories

|  |               |
|--|---------------|
| Table feet (for sizes up to xx 15 20 08 0) | 10 03 40 01 0 |
| Table feet (for sizes up to xx 16 24 19 0) | 10 03 40 02 0 |
| Threaded bushes M4 (10 pcs.)               | 10 03 70 04 0 |
| Threaded bushes M3 (10 pcs.)               | 10 03 70 03 0 |
| External hinge set (2 pcs.)                | 10 02 12 01 0 |
| External mounting brackets (4 pcs.)        | 10 03 12 01 0 |

## Mounting plates

for fixing electromechanical components  
Material: Pertinax

| Order no.     | for enclosure type  | Order no.     | for enclosure type  |
|---------------|---------------------|---------------|---------------------|
| 10 01 20 01 0 | 03/09/33 05 05 04 0 | 10 01 20 07 0 | 03/09/33 12 16 14 0 |
| 10 01 20 02 0 | 03/09/33 05 07 04 0 | 10 01 20 08 0 | 03/09/33 12 20 08 0 |
| 10 01 20 03 0 | 03/09/33 08 08 06 0 | 10 01 20 08 0 | 03/09/33 12 20 09 0 |
| 10 01 20 03 0 | 03/09/33 08 08 09 0 | 10 01 20 09 0 | 03/09/33 12 24 10 0 |
| 10 01 20 04 0 | 03/09/33 08 12 06 0 | 10 01 20 10 0 | 03/09/33 15 20 08 0 |
| 10 01 20 04 0 | 03/09/33 08 12 09 0 | 10 01 20 11 0 | 03/09/33 16 24 09 0 |
| 10 01 20 05 0 | 03/09/33 08 16 06 0 | 10 01 20 11 0 | 03/09/33 16 24 12 0 |
| 10 01 20 05 0 | 03/09/33 08 16 09 0 | 10 01 20 12 0 | 03/09/33 16 36 10 0 |
| 10 01 20 16 0 | 03/09/33 08 23 09 0 | 10 01 20 13 0 | 03/09/33 20 36 15 0 |
| 10 01 20 06 0 | 03/09/33 12 12 06 0 | 10 01 20 14 0 | 03/09/33 23 30 09 0 |
| 10 01 20 06 0 | 03/09/33 12 12 09 0 | 10 01 20 14 0 | 03/09/33 23 30 11 0 |
| 10 01 20 06 0 | 03/09/33 12 12 11 0 | 10 01 20 15 0 | 03/09/33 40 36 15 0 |
| 10 01 20 07   | 03/09/33 12 16 09 0 |               |                     |

<sup>1)</sup> Please specify mounting side A-D when ordering.

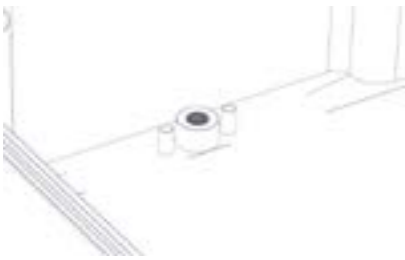
<sup>2)</sup> Non-rusting steel, <sup>3)</sup> Galvanised sheet steel

Transparent cover for ABS not available.

## Accessories



**Externale hinges**  
(Set = 2 pieces)  
Swivelling range 150°  
Order no. 10 02 12 01 0



**Thread bush inserts**

**Order no.**

|  |                     |
|--|---------------------|
| 10 03 70 03 0  | Set with 10 pcs. M3 |
| 10 03 70 04 0  | Set with 10 pcs. M4 |
| for enclosures only ...16 36 10;<br>...20 36 15; ...40 36 15 |                     |



**External mounting brackets**  
(Set = 4 pieces)  
Order no. 10 03 12 01 0

## Applications



# > Polycarbonate Flange

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Lightweight plastic enclosure for industrial applications with flange knockouts
- + Combination options with other polycarbonate flange enclosures
- + Quick-lock technology with flange quick-fastening system



## Technical data

|                         |   |
|-------------------------|---|
| Material:               | Polycarbonate                             |
| Colour:                 | Enclosure: RAL 7032, pebble grey          |
| Protection class:       | IP54 according to EN 60529                |
| Impact resistance:      | IK07 according to DIN EN60068-2-75        |
| Flammability:           | Enclosure: V0 / self-Extinguishing, UL 94 |
| Insulation:             | Fully insulated according to VDE 0100     |
| Disruptive strength:    | Enclosure: >18 KV/mm, IEC 60243-1         |
| Seal:                   | CR round cord                             |
| Toxicity:               | Low halogen                               |
| Surface resistance:     | 10 <sup>15</sup> Ohm, IEC 60093           |
| Temperature resistance: | -30 °C to +125 °C                         |

### Included in delivery

Completely closed enclosure body with flange break-out points, lid with plastic quick-lock; 4 threaded insert bushes for internal fastening



3-D data and drawings

# > Polycarbonate Flange

Polycarbonate enclosure / Standard enclosure

INDUSTRIAL ENCLOSURE

## Product overview

(for all types)

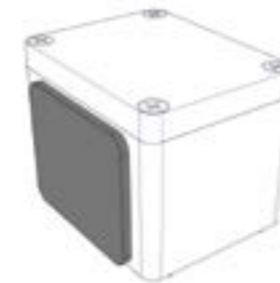
| Order no.     | Dimensions W x L x H (mm) | Flange openings | Mounting rails TS 35 | Earth rails   | Mounting plates |
|---------------|---------------------------|-----------------|----------------------|---------------|-----------------|
| 17 01 10 00 0 | 170 x 134 x 130           | 2               | 10 06 17 24 0        | 10 06 21 00 0 | 17 01 60 00 0   |
| 17 02 10 00 0 | 170 x 170 x 130           | 4               | 10 06 17 24 0        | 10 06 21 00 0 | 17 02 60 00 0   |
| 17 03 10 00 0 | 170 x 269 x 130           | 4               | 10 06 17 22 0        | 10 06 21 01 0 | 17 03 60 00 0   |
| 17 04 10 00 0 | 269 x 269 x 130           | 4               | 10 06 17 22 0        | 10 06 21 01 0 | 17 04 60 00 0   |
| 17 05 10 00 0 | 269 x 540 x 130           | 6               | 10 06 17 23 0        | 10 06 21 02 0 | 17 05 60 00 0   |
| 17 06 10 00 0 | 269 x 441 x 130           | 4               | 10 06 17 25 0        | 10 06 20 11 0 | 17 06 60 00 0   |

## Accessories

(for all types)

|   |               |
|---|---------------|
| Blind flange I  | 17 00 31 00 0 |
| Blind flange II   | 17 00 32 00 0 |
| Connecting flange I                                     | 17 00 36 00 0 |
| Connection flange II                                    | 17 00 37 00 0 |
| Fixing angle (set of 4), 2 sets required for type 17.05 | 17 00 42 00 0 |
| Additional threaded bush inserts (set of 10)            | 10 03 50 03 0 |
| External mounting brackets (set of 4)                   | 10 03 11 04 0 |
| Spare fixing wedges (set of 10)                         | 17 00 41 00 0 |

## Accessories



### Blind flange

| Order no.     | Version                                   |
|---------------|---|
| 17 00 31 00 0 | 17.00 31 00 Blind flange I (125 x 106 mm) |
| 17 00 32 00 0 | Blind flange II (224 x 106 mm)            |



### Connecting flange

For connecting two polycarbonate flange enclosures

| Order no.     | Version              |
|---------------|----------------------|
| 17 00 36 00 0 | Connecting flange I  |
| 17 00 37 00 0 | Connecting flange II |

\* 2 Mounting rails possible = double number of terminals

## > Polycarbonate Flange

Polycarbonate enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



### External mounting brackets

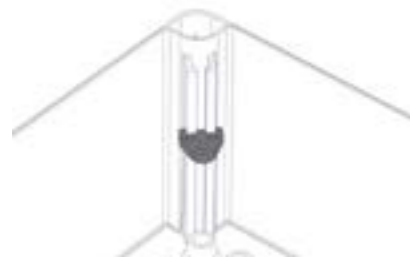
Set = 4 pieces

Order no. 10 03 11 04 0



### Mounting plates

for mounting electromechanical components



### Fixing angle

Set = 4 pieces

Order no. 17 00 42 00 0

## > ECO / PCI Compact enclosures

Compact enclosure ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications



# > ECO / PCI Compact enclosures

Compact enclosure ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Polycarbonate enclosure with standard or transparent lid
- + ECO version: base with smooth side walls, lid version standard or transparent
- + PCI version: base with knock-outs for cable glands

## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Thermoplast PS  |
| <b>Colour:</b>                 | RAL 7035, light grey  |
| <b>Protection class:</b>       | IP66 according to EN 60529  |
| <b>Impact resistance:</b>      | IK07 according to EN 60068-2-75   |
| <b>Flammability:</b>           | UL 94 HB  |
| <b>Insulation:</b>             | Protection class II according to VDE 0140   |
| <b>Toxicity:</b>               | halogen-free  |
| <b>Weather resistance:</b>     | generally good, protect from direct sunlight  |
| <b>Chemical resistance:</b>    | generally good. However, not resistant to petrol, diesel, oils and greases or strong acids. |
| <b>Temperature resistance:</b> | -25 °C to +40 °C  |

### Included in delivery

Plastic enclosure consisting of lid, seal, incl. captive +/- lid screws and screw set for fastening incl. sealing caps.



3-D data and drawings

# > ECO / PCI Compact enclosures

Compact enclosures ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

| Type        | Order no.     | Dimensions      | Type       | Order no.     | Mounting plates | Mounting rails TS 15 (mm) |    |    |     |     | Mounting rails TS 35 (mm) |     |     |     |     |  |  |  |  |  |
|-------------|---------------|-----------------|------------|---------------|-----------------|---------------------------|----|----|-----|-----|---------------------------|-----|-----|-----|-----|--|--|--|--|--|
|             |               |                 |            |               |                 | 49,5                      | 80 | 92 | 111 | 154 | 81                        | 106 | 144 | 216 | 336 |  |  |  |  |  |
| ECO 01-6    | 60 07 07 11 0 | 65 x 65 x 57    | PCI 01-6M  | 60 07 07 15 0 | *               | *                         |    |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 01-8    | 60 07 07 21 0 | 65 x 65 x 81    |            |               | *               | *                         |    |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 02-6    | 60 07 09 11 0 | 65 x 94 x 57    | PCI 02-6M  | 60 07 09 15 0 | *               | *                         | *  |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 02-8    | 60 07 09 21 0 | 65 x 94 x 81    |            |               | *               | *                         | *  |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 03-6    | 60 09 09 11 0 | 94 x 94 x 57    | PCI 03-6M  | 60 09 09 15 0 | *               | *                         |    |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 03-8    | 60 09 09 21 0 | 94 x 94 x 81    |            |               | *               | *                         |    |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 03-6 t  | 60 09 09 12 0 | 94 x 94 x 57    |            |               | *               | *                         |    |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 03-8 t  | 60 09 09 22 0 | 94 x 94 x 81    |            |               | *               | *                         |    |    |     |     |                           |     |     |     |     |  |  |  |  |  |
| ECO 04-6    | 60 09 13 11 0 | 94 x 130 x 57   | PCI 04-6M  | 60 09 13 15 0 | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 04-8    | 60 09 13 21 0 | 94 x 130 x 81   |            |               | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 04-6 t  | 60 09 13 12 0 | 94 x 130 x 57   |            |               | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 04-8 t  | 60 09 13 22 0 | 94 x 130 x 81   |            |               | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 05-7    | 60 11 11 11 0 | 110 x 110 x 66  |            |               | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 05-9    | 60 11 11 21 0 | 110 x 110 x 90  | PCI 05-9M  | 60 11 11 15 0 | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 05-7 t  | 60 11 11 12 0 | 110 x 110 x 66  |            |               | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 05-9 t  | 60 11 11 22 0 | 110 x 110 x 90  |            |               | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 06-7    | 60 13 13 11 0 | 130 x 130 x 75  | PCI 06-7M  | 60 13 13 15 0 | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 06-10   | 60 13 13 21 0 | 130 x 130 x 99  |            |               | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 06-7 t  | 60 13 13 12 0 | 130 x 130 x 75  |            |               | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 06-10 t | 60 13 13 22 0 | 130 x 130 x 99  |            |               | *               | *                         | *  | *  |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 07-6    | 60 09 18 11 0 | 94 x 180 x 57   | PCI 07-6M  | 60 09 18 15 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 07-8    | 60 09 18 21 0 | 94 x 180 x 81   |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 07-6 t  | 60 09 18 12 0 | 94 x 180 x 57   |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 07-8 t  | 60 09 18 22 0 | 94 x 180 x 81   |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 08-9    | 60 11 18 11 0 | 110 x 180 x 90  | PCI 08-9M  | 60 11 18 15 0 | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 08-11   | 60 11 18 21 0 | 110 x 180 x 111 | PCI 08-11M | 60 11 18 25 0 | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 08-9 t  | 60 11 18 12 0 | 110 x 180 x 90  |            |               | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 08-11 t | 60 11 18 22 0 | 110 x 180 x 111 |            |               | *               | *                         | *  |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 09-9    | 60 18 18 11 0 | 180 x 182 x 90  | PCI 09-9M  | 60 18 18 15 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 09-11   | 60 18 18 21 0 | 180 x 182 x 111 | PCI 09-11M | 60 18 18 25 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 09-16   | 60 18 18 31 0 | 180 x 182 x 165 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 09-9 t  | 60 18 18 12 0 | 180 x 182 x 90  |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 09-11 t | 60 18 18 22 0 | 180 x 182 x 111 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 09-16 t | 60 18 18 32 0 | 180 x 182 x 165 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-6    | 60 18 25 10 0 | 180 x 254 x 63  | PCI 10-6M  | 60 18 25 05 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-9    | 60 18 25 11 0 | 180 x 254 x 90  | PCI 10-9M  | 60 18 25 15 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-11   | 60 18 25 21 0 | 180 x 254 x 111 | PCI 10-11M | 60 18 25 25 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-16   | 60 18 25 31 0 | 180 x 254 x 165 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-6t   | 60 18 25 09 0 | 180 x 254 x 63  |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-9 t  | 60 18 25 12 0 | 180 x 254 x 90  |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-11 t | 60 18 25 22 0 | 180 x 254 x 111 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 10-16 t | 60 18 25 32 0 | 180 x 254 x 165 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 11-11   | 60 25 36 11 0 | 254 x 361 x 111 | PCI 11-11M | 60 25 36 15 0 | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 11-16   | 60 25 36 21 0 | 254 x 361 x 165 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 11-11 t | 60 25 36 12 0 | 254 x 361 x 111 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |
| ECO 11-16 t | 60 25 36 22 0 | 254 x 361 x 165 |            |               | *               | *                         |    |    |     |     | *                         | *   |     |     |     |  |  |  |  |  |

t = lid transparent

## > ECO / PCI Compact enclosures

Compact enclosures ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES

### Accessories

(for all types)

|   |               |
|---|---------------|
| External mounting brackets                      | 60 00 04 00 0 |
| External hinge (pair) up to ECO/PCI 07- (small) | 60 00 04 07 0 |
| External hinge (pair) from ECO/PCI 08- (large)  | 60 00 04 08 0 |
| Knurled screw (set)                             | 60 00 04 01 0 |
| Spacers (set = 8 pcs.)                          | 60 00 04 02 0 |



#### Mounting plates

made of plastic, 2.5 mm thick including self-tapping fastening screws and spacers

#### Order no.

|               |                 |
|---------------|-----------------|
| 60 00 01 01 0 | for ECO/PCI 01- |
| 60 00 01 02 0 | for ECO/PCI 02- |
| 60 00 01 03 0 | for ECO/PCI 03- |
| 60 00 01 04 0 | for ECO/PCI 04- |
| 60 00 01 05 0 | for ECO/PCI 05- |
| 60 00 01 06 0 | for ECO/PCI 06- |
| 60 00 01 07 0 | for ECO/PCI 07- |
| 60 00 01 08 0 | for ECO/PCI 08- |
| 60 00 01 09 0 | for ECO/PCI 09- |
| 60 00 01 10 0 | for ECO/PCI 10- |
| 60 00 01 11 0 | for ECO/PCI 11- |



#### Hinge set

Set = 2 pieces

#### Order no.

|               |                           |
|---------------|---------------------------|
| 60 00 04 07 0 | up to ECO/PCI 07- (small) |
| 60 00 04 08 0 | from ECO/PCI 08- (large)  |

## > ECO / PCI Compact enclosures

Compact enclosures ECO/PCI / Standard enclosures

INDUSTRIAL ENCLOSURES



#### External mountings

Set = 4 pieces

Order no. 60 00 04 00 0

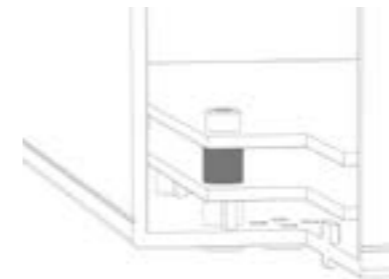


#### Knurled screws

Can be snapped onto the lid screw as a manual twist lock

Set = 4 pieces

Order no. 60 00 04 01 0



#### Spacers

6 and 8 mm made of plastic for desired distances between PCBs or mounting plates

Set = 8 pieces

Order no. 60 00 04 02 0



## > ECO / PCI Compact enclosures

Compact enclosures ECO / PCI / Standard enclosures

INDUSTRIAL ENCLOSURES



### Double membrane connecting plug

Set = 2 Pieces

| Order no.     |              | Sealing range (mm) |
|---------------|--------------|--------------------|
| 60 00 05 16 0 | 50 pcs. M 16 | 5 - 9              |
| 60 00 05 20 0 | 50 pcs. M 20 | 7 - 12             |
| 60 00 05 25 0 | 50 pcs. M 25 | 9 - 16             |
| 60 00 05 32 0 | 50 pcs. M 32 | 14 - 21            |



### Double membrane connecting plug

IP 66, with 2 integrated sealing membranes, tight fit without counter nut, for wall thicknesses 1.5 - 4.5 mm

| Order no.     |               |
|---------------|---------------|
| 60 00 04 20 0 | 100 pcs. M 20 |

## > Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications



# > Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Enclosure system with concealed External hinge
- + Standard version or with window
- + Polycase version with carrying handle



## Technical data

|                         |  |
|-------------------------|--|
| Material:               | glass fibre reinforced, thermoset polyester  |
| Colour:                 | RAL 7038, agate grey   |
| Protection class:       | IP66 according to EN 60529   |
| Impact resistance:      | Enclosure without window: IK08<br>Enclosure with window: IK07                              |
| Flammability:           | V0 / self-Extinguishing, UL 94   |
| Insulation:             | 18 KV/mm, IEC 60243-1  |
| Disruptive strength:    | Enclosure: >18 KV/mm, IEC 60243-1  |
| Toxicity:               | halogen-free   |
| Surface resistance:     | >10 <sup>12</sup> Ohm, IEC 60093   |
| Door-swivel angle:      | 135°   |
| Temperature resistance: | VMQ (silicone) seal (optional): -60 °C to +165 °C<br>Version with window: -40 °C to +80 °C |

### Included in delivery

Enclosure consisting of base and door; order door lock separately, press-fit bushes in base for internal and External mounting



3-D data and drawings

# > Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

(for all types)

| Polyglas/ Polycase | Dimensions W x L x H (mm) | Polyglas      | Weight (g) | "Polyglas with window and lock" | "Polycase* without window with handle" | Weight (g) | "Polycase* with window and handle" |
|--------------------|---------------------------|---------------|------------|---------------------------------|--|------------|------------------------------------|
| Size 1             | 300 x 400 x 200           | 21 30 40 00 0 | 4388       | 22 30 40 00 0                   | 23 30 40 00 0                          | 5510       | 24 30 40 00 0                      |
| Size 2             | 400 x 600 x 250           | 21 40 60 00 0 | 7300       | 22 40 60 00 0                   | 23 40 60 00 0                          | 8400       | 24 40 60 00 0                      |

Note: Enclosure supplied without lock, please order separately!

## Fasteners optional (loose)

|                                    |               |
|------------------------------------|---------------|
| Triangular lock 8 mm (2 pcs.)      | 21 61 00 03 0 |
| Square lock 8 mm (2 pcs.)          | 21 61 00 04 0 |
| Square lock 7 mm (2 pcs.)          | 21 61 00 14 0 |
| Daimler-Benz lock (2 pcs.)         | 21 61 00 06 0 |
| Double ward lock 3 mm (2 pcs.)     | 21 61 00 07 0 |
| Standard handle (2 pcs.)           | 21 61 00 01 0 |
| Standard handle with lock (2 pcs.) | 21 61 00 02 0 |

## Accessories (loose)

|  |               |
|--|---------------|
| Mounting plate for size 1 (galvanised sheet steel)           | 10 01 12 03 0 |
| Mounting plate for size 2 (galvanised sheet steel)           | 10 01 12 04 0 |
| External mounting brackets (4 pcs.)                          | 10 03 10 09 0 |
| Hole covers for fastenings through the cabinet base (4 pcs.) | 10 03 90 01 0 |
| Socket wrench triangular 8 mm                                | 10 04 70 03 0 |
| Socket wrench square 8 mm                                    | 10 04 70 04 0 |
| Socket wrench square 7 mm                                    | 10 04 70 14 0 |
| Socket wrench Daimler-Benz                                   | 10 04 70 06 0 |
| Socket wrench double ward 3 mm                               | 10 04 70 07 0 |

## Accessories



### Mounting plates

| Order no.     | for sizes    |
|---------------|--------------|
| 10 01 12 03 0 | 300 x 400 mm |
| 10 01 12 04 0 | 400 x 600 mm |



### External mounting brackets

Order no. 10 03 10 09 0

## > Polyglas / Polycase

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Polyglas



#### Windows

| Type       | A   | B   | C    |
|------------|-----|-----|------|
| 22 30 40 0 | 153 | 275 | 62,5 |
| 22 40 60 0 | 250 | 450 | 75   |

## > Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications



# > Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Mini-Polyglas housing with concealed external hinge for MSR technology
- + Standard design or with viewing window
- + Small distribution cabinets



## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | glass fibre reinforced, thermoset polyester   |
| <b>Colour:</b>                 | RAL 7038, agate grey  |
| <b>Protection class:</b>       | IP66 according to EN 60529<br>Higher protection class on request  |
| <b>Impact resistance:</b>      | IK09 according to DIN EN 60068-2-75   |
| <b>Temperature resistance:</b> | CR (chloroprene) seal (standard): -40 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +165 °C |

### Included in delivery

Die-cast aluminium enclosure consisting of lid, seal, incl. captive +/- stainless steel screws, base with 4 earthing screws



3-D data and drawings

# > Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

(for all types)

| Mini-Polyglas | Dimension W x L x H (mm) | Weight (g) | Mini-Polyglas | Mini-Polyglas with window | Mounting plates (Sheet steel, loose) |
|---------------|--------------------------|------------|---------------|---------------------------|--------------------------------------|
| Size 1        | 120 x 200 x 100          | 1240       | 21 12 20 00 0 | 22 12 20 00 0             | 10 01 12 07 0                        |
| Size 2        | 160 x 260 x 100          | 1900       | 21 16 26 00 0 | 22 16 26 00 0             | 10 01 12 08 0                        |
| Size 3        | 160 x 340 x 100          | 2000       | 21 16 34 00 0 | 22 16 34 00 0             | 10 01 12 09 0                        |
| Size 4        | 200 x 150 x 100          | 1380       | 21 20 15 00 0 | 22 20 15 00 0             | 10 01 12 10 0                        |
| Size 5        | 200 x 200 x 170          | 2068       | 21 20 20 00 0 | 22 20 20 00 0             | 10 01 12 01 0                        |
| Size 6        | 200 x 300 x 170          | 2990       | 21 20 30 00 0 | 22 20 30 00 0             | 10 01 12 02 0                        |

Note: Please order enclosure without screw plugs separately on delivery.

## Fasteners optional (loose)

|                              |               |
|------------------------------|---------------|
| Triangel screw 8 mm (2 pcs.) | 21 63 00 03 0 |
| Square screw 8 mm (2 pcs.)   | 21 63 00 04 0 |
| Square screw 6 mm (2 pcs.)   | 21 63 00 24 0 |
| Cross-head screw (2 pcs.)    | 21 63 00 05 0 |

## Accessories (loose)

|                                     |               |
|-------------------------------------|---------------|
| External mounting brackets (4 pcs.) | 10 03 10 08 0 |
| Socket wrench triangular 8 mm       | 10 04 70 03 0 |
| Socket wrench square 8 mm           | 10 04 70 04 0 |
| Socket wrench cross-head            | 10 04 70 05 0 |

## Accessories



### Mounting plates

| Order no.     | for sizes |
|---------------|-----------|
| 10 01 12 07 0 | 21 12 20  |
| 10 01 12 08 0 | 21 16 26  |
| 10 01 12 09 0 | 21 16 34  |
| 10 01 12 10 0 | 21 20 15  |
| 10 01 12 01 0 | 21 20 20  |
| 10 01 12 02 0 | 21 20 30  |



### External mounting brackets

Set = 4 pieces

Order no. 10 03 10 08 0

## > Mini-Polyglas

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Window



| Type          | A   | B   | C  |
|---------------|-----|-----|----|
| 22 12 20 00 0 | 116 | 66  | 45 |
| 22 16 26 00 0 | 176 | 108 | 45 |
| 22 16 34 00 0 | 256 | 108 | 45 |
| 22 20 15 00 0 | 66  | 147 | 45 |
| 22 20 20 00 0 | 120 | 120 | 45 |
| 22 20 30 00 0 | 210 | 120 | 45 |

## > Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

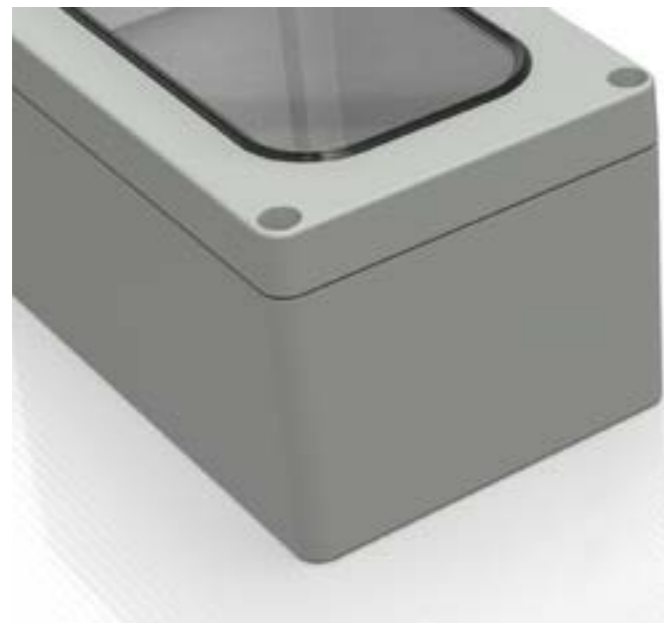
### Applications



# > Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Enclosure system with hinged lid for MCR technology
- + Standard version, with window or transparent door (ABS)



## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | glass fibre reinforced, thermoset polyester/ABS   |
| <b>Colour:</b>                 | Polyester: RAL 7032, pebble grey<br>ABS: RAL 7035, light grau   |
| <b>Protection class:</b>       | IP65 according to EN 60529  |
| <b>Impact resistance:</b>      | IK07 according to EN 60068-2-75   |
| <b>Flammability:</b>           | Polyester: V0 / self-Extinguishing, UL 94<br>ABS: HB, UL 94   |
| <b>Insulation:</b>             | Fully insulated according to VDE 0100   |
| <b>Desruptive strength:</b>    | Polyester: 26 KV/mm, IEC 60243-1<br>ABS: 24 KV/mm, IEC 60243-1  |
| <b>Toxicity:</b>               | halogen-free  |
| <b>Surface resistance:</b>     | Polyester: $4 \times 10^{15}$ Ohm, IEC 60093<br>ABS: $4 \times 10^{14}$ Ohm, IEC 60093  |
| <b>Door-swivel angel:</b>      | 135°  |
| <b>Temperature resistance:</b> | CR (chloroprene) seal (standard): -40 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +165 °C<br>ABS: -40 °C to +70 °C<br>with window: -55 °C to +80 °C |

### Included in delivery

Enclosure consisting of base and door; order door lock separately, press-fit bushes in base for internal and External mounting.



3-D data and drawings

# > Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

(for all types)

|        | Dimensions W x L x H (mm) | Weight (g) | ABS         | "ABS with transparent door" | Polyester   | "Polyester with window" |
|--------|---------------------------|------------|-------------|-----------------------------|-------------|-------------------------|
| Size 1 | 200 x 250 x 150           | 748        | 21.20 25 90 | 22.20 25 90                 | -           | -                       |
| Size 2 | 250 x 300 x 170           | 1248       | 21.25 30 90 | 22.25 30 90                 | -           | -                       |
| Size 1 | 200 x 250 x 150           | 1300       | -           | -                           | 21.20 25 00 | 22.20 25 00             |
| Size 2 | 250 x 300 x 170           | 2530       | -           | -                           | 21.25 30 00 | 22.25 30 00             |

Note: Please order enclosure without screw plugs separately on delivery.

## Fasteners optional (loose)

|                                 |               |
|---------------------------------|---------------|
| Triangular lock 8 mm (1 pc.)    | 21 62 00 03 0 |
| Square lock 8 mm (1 pc.)        | 21 62 00 04 0 |
| Toggle handle (1 pc.)           | 21 62 00 01 0 |
| Toggle handle with lock (1 pc.) | 21 62 00 02 0 |

## Accessories (loose)

|   |               |
|---|---------------|
| Mounting plate for size 1 (laminated paper)                   | 10 01 12 05 0 |
| Mounting plate for size 2 (aminated paper)                    | 10 01 12 06 0 |
| Internal aluminium front panel with stud bolts for size 1     | 10 01 31 01 0 |
| Internal aluminium front panel with stud bolts for size 2     | 10 01 31 02 0 |
| External mounting brackets (4 pcs.)                           | 10 03 10 10 0 |
| Hole covers for fastenings through the cupboard base (4 pcs.) | 10 03 90 02 0 |
| Socket spanner triangular 8 mm                                | 10 04 70 03 0 |
| Socket spanner square 8 mm                                    | 10 04 70 04 0 |

## Accessories



### Mounting plates

| Order no.     | for size |
|---------------|----------|
| 10 01 12 05 0 | 21 20 25 |
| 10 01 12 06 0 | 21 25 30 |



### Internal front plate with stud bolts

| Order no.     | for size |
|---------------|----------|
| 10 01 31 01 0 | 21 20 25 |
| 10 01 31 02 0 | 21 25 30 |

## > Polyester / ABS Switch gear cabinet

Polyester enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



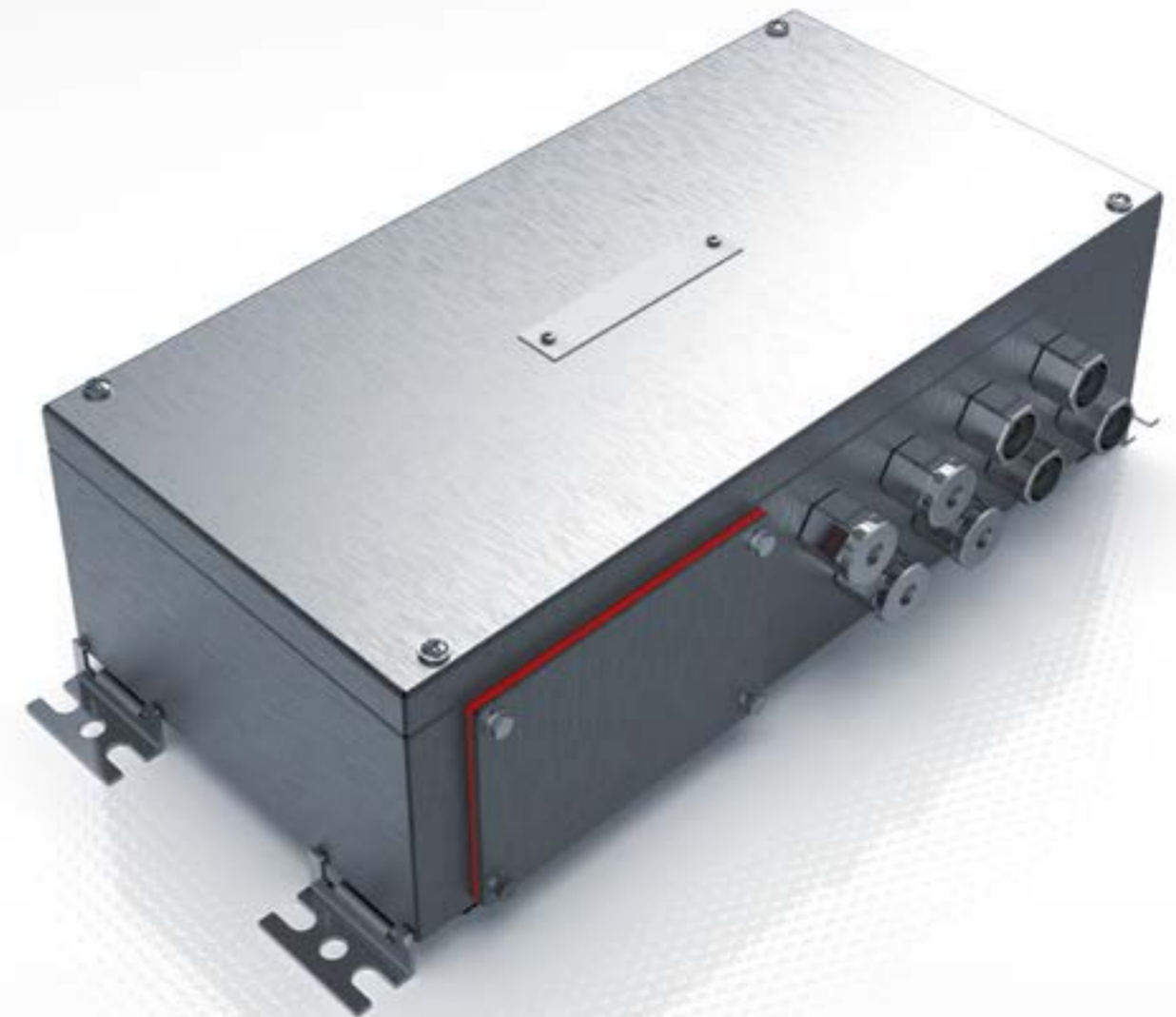
External mounting brackets  
Order no. 10 03 10 10 0

## > Stainless steel industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

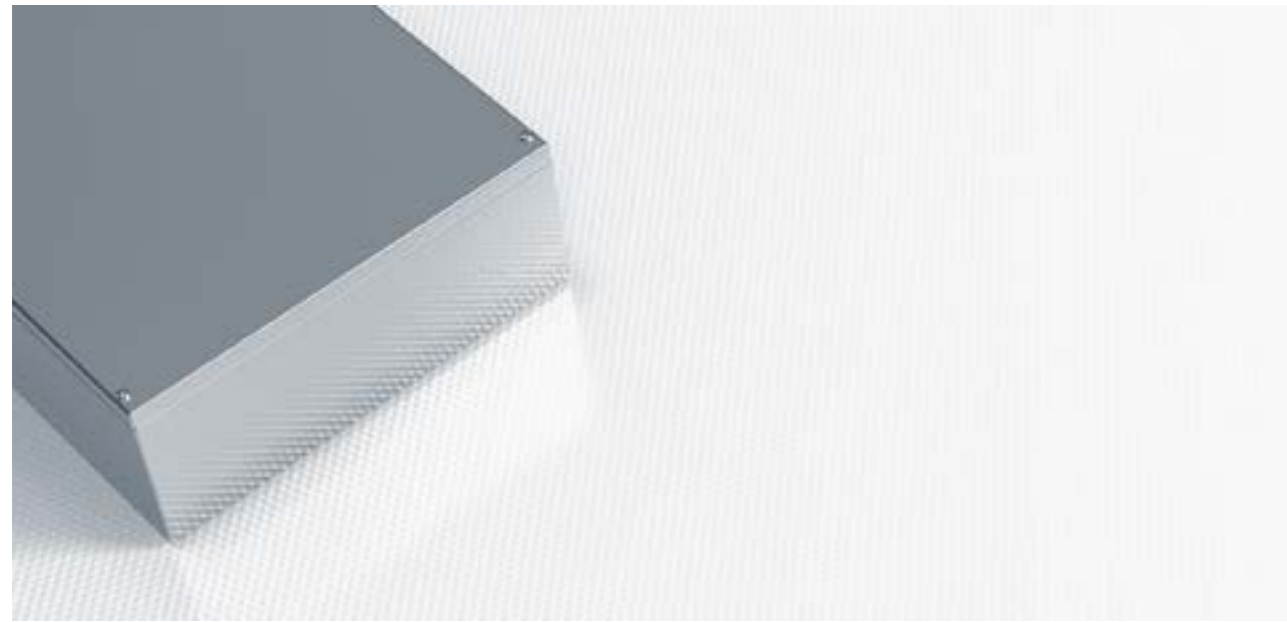
### Applications



# > Stainless steel Industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



- + Universal industrial enclosures for hygienic areas
- + High surface quality 1.4301
- + No gap formation lid/bottom part
- + Protection class up to IP 69K (on request)



DIN EN 45545-2  
EN 15085-2 CL2 on request

## Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel 1,25 mm resp. 1,5 mm; 1.4301 / 304<br>1.4404 / 316 on request                          |
| <b>Protection class:</b>       | IP66 according to EN 60529<br>IP67 on request  |
| <b>Surface:</b>                | ground, grain 240 to grain 320   |
| <b>Temperature resistance:</b> | VMQ (silicone) seal (standard): -60 °C to +175 °C<br>EMC (silicone) seal (optional): -55 °C to +200 °C |

### Included in delivery

Lower part of enclosure with screw-on bars and threaded holes for mounting rails, 4 base embossings with fixing holes and sealing plugs. Alternative: Without fixing holes, cover with threaded bolt inside and captive cover screws



3-D data  
and drawings

# > Stainless steel industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

| Enclosure with mounting bosses and mounting hole | Enclosure with mounting bosses without mounting hole | Mounting plates | Weight (g) | Dimensions (mm) L x W x H                   |
|--|--|-----------------|------------|---|
| Order no.  | Order no.  | Order no.       |            |   |
| 37 10 10 06 0                                    | 37 10 10 96 0  | 10 01 10 53 0   | 561        | 100 x 100 x 61                              |
| 37 15 10 06 0                                    | 37 15 10 96 0  | 10 01 10 54 0   | 717        | 150 x 100 x 61                              |
| 37 15 15 08 0                                    | 37 15 15 98 0  | 10 01 10 38 0   | 1175       | 150 x 150 x 81                              |
| 37 20 10 06 0                                    |  | 10 01 10 55 0   | 914        | 200 x 100 x 61                              |
| 37 20 20 08 0                                    | 37 20 20 98 0  | 10 01 10 40 0   | 1792       | 200 x 200 x 81                              |
| 37 20 20 12 0                                    | 37 20 20 92 0  | 10 01 10 40 0   | 2106       | 200 x 200 x 121                             |
| 37 30 15 08 0                                    |  | 10 01 10 39 0   | 1893       | 300 x 150 x 81                              |
| 37 30 20 08 0                                    |  | 10 01 10 41 0   | 2367       | 300 x 200 x 81                              |
| 37 30 20 12 0                                    | 37 30 20 92 0  | 10 01 10 41 0   | 2770       | 300 x 200 x 121                             |
| 37 30 30 12 0                                    |  | 10 01 10 44 0   | 3792       | 300 x 300 x 121                             |
| 37 30 30 16 0                                    |  | 10 01 10 44 0   | 4101       | 300 x 300 x 161                             |
| 37 38 38 16 0                                    |  | 10 01 10 45 0   | 5838       | 380 x 380 x 161                             |
| 37 40 15 08 0                                    |  | 10 01 10 56 0   | 2370       | 400 x 150 x 81                              |
| 37 40 20 12 0                                    |  | 10 01 10 43 0   | 3383       | 400 x 200 x 121                             |
| 37 40 30 16 0                                    |  | 10 01 10 48 0   | 5268       | 400 x 300 x 161                             |
| 37 50 30 16 0                                    |  | 10 01 10 57 0   | 6237       | 500 x 300 x 161                             |
| 37 50 40 16 0                                    |  | 10 01 10 49 0   | 7333       | 500 x 400 x 161                             |
| 37 60 20 12 0                                    |  | 10 01 10 58 0   | 5798       | 600 x 200 x 121                             |
| 37 99 99 99 0                                    |  |                 |            | Customised size according to specifications |

## Accessories

|   | Order no.     |
|---|---------------|
| Mounting set (Sealing discs, nuts and screws) | 37 99 00 01 0 |
| External hinge set (2 pcs.)                   | 37 00 00 02 0 |
| External mounting brackets (4 pcs.)           | 37 10 50 00 0 |



### Mounting set

Sealing discs, nuts and screws  
Order no. 37 99 00 01 0



## > Stainless steel Industrial enclosures

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



External hinge set  
Order no. 37 00 00 02 0



External mounting brackets  
Order no. 37 10 50 00 0

Order no. for enclosure type

|               |
|---------------|
| 37 10 10 06 0 |
| 37 15 10 06 0 |
| 37 15 15 08 0 |
| 37 20 10 06 0 |
| 37 20 20 08 0 |
| 37 20 20 12 0 |
| 37 30 15 08 0 |
| 37 30 20 08 0 |
| 37 30 20 12 0 |
| 37 30 30 12 0 |
| 37 30 30 16 0 |
| 37 38 38 16 0 |
| 37 40 15 08 0 |
| 37 40 20 12 0 |
| 37 40 30 16 0 |
| 37 50 30 16 0 |
| 37 50 40 16 0 |
| 37 60 20 12 0 |

## > Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

### Applications



# > Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



+ Universal enclosures with concealed hinge and lock

+ High surface quality 1.4301



DIN EN 45545-2  
EN 15085-2 CL2 on request

## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel 1,25 mm resp. 1,5 mm; 1.4301/304<br>1.4404/316 on request           |
| <b>Protection class:</b>       | IP66 according to EN 60529  |
| <b>Surface:</b>                | ground, grain 240 to grain 320  |
| <b>Temperature resistance:</b> | VMQ (silicone) seal (standard): -60 °C to +175 °C<br>EMC (silicone) seal on request |

### Included in delivery

Enclosure with hinged lid, double-bit lock, 4 base embossings with fastening openings and sealing plugs



3-D data  
and drawings

# > Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES

## Product overview

| Order no.     | Weight (g) | Mounting plates | Dimensions (mm) L x W x H                   |
|---------------|------------|-----------------|---|
| 37 00 22 09 0 | 2350       | 10.01 10 66     | 200 x 250 x 97                              |
| 37 00 22 15 0 | 2880       | 10.01 10 66     | 200 x 250 x 157                             |
| 37 00 32 09 0 | 3490       | 10.01 10 67     | 350 x 250 x 97                              |
| 37 00 33 16 0 | 4360       | 10.01 10 44     | 300 x 300 x 167                             |
| 37 00 44 16 0 | 6080       | 10.01 10 45     | 380 x 380 x 167                             |
| 37 00 44 21 0 | 6820       | 10.01 10 45     | 380 x 380 x 217                             |
| 37 00 53 16 0 | 6350       | 10.01 10 57     | 500 x 300 x 167                             |
| 37 00 63 16 0 | 8750       | 10.01 10 68     | 600 x 300 x 167                             |
| 37 00 64 21 0 | 11420      | 10.01 10 69     | 600 x 380 x 217                             |
| 37 00 99 00 0 |            |                 | Customised size according to specifications |

## Product overview

|   |               |
|---|---------------|
| Mounting set (Sealing discs, nuts and screws) | 37 99 00 01 0 |
| External mounting brackets (4 pcs.)           | 37 10 50 00 0 |



**Mounting set**  
(Sealing discs, nuts and screws)  
**Order no. 37 99 00 01 0**

## > Stainless steel Industrial hinged

Stainless steel enclosures / Standard enclosures

INDUSTRIAL ENCLOSURES



External mounting brackets  
Order no. 37 10 50 00 0

For enclosure type

37 00 22 09 0

37 00 32 09 0

37 00 22 15 0

37 00 33 16 0

37 00 44 16 0

37 00 53 16 0

37 00 63 16 0

37 00 44 21 0

37 00 64 21 0

## > NoVoTronic

ELECTRONIC ENCLOSURES

INDUSTRIAL ENCLOSURES

### Applications





- + Aluminium profile enclosure system in 5 sizes for data, PC and MCR technology
- + Chip-free interior thanks to External screw channels
- + Integrated guide grooves for holding circuit boards
- + External function insert strips (Except NoVoTronic 200)
- + Variable length design thanks to profile technology



DIN EN 45545-2

## Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Enclosure profile: DIN EN 573 EN AW-ALMgSi<br>Enclosure lid: DIN EN 1706 EN AC-AISI 12 (Fe)   |
| <b>Colour:</b>                 | Enclosure body and enclosure lid: RAL 9005, jet black<br>Functional insert strips: RAL 3003, ruby red   |
| <b>Surface:</b>                | Powder coating, fine structure matt   |
| <b>Protection class:</b>       | IP65 according to EN 60529  |
| <b>EMC:</b>                    | Optional EMC version  |
| <b>Temperature resistance:</b> | PU (polyurethane) seal (standard): -40 °C to +80 °C<br>CR (chloroprene) seal (optional): -30 °C to +90 °C<br>VMQ (silicone) seal (optional): -60 °C to +175 °C<br>EMC (silicone) seal (optional): -55 °C to +200 °C |

### Included in delivery

Enclosure with two die-cast aluminium covers and two functional insert strips, not screwed on



3-D data and drawings

## Product overview

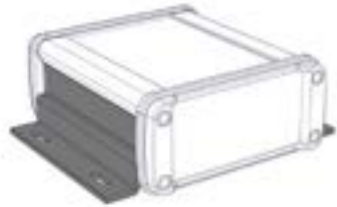
| Type                  | Order no. Standard | Order no. EMC Version | Weight (g) | External enclosure dimensions W x H x D (mm) | Internal enclosure dimensions W x H x D (mm) |
|-----------------------|--------------------|-----------------------|------------|--|--|
| <b>NoVoTronic 80</b>  |                    |                       |            |  |  |
| NoVo-Tronic 80-100    | 07 50 10 10 0      | 07 51 10 10 0         | 480        | 106 x 49 x 120                               | 80 x 36 x 100                                |
| NoVo-Tronic 80-160    | 07 50 10 11 0      | 07 51 10 11 0         | 660        | 106 x 49 x 180                               | 80 x 36 x 160                                |
| NoVo-Tronic 80-200    | 07 50 10 12 0      | 07 51 10 12 0         | 780        | 106 x 49 x 220                               | 80 x 36 x 200                                |
| NoVo-Tronic 80-SL     | 07 50 10 99 0      | 07 51 10 99 0         |            | 106 x 49 x SL                                | 80 x 36 x SL                                 |
| <b>NoVoTronic 100</b> |                    |                       |            |  |  |
| NoVo-Tronic 100-100   | 07 50 20 10 0      | 07 51 20 10 0         | 550        | 126 x 49 x 120                               | 100 x 36 x 100                               |
| NoVo-Tronic 100-160   | 07 50 20 11 0      | 07 51 20 11 0         | 750        | 126 x 49 x 180                               | 100 x 36 x 160                               |
| NoVo-Tronic 100-200   | 07 50 20 12 0      | 07 51 20 12 0         | 880        | 126 x 49 x 220                               | 100 x 36 x 200                               |
| NoVo-Tronic 100-SL    | 07 50 20 99 0      | 07 51 20 99 0         |            | 126 x 49 x SL                                | 100 x 36 x SL                                |
| <b>NoVoTronic 130</b> |                    |                       |            |  |  |
| NoVo-Tronic 130-130   | 07 50 25 10 0      | 07 51 25 10 0         | 880        | 157 x 69 x 150                               | 130 x 57 x 130                               |
| NoVo-Tronic 130-160   | 07 50 25 11 0      | 07 51 25 11 0         | 1020       | 157 x 69 x 180                               | 130 x 57 x 160                               |
| NoVo-Tronic 130-200   | 07 50 25 12 0      | 07 51 25 12 0         | 1200       | 157 x 69 x 220                               | 130 x 57 x 200                               |
| NoVo-Tronic 130-SL    | 07 50 25 99 0      | 07 51 25 99 0         |            | 157 x 69 x SL                                | 130 x 57 x SL                                |
| <b>NoVoTronic 160</b> |                    |                       |            |  |  |
| NoVo-Tronic 160-160   | 07 50 30 10 0      | 07 51 30 10 0         | 1500       | 190 x 90 x 180                               | 160 x 76 x 160                               |
| NoVo-Tronic 160-200   | 07 50 30 11 0      | 07 51 30 11 0         | 1800       | 190 x 90 x 220                               | 160 x 76 x 200                               |
| NoVo-Tronic 160-300   | 07 50 30 12 0      | 07 51 30 12 0         | 2500       | 190 x 90 x 320                               | 160 x 76 x 300                               |
| NoVo-Tronic 160-SL    | 07 50 30 99 0      | 07 51 30 99 0         |            | 190 x 90 x SL                                | 160 x 76 x SL                                |
| <b>NoVoTronic 200</b> |                    |                       |            |  |  |
| NoVo-Tronic 200-220   | 07 50 40 10 0      | 07 51 40 10 0         | 2500       | 233 x 121 x 240                              | 200 x 105 x 220                              |
| NoVo-Tronic 200-280   | 07 50 40 11 0      | 07 51 40 11 0         | 3060       | 233 x 121 x 300                              | 200 x 105 x 280                              |
| NoVo-Tronic 200-330   | 07 50 40 12 0      | 07 51 40 12 0         | 3450       | 233 x 121 x 350                              | 200 x 105 x 330                              |
| NoVo-Tronic 200-SL    | 07 50 40 99 0      | 07 51 40 99 0         |            | 233 x 121 x SL                               | 200 x 105 x SL                               |

## Accessories

|                                | Order no.     | NoVoTronic 80 | NoVoTronic 100 | NoVoTronic 130 | NoVoTronic 160 | NoVoTronic 200 |
|--------------------------------|---------------|---------------|----------------|----------------|----------------|----------------|
| Wall profile 80/100-100        | 07 50 90 11 0 | *             | *              |                |                |                |
| Wall profile 80/100-160        | 07 50 90 12 0 | *             | *              |                |                |                |
| Wall profile 80/100-200        | 07 50 90 13 0 | *             | *              |                |                |                |
| Wall profile 80/100-SL         | 07 50 90 99 0 | *             | *              |                |                |                |
| Wall profile 130/160-130       | 07 50 91 11 0 |               |                | *              | *              |                |
| Wall profile 130/160-160       | 07 50 91 12 0 |               |                | *              | *              |                |
| Wall profile 130/160-200       | 07 50 91 13 0 |               |                | *              | *              |                |
| Wall profile 130/160-300       | 07 50 91 14 0 |               |                | *              | *              |                |
| Wall profile 130/160-SL        | 07 50 91 99 0 |               |                | *              | *              |                |
| Lid wall holder 80/100         | 07 50 90 02 0 | *             | *              |                |                |                |
| NoVo-Wall holder P80           | 07 50 90 03 0 | *             |                |                |                |                |
| NoVo-Wall holder P100          | 07 50 90 04 0 |               | *              |                |                |                |
| NoVo-Wall holder P130          | 07 50 90 15 0 |               |                | *              |                |                |
| NoVo-Wall holder P160          | 07 50 90 05 0 |               |                |                | *              |                |
| Foot- / connecting element 80  | 07 50 90 06 0 | *             |                |                |                |                |
| Foot- / connecting element 100 | 07 50 90 07 0 |               | *              |                |                |                |
| Foot- / connecting element 130 | 07 50 90 14 0 |               |                | *              |                |                |

SL = Special length

Accessories



**Wall profile (2 pieces)**  
For insertion into system groove as wall mounting

**NoVoTronic 80**



**Foot- / connecting element (1 piece)**  
for stacking or mechanically connecting enclosures

| Order no.     | for type       | Dimensions |      |      |
|---------------|----------------|------------|------|------|
|               |                | A          | B    | C    |
| 07 50 90 06 0 | NoVoTronic 80  | 107,0      | 33,5 | 20,0 |
| 07 50 90 07 0 | NoVoTronic 100 | 127,0      | 33,5 | 20,0 |
| 07 50 90 14 0 | NoVoTronic 130 | 158,0      | 51,8 | 25,0 |



**NoVo-Wall holder**  
for wall mounting and as a connection to e.g. Commander

| Order no.     | for type       | Dimensions |       |      |
|---------------|----------------|------------|-------|------|
|               |                | A          | B     | C    |
| 07 50 90 03 0 | NoVoTronic 80  | 74,0       | 99,0  | 41,2 |
| 07 50 90 04 0 | NoVoTronic 100 | 90,0       | 119,0 | 41,2 |
| 07 50 90 15 0 | NoVoTronic 130 | 116,5      | 150,0 | 51,2 |
| 07 50 90 05 0 | NoVoTronic 160 | 150,0      | 183,5 | 61,5 |



**Battery compartment**

| Order no.   | for type         |
|-------------|------------------|
| 83.90 00 03 | for 9V block     |
| 83.90 00 06 | for 4 x AA cells |



**Lid wall holder 80/100 (2 pieces)**  
For screwing onto the enclosure cover as a swivelling wall bracket  
Swivelling range when mounted on a straight surface and attached to the centre of the lid:  
NoVoTronic 80 +40°  
NoVoTronic 100 +30°

**Order no. 07 50 90 02 0**

Applications





- + Aluminium table-top enclosure for MCR technology
- + Customised height variants thanks to profile technology
- + Stacking option due to special foot shape
- + Contactless inside of enclosure
- + Internal mounting groove for M4 and M5 spring nuts



**Technical data**

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Half shell: DIN EN 1706 EN AC-AISI 12 (Fe)<br>Side profiles: DIN EN 573 EN AW-AlMgSi  |
| <b>Colour combination:</b>     | Enclosure RAL 7035, light grey<br>Base elements RAL 7024, graphite grey<br>or enclosure RAL 9005, jet black<br>Base elements RAL 3003, ruby red |
| <b>Protection class:</b>       | IP40 according to EN 60529  |
| <b>Surface:</b>                | Powder coating, silk gloss texture  |
| <b>Temperature resistance:</b> | -40 °C to +80 °C  |

Included in delivery  
Enclosure system with base/head elements; order front panel / rear panel separately



3-D data and drawings

**Product overview**

| Type                      | Order no.     | External enclosure dimensions*<br>W x L x H (mm) | Weight (g) | Colour combinations | Front panel / rear wall (Set, 2 pcs.) | Max. front panel area |
|---------------------------|---------------|--|------------|---------------------|---------------------------------------|-----------------------|
| Wavetronic 1              | 07 70 01 01 0 | 324 x 268 x 55                                   | 2300       | grey/anthracite     | 07 70 00 91 0                         | 287 x 37              |
| Wavetronic 1              | 07 70 02 01 0 | 324 x 268 x 55                                   | 2300       | black/red           | 07 70 00 91 0                         | 287 x 37              |
| Wavetronic 2              | 07 70 01 02 0 | 324 x 268 x 101                                  | 2700       | grau/anthrazit      | 07 70 00 92 0                         | 287 x 83              |
| Wavetronic 2              | 07 70 02 02 0 | 324 x 268 x 101                                  | 2700       | black/red           | 07 70 00 92 0                         | 287 x 83              |
| Wavetronic 3              | 07 70 01 03 0 | 324 x 268 x 147                                  | 3100       | grey/anthracite     | 07 70 00 93 0                         | 287 x 129             |
| Wavetronic 3              | 07 70 02 03 0 | 324 x 268 x 147                                  | 3100       | black/red           | 07 70 00 93 0                         | 287 x 129             |
| Wavetronic 4              | 07 70 01 04 0 | 324 x 268 x 194                                  | 3500       | grey/anthracite     | 07 70 00 94 0                         | 287 x 176             |
| Wavetronic 4              | 07 70 02 04 0 | 324 x 268 x 194                                  | 3500       | black/red           | 07 70 00 94 0                         | 287 x 176             |
| Wavetronic Special height | 07 70 01 99 0 | 324 x 268 x SH**                                 |            | grey/anthracite     | 07 70 00 99 0                         | 287 x SH***           |
| Wavetronic Special height | 07 70 02 99 0 | 324 x 268 x SH**                                 |            | black/red           | 07 70 00 99 0                         | 287 x SH***           |

\* Dimensions without base elements

\*\* Front panel area + 18

\*\*\* min. special height = 75 mm; max. special height = 300 mm

EMC version on request

**Accessories**

| Type                          | Order no. EMC version |
|-------------------------------|-----------------------|
| Support feet (2 pcs.), grey   | 07.70 00 81           |
| Carrying handle               | 07.70 00 82           |
| 19"-Slide-in set (53TE / 3HE) | 07.70 00 83           |
| Spring nuts M4 (4 pcs.)       | 29.00 00 50           |
| Spring nuts M5 (8 pcs.)       | 10.03 60 01           |



**19"-Slide-in set**  
(for Wavetronic 3)

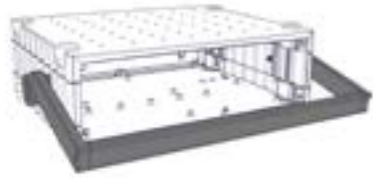
Order no. 07 70 00 83 0



**Spring nuts for fastening to the side profile**

|             |               |
|-------------|---------------|
| M4 (4 pcs.) | 29 00 00 50 0 |
| M5 (8 pcs.) | 10 03 60 01 0 |

**Accessories**

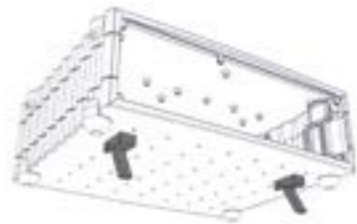


**Handles**  
Order no. 07 70 00 82 0



**Front panel / back panel**

|                           |               |
|---------------------------|---------------|
| Wavetronic 1              | 07 70 00 91 0 |
| Wavetronic 2              | 07 70 00 92 0 |
| Wavetronic 3              | 07 70 00 93 0 |
| Wavetronic 4              | 07 70 00 94 0 |
| Wavetronic Special height | 07 70 00 99 0 |



**Support feet**  
Order no. 07 70 00 81 0



## > Protection Classes and Tightening Torques

IP AND NEMA PROTECTION CLASSES

INDUSTRIAL ENCLOSURES

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

### Meaning of the NEMA protection class:

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

### Protection classes and tightening torques

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

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

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

### Degrees of protection for water protection

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

## > Protection Classes and Tightening Torques

IK protection classes and tightening torques

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### IK protection classes

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

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

| Product group | Description          | Size of the lid screw | Tightening torque in Nm |
|---------------|----------------------|-----------------------|-------------------------|
| 01            | AL- enclosures       | M4                    | 1 - 2,5                 |
| 01            | AL- enclosures       | M6                    | 1 - 3,0                 |
| 02            | Polyester enclosures | M4                    | 1 - 1,5                 |
| 02            | Polyester enclosures | M6                    | 1 - 3,0                 |
| 03            | PC- enclosures       | M4                    | 1 - 2,0                 |
| 03            | PC- enclosures       | M6                    | 1 - 2,5                 |
| 04            | AluForm enclosures   | M4                    | 1 - 2,0                 |
| 04            | AluForm enclosures   | M6                    | 1 - 2,5                 |



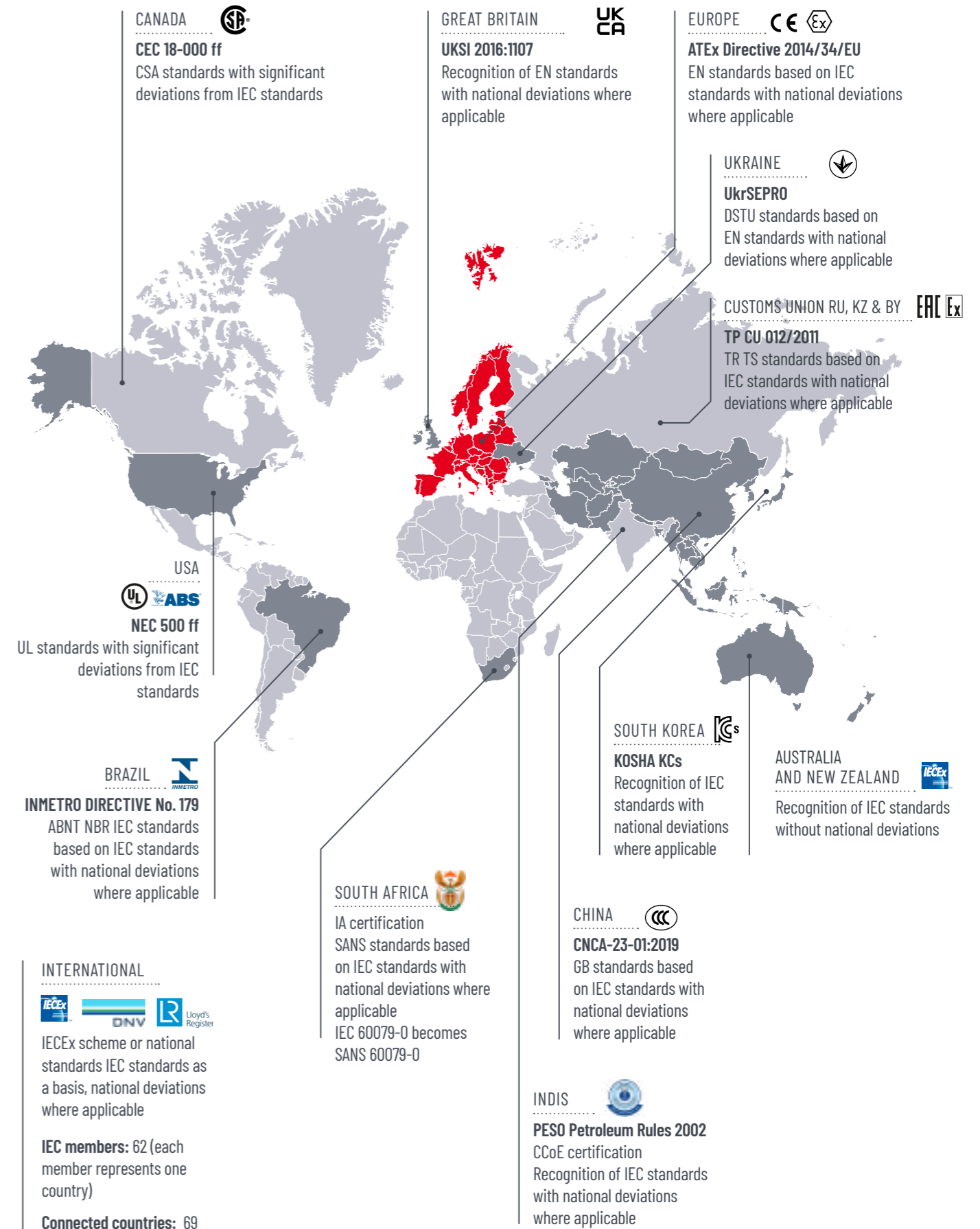
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| Productgroup | ABS | ATEX | CCC (Plant India I+II) | CCC (Plant India III) | CCC (Plant Porta Westfalica) | CCC (Plant Singapore) | CCoE (India) | DNV | IA (South Africa) | IECEX | INMETRO (Brazil) | KTL (Korea) | Lloyd's Register (LR) | Russian Maritime Register of Shipping (R-MR) | TRTS/EAC (Russia) | UKCA | UkrSEPRO (Ukraine) | UL 508A (E66473) | UL Ex (E203312) |
|--------------|-----|------|------------------------|-----------------------|------------------------------|-----------------------|--------------|-----|-------------------|-------|------------------|-------------|-----------------------|--|-------------------|------|--------------------|------------------|-----------------|
| 01           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             | 1                     |  |                   |      |                    |                  | 1               |
| 02           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             | 1                     |  |                   |      |                    |                  | 1               |
| 04           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             | 1                     |  |                   |      |                    |                  | 1               |
| 05           | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             |                       | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 06           | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             |                       | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 15           | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             |                       | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 16           | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             |                       | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 19           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  | 1               |
| 20           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  | 1               |
| 21           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       | 1  |                   |      |                    |                  | 1               |
| 25           | 1   | 1    |                        | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             | 1                     | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 26           | 1   | 1    |                        | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             | 1                     | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 28           |     | 1    |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  | 1                 |      |                    |                  |                 |
| 34           | 1   | 1    |                        | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             | 1                     | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 35           | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             |                       | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 36           | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     | 1                |             |                       | 1  | 1                 | 1    | 1                  | 1                | 1               |
| 37           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             | 1                     |  |                   |      |                    |                  | 1               |
| 38           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  | 1               |
| 40-EJB       | 1   |      | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     |                  |             |                       | 1  | 1                 | 1    |                    |                  |                 |
| 40-EFJB      | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 40-ELJB      | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 40-EJS       | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 40-GUB       | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     |                  |             |                       | 1  | 1                 | 1    |                    |                  |                 |
| 40-IJB       | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     |                  |             |                       | 1  | 1                 | 1    |                    |                  |                 |
| 40-IFJB      | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 40-TBE       | 1   | 1    | 1                      | 1                     | 1                            | 1                     | 1            | 1   | 1                 | 1     |                  |             |                       | 1  | 1                 |      |                    |                  |                 |
| 40-CA        | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 42           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  |                 |
| 46           | 1   |      |                        |                       |                              |                       | 1            |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 47           | 1   |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  |                 |
| 48           | 1   |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      | 1                  |                  |                 |
| 58           | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 62           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  |                 |
| 64           |     |      |                        |                       |                              |                       |              |     |                   |       |                  |             |                       |  |                   |      |                    |                  | 1               |
| 68           | 1   |      |                        |                       |                              |                       |              |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 90           | 1   |      |                        |                       |                              |                       | 1            |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 91           | 1   |      |                        |                       |                              |                       | 1            |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 92           | 1   |      |                        |                       |                              |                       | 1            |     |                   | 1     |                  |             |                       |  |                   |      |                    |                  |                 |
| 35.30.30.19  |     |      |                        |                       |                              |                       |              |     |                   |       |                  | 1           |                       |  |                   |      |                    |                  |                 |
| 35.40.30.16  |     |      |                        |                       |                              |                       |              |     |                   |       |                  | 1           |                       |  |                   |      |                    |                  |                 |
| 35.50.40.16  |     |      |                        |                       |                              |                       |              |     |                   |       |                  | 1           |                       |  |                   |      |                    |                  |                 |
| 35.60.70.19  |     |      |                        |                       |                              |                       |              |     |                   |       |                  | 1           |                       |  |                   |      |                    |                  |                 |

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## The path to the right enclosure

There are various criteria to consider when selecting an enclosure:

- > the installation location (indoor/outdoor area, hazardous area, seawater area, etc.)
- > the size (depends on the fixtures)
- > the protective function (protection class, EMC resistance, Ex)

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

## I. Enclosure material specifications

### Aluminium enclosure

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

### Polyester enclosure

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

### Polycarbonate enclosure

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

### ABS enclosure

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

### Polystyrene enclosure

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

### Stainless steel enclosures

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

## Chemical resistance

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

### Explanation of symbols

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

- conditionally resistant
- unstable
- / without specification

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

# > Industrial enclosures



A Phoenix Mecano Company



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