



## **Complete Range Enclosure Systems**





# BERNSTEIN AG – A Success Story



## Safety for man and machine

BERNSTEIN AG ranks among the world's leading providers of industrial **safety technology**. With our comprehensive range of **switches, sensors, enclosures, suspension systems** and other components for industrial applications, we offer our customers effective and versatile solutions.

In-depth market knowledge, the close proximity to end users as well as years of experience in mechanical engineering and electronics are reflected down to the last detail in our products.

By conforming to international safety guidelines, our products perfectly integrate in individual system solutions. Our focus is complete commitment to safety for man, machine and industrial processes.

## Our expertise for your safety

With sound application expertise we support our customers from all branches of industry in the planning and implementation of systems designed to meet stringent safety requirements. In addition to classic **plant and machine construction**, we look after customers in the **lift construction, automotive, agriculture, conveyor construction, automation engineering, wood-working, renewable energy, medical technology industries, AS-Interface** and **ATEX**.



**Our knowledge  
is your success**

### **Our philosophy**

**Customer Satisfaction** is our number one priority. For us, **Quality** is more than making a good product, it's about designing them to perfectly match ALL of your needs.

**Customized Solutions** are fully integrated into our business and form part of our everyday working life. Employees are treated as our greatest asset as they are responsible for the quality and success of our products. All **BERNSTEIN TEAM** members are trained and educated to the highest possible standard so they can deliver **"Best in Class" Service and Support**. The BERNSTEIN TEAM will support you both personally and professionally, working together we will provide you with the **best Safe Solution** – for any size of project.

### **Future-proof solutions**

Our objective is to actively influence technical innovation and modern application solutions. BERNSTEIN has therefore always been at the centre of defining trends in technology. With an unwavering commitment to the future we will continue providing the best possible answers in terms of technology, ecology and economic efficiency.

That is our definition of progress!

# BERNSTEIN AG

## The Product Lines

### Switch system



#### Switch system – Economy meets safety

BERNSTEIN electromechanical switches offer a convincing price/performance ratio and impress with their extreme reliability for many different operating voltages. The range extends from limit switches, encapsulated in insulating material or metal, through foot switches to safety switching devices. The AS-i compatible products save time and material in installation and provide cost advantages in operation. The comprehensive range of designs and sizes, the possible switching functions and the choice of actuators make virtually any application reality.

### Sensor systems



#### Sensor systems – Compact intelligence

The extremely fast and exceptionally precise BERNSTEIN sensors operate without interference and wear in all applications. The tried-and-tested reliability and the compact dimensions are greatly appreciated in all branches of industry. Matching the specific application, in addition to ultrasonic sensors and level switches, customers can choose from a wide range of inductive, capacitive, magnetic or optical sensors. Alongside the comprehensive standard range of sensors, we also offer comprehensive development and design for individual solutions.

## Enclosure systems



### Enclosure systems – Function and design

With its long tradition in manufacturing enclosures, BERNSTEIN combines superior enclosure technology, designed for encapsulating a diverse range of applications, with ultramodern and variable suspension systems. An extensive range of aluminium and plastic terminal boxes as well as the wiring and circuitry in standard and control enclosures conforming to specific customer requirements round off the product portfolio. Our enclosures conform to standards used in medical technology, industry as well as food and EX applications.

# Product Line Enclosure Systems



## Enclosure systems – Function and design

Functional design, high quality and durability are essential prerequisites for effective system integration. We incorporate customised wiring and specific component configurations in our expanded enclosure production process, which includes the preassembly of mounting rails or the installation of PLC/IPS solutions of all renowned manufacturers. In cooperation with our customers, this extremely pragmatic project planning results in fast and exceptionally reliable solutions.

In the modular aluminium control enclosure systems we combine state-of-the-art design with outstanding technical features to individually and efficiently encapsulate industrial controllers and operator panels. Our extensive range of suspension systems perfectly enhance this product portfolio. The same meticulous attention to detail is reflected in our range of stainless steel control enclosures.

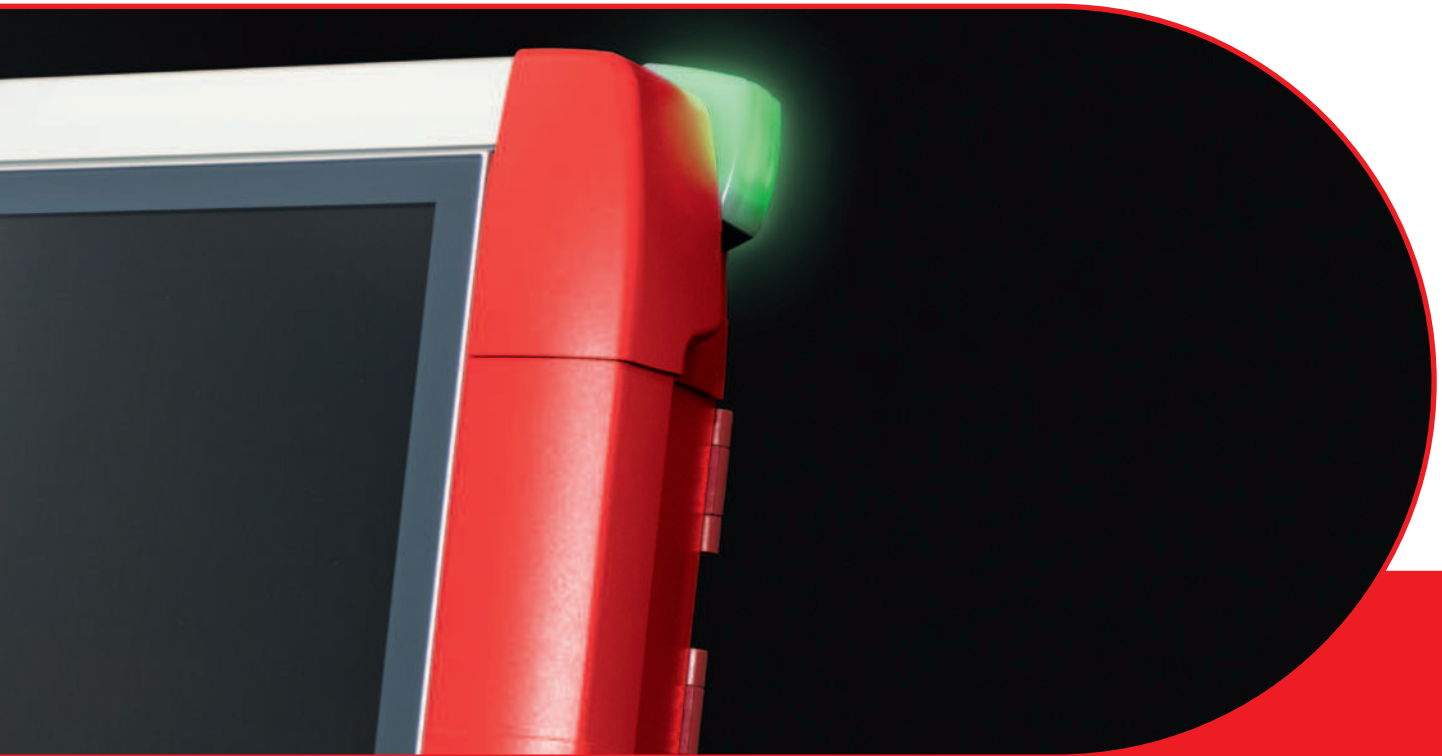
These products are ideally suited for applications where the use of stainless steel is essential on account of special requirements and ambient conditions. With special sizes, different surface finishes and the comprehensive range of stainless steel suspension systems we offer unlimited scope for individualisation.

All state-of-the-art BERNSTEIN suspension systems are characterised by variable layout, advanced design and ease of installation.

## Integrated diversity

Modern industrial design, perfected ergonomics and a host of combinable components create innovative system solutions based on modular principles. BERNSTEIN standard enclosures with quick-release fasteners, flexible internal articulated hinges and international approvals give our customers ample scope in the choice of enclosures best suited for their specific application.





With a range of materials such as plastic, metal and stainless steel, BERNSTEIN has the ideal solution for all applications. Backed by our quality manufacturing guarantee we will do whatever it takes to make sure that BERNSTEIN enclosures provide the perfect solution.

#### **Services and standards**

- Bespoke solutions
- Lower costs thanks to all-encompassing system
- Supply of complete systems and their project integration
- System components procured by BERNSTEIN
- Compliance with applicable product and industrial standards
- International approvals

## System solutions / EX

**Type** **Page**



**BERNSTEIN System solutions** **12**  
Comprehensive range of services from BERNSTEIN enclosure systems



**EX** **14**  
EX-approved products for potentially explosive atmospheres

**Selection criteria and general technical information on enclosures** **18**  
(IP classification, chemical resistance, etc.)

## Standard enclosures

**Type** **Page**



**Aluminium enclosures** **26**  
**Type CA**  
• High mechanical loading capacity  
• High corrosion resistance  
• IP 66  
• Accessories  
• Assembly, aluminium enclosures



**Polycarbonate enclosures** **46**  
**Type CT**  
• Medium mechanical loading capacity  
• Conditional suitability, for outdoor use  
• IP 65  
• Accessories  
• Assembly, polycarbonate and ABS enclosures

**ABS enclosures**  
**Type CT**  
• Low mechanical loading capacity  
• Limited suitability for outdoor use  
• IP 65  
• Accessories



**Polyester enclosures** **60**  
**Type CP**  
• High mechanical loading capacity  
• Very high corrosion resistance  
• Excellent suitability for outdoor use  
• IP 66  
• Accessories

## Control enclosures

**Type** **Page**

**Overview Aluminium-Control enclosures** **72**



**Control enclosures** **74**  
**Type CC-5000 neXt**  
• Modular aluminium enclosure concept  
• Direct installation of commercially avlb. controllers  
• Different front panel installation options  
• Customer-specific dimensions



**Control enclosures** **78**  
**Type CC-4000/CC-4000 SL**  
• Modular aluminium enclosure concept  
• Direct installation of commercially avlb. controllers  
• Different front panel installation options  
• Customer-specific dimensions  
• Stand



**Light-duty control enclosures** **82**  
**Type CC-3000**  
• Modular, flat aluminium slimline concept  
• Direct installation of commercially avlb. controllers  
• Different front panel installation options  
• Customer-specific dimensions

**Accessories Control enclosures** **86**

**Checklists** **94**

## Suspension systems

**Type** **Page**

**Selection criteria for suspension systems** **104**



**Light-duty suspension system** **106**  
**Type CS-2000 SL 45/60**  
 • Modular suspension system concept in two colours for light mechanical loads  
 • Alum. connecting sections with/without cable duct  
 • Installation openings at joints

**CS-3000 Family** **119**



**Light-duty suspension system** **122**  
**Type CS-3000 neXt**  
 • Modular suspension system concept for light mechanical loads  
 • Anodised aluminium tubing as connecting element and cable duct  
 • Installation openings at joints



**Medium-duty suspension system** **130**  
**Type CS-3000**  
 • Modular suspension system concept for medium mechanical loads  
 • Anodised aluminium tubing as connecting element and cable duct  
 • Installation openings at joints

**Accessories CS-3000 Family** **143**



**Heavy-duty suspension system** **144**  
**Type CS-2000 System 80**  
 • Modular suspension system concept for heavy mechanical loads  
 • Steel tubing as connecting element and cable duct  
 • Installation openings at joints

**Accessories for suspension CS-2000 SL and System 80** **154**

## Stainless steel range

**Type** **Page**



**Stainless steel enclosure CC-800** **156**  
 • Material 1.4301  
 • Protection class IP 65  
 • Modern design



**Suspension system for light to medium loads** **160**  
**Type CS-480 NR**  
 • Material 1.4305  
 • Protection class IP 66



**Suspension system for medium to high loads** **168**  
**Type CS-600 NR**  
 • Material 1.4305  
 • Protection class IP 66  
 • Modular system

## Expertise from under one roof

### Comprehensive range of services from BERNSTEIN enclosure systems

BERNSTEIN specialises in products that reliably protect your technical equipment from damage, the environment or unauthorised access.

Bespoke, individually designed system solutions are based on tried-and-tested enclosure technology combined with BERNSTEIN suspension systems.

Tailored wiring and the installation of components can now be integrated directly in the expanded enclosure production process.

Starting with the preassembly of mounting rails and terminals through cable configuration to component mounting and complete wiring in the enclosure.

### BERNSTEIN – Your solution specialist.

### New system integration approaches such as the installation and preassembly of:

- Power supply systems
- Operating and control elements
- Membrane keypads
- Displays, power supply and data cables
- I/O assemblies
- Ethernet components
- PLC/IPC solutions of all renowned manufacturers

### Your benefits:

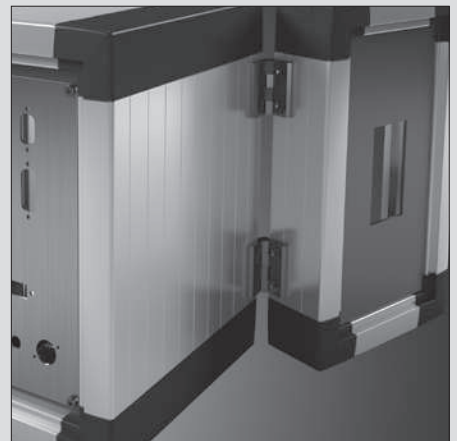
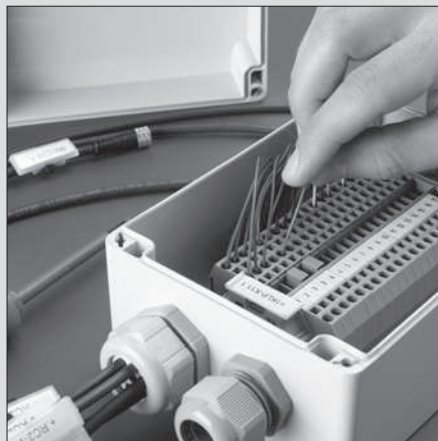
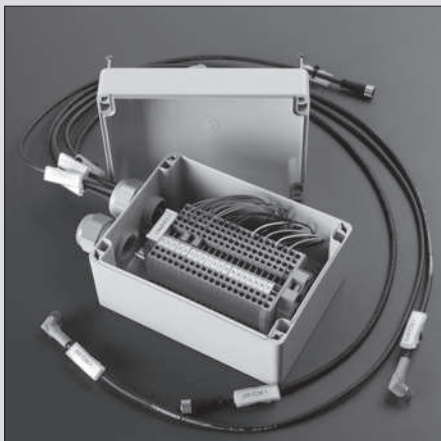
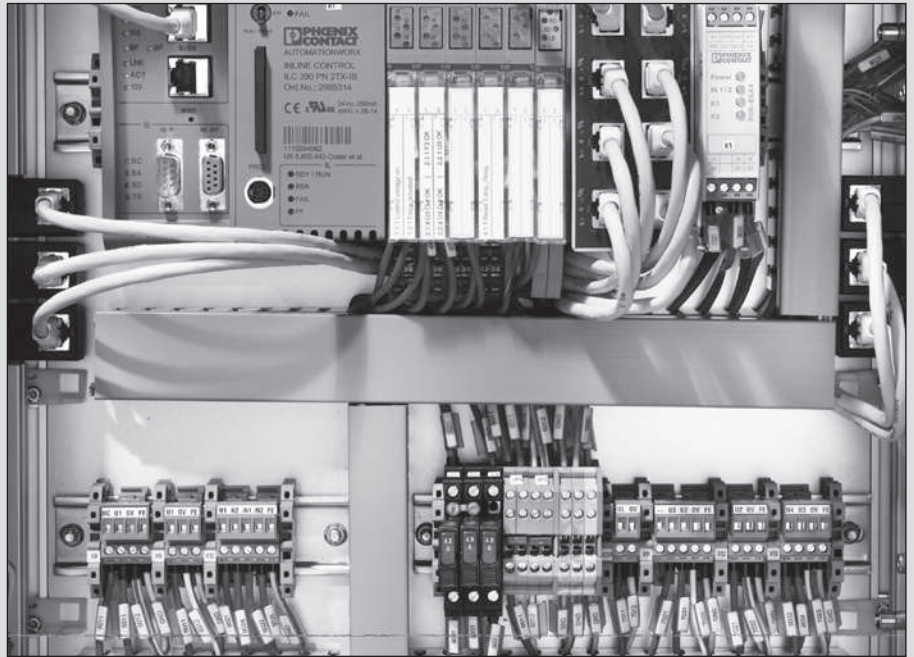
- **Solution specifically tailored** to customer requirements
- System solution phased directly into production process
- Compliance with **applicable product and industrial standards** (EX, IP-classes)
- Administration expenditure and costs reduced by
  - **Purchase and stock keeping** of components by BERNSTEIN
  - No residual quantities of individual components
  - Use of standard components
  - No costs incurred for **assembling individual components** – delivery of complete systems
  - Acceptance of part projects by BERNSTEIN, therefore, reduced assembly and component mounting costs
- **Integration** of BERNSTEIN switch and sensor systems
- System components procured by BERNSTEIN



## Combination of BERNSTEIN enclosures and customer technologies

As a solution specialist, BERNSTEIN has available core expertise in mechanical applications and a comprehensive range of tools to suit the most diverse configuration requirements.

- **Customised enclosure modifications, freely selectable dimensions and configurations created by:**
  - Holes
  - Threads
  - Apertures
  - Pre-punched blanks
- **Preassembly, mounting and wiring of:**
  - Mounting panels and support rails
  - Hinges and mounting brackets
  - Terminals and screwed cable glands
  - Circular connectors
- **Individual powder coating also available in special colours in own production process**

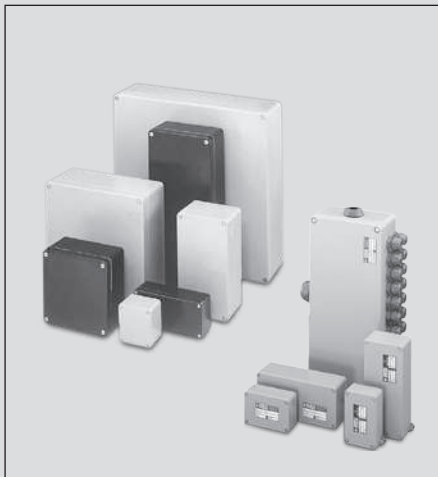


## EX-approved products for potentially explosive atmospheres

- Ex e, Ex ia and Ex e/ia terminal boxes made from polyester and aluminium
- Ex d / Ex tb limit switches, rope pull switches and foot switches
- Ex mb / Ex tb magnetic switches
- Ex ib inductive Namur sensors



Services, training, system solutions, project- and customer-specific solutions.



### Terminal enclosures and empty enclosures

Only materials that correspond to the temperature range required for Ex enclosures are used in these enclosures and components.

The minimum type of protection rating of all enclosures and screw connections is IP 64, other protection classes available on request.

The latching devices on the enclosures are optionally available as captive screw connections or quick-release fasteners.

Various CA versions are available with flange plates.

All built-in components must conform to the relevant approvals.



### Momentary contact, cable pull and foot switches

An Ex d-certified switching element lies at the core of these Ex-approved switches.

It is mounted in the corresponding switch enclosures. The mechanical actuator and its installation are certified separately.

The approval of additional actuators and switch enclosures from other series is possible on request.

All switches and momentary contact switches feature one NO contact and one NC contact.



### Magnetic switches, inductive Namur sensors

For magnetic switches, protection against ignition energy is achieved by encapsulation. For Inductive Namur sensors, protection is achieved by the principle of intrinsic safety.











Magnetic switches and Namur sensors have a Factory fitted connection cable.

This cable is permanently attached to the body and forms part of the approval.

All sensors are certified for a surface temperature of + 80 °C.

### Services offered by the BERNSTEIN-EX experts:

- Approval of a stainless steel enclosure with freely definable dimensions
- Approvals assistance for plant operators
- Approval of switching and control elements in all enclosures
- Approval of plug-in devices in all enclosures
- Component mounting and wiring of enclosures according to customer specifications
- Training courses for planners and plant operators
- Cross-product system solutions
- Customer-specific development and project management on request
- TR (EAC) and NEC (North America) approvals on request
- Approval according to IEC Ex

	II2G	Ex	ia	IIC	T6	TÜV	2008	ATEX	1234	-
Type approval to directive 94/9/EC	Application	Explosion protection	Type of protection	Device group	Temperature class	Inspection authority	Year	As per directive 94/9/EC	Consecutive number	Additional conditions
<b>Protection Concept</b>										
Symbol		Type of protection						Standards		
	Ex "d"	Flameproof encapsulation Switching devices, motors, transformers etc. IEC60079-1						IEC / EN 60079-1		
	Ex "p"	Pressurised encapsulation Control cabinets px = Use in Zone 1, 2 py = Use in Zone 1, 2 pz = Use in Zone 2		pb = Use in Zone 21, 22 pc = Use in Zone 22		IEC / EN 60079-2 (Gas) IEC / EN 61241-4 (Dust)				
	Ex "q"	Powder-filled encapsulation Transformers, capacitors						IEC / EN 60079-5		
	Ex "o"	Oil immersion encapsulation Transformers, load resistors						IEC / EN 60079-6		
	Ex "e"	Increased safety Terminal boxes, control cabinets, enclosures for installing devices of other protection class						IEC / EN 60079-7		
	Ex "i"	Intrinsically safe Terminal boxes, control cabinets, sensors, measurement and control equipment ia = Use in Zone 0, 1, 2, 20, 21, 22 ib = Use in Zone 1, 2, 21, 22						IEC / EN 60079-11		
		Intrinsically safe systems						IEC / EN 60079-25		
	Ex "n"	Non sparking Systems that, due to their design, cannot spark						IEC / EN 60079-15		
	Ex "m"	Encapsulation Command and signalling devices, sensors, display/indicator devices ma = Use in Zone 0, 1, 2, 20, 21, 22 mb = Use in Zone 1, 2, 21, 22						IEC / EN 60079-18		
	Ex "op"	Optical radiation op is = Intrinsically safe optical radiation op pr = Protected optical radiation op sh = Shutdown optical radiation						IEC / EN 60079-28		
	Ex „t“	Protection by enclosure Switching devices, Terminal boxes, control cabinets ta = Use in Zone 20, 21, 22 tb = Use in Zone 21, 22 tc = Use in Zone 22						IEC / EN 60079-31		
<b>IP Protection Classes</b>										
IP 1st digit	Contact	Foreign bodies		IP 2nd digit	Water		Max. permissible surface temperature	Temperature classes for gases		
0	No protection	No protection		0	No protection		450°	T1		
1	Large body parts	Solid object > 50 mm		1	Water dripping vertically		300°	T2		
2	Finger	Solid object > 12.5 mm		2	Water dripping at angle up to 15°		200°	T3		
3	Tool > 2.5 mm	Solid object > 2.5 mm		3	Water sprayed at an angle up to 60°		135°	T4		
4	Tool > 1 mm	Solid object > 1 mm		4	Spayed water 360°		100°	T5		
5	Complete protection	Dust accumulation		5	Hose water 360°		85°	T6		
6	Complete protection	Dust infiltration		6	Strong hose water 360°		<b>Explosion groups for gases</b>			
				7	Temporary submersion		Group	Typical gas	Ignition energy	
				8	Submersion		I	Methane	280 µJ	
<b>Device group I Mining</b>										
I M1	Safety provided by 2 safety measures, 2 faults						IIA			
I M2	Shutdown on occurrence of explosive atmosphere						IIB			
							IIC			
<b>Device group II All potentially explosive atmospheres except mining</b>							<b>Explosion groups for dusts</b>			
II 1	Zone 0	Zone 20	Safety provided by 2 safety measures, 2 faults			Group		Dust		
II 2	Zone 1	Zone 21	Safety in the event of frequent equipment malfunctions, 1 fault			IIIA		combustible flyings		
II 3	Zone 2	Zone 22	Safety in trouble-free operation			IIIB		non-conductive dust		
						IIIC		conductive dust		
<b>Zone categories, device group II</b>							<b>Additional conditions</b>			
Hazard permanent or frequent		Gas as per IEC / EN Zone 0		Dust as per IEC / EN Zone 20		-				
occasional		Zone 1		Zone 21		X				
rare, temporary no longer than 30 min per year		Zone 2		Zone 22		U				
						No restriction				
						Special conditions				
						Component certification Parts certification				

# Blank enclosures for use in potentially explosive atmospheres

## EX-U certified standard aluminium CA enclosures

BERNSTEIN CA enclosures have been tested by an internationally recognised and certified inspection authority and certified through type approval testing for use in areas with potentially explosive dust and gas atmospheres. Used as terminal and control enclosures, the aluminium pressure die-cast enclosures are designed to accept corresponding mechanical and electrical equipment. The enclosures come with operating instructions, type identification plate and CE Declaration of Conformity. Either an EPDM or silicone seal can be used. The enclosures can be fitted at the factory with external hinges.

External dimensions in mm	Type	Art. No. with silicone seal	Art. No. with EPDM seal
58 x 64 x 36	CA-060	1064005000	1064000000
98 x 64 x 36	CA-080	1084005000	1084000000
150 x 64 x 36	CA-100	1104005000	1104000000
75 x 80 x 57	CA-130	1134005000	1134000000
125 x 80 x 57	CA-150	1154005000	1154000000
175 x 80 x 57	CA-170	1174005000	1174000000
250 x 80 x 57	CA-190	1194005000	1194000000
122 x 122 x 80	CA-210	1214005000	1214000000
122 x 122 x 90	CA-215	1214005050	1214000050
122 x 122 x 80	CA-220	1224005000	1224000000
220 x 122 x 80	CA-230	1234005000	1234000000
220 x 122 x 90	CA-235	1234005050	1234000050
220 x 122 x 80	CA-240	1244005000	1244000000
360 x 122 x 80	CA-250	1254005000	1254000000
160 x 160 x 90	CA-270	1274005000	1274000000
160 x 160 x 90	CA-280	1284005000	1284000000
260 x 160 x 90	CA-290	1294005000	1294000000
260 x 160 x 90	CA-300	1304005000	1304000000
360 x 160 x 90	CA-310	1314005000	1314000000
560 x 160 x 90	CA-330	1334005000	1334000000
200 x 230 x 110	CA-350	1354005000	1354000000
200 x 230 x 180	CA-360	1364005000	1364000000
280 x 230 x 110	CA-370	1374005000	1374000000
330 x 230 x 110	CA-380	1384005000	1384000000
330 x 230 x 180	CA-390	1394005000	1394000000
400 x 230 x 110	CA-400	1404005000	1404000000
600 x 230 x 110	CA-420	1424005000	1424000000
402,5 x 310 x 110	CA-450	1454005000	1454000000
402,5 x 310 x 180	CA-460	1464005000	1464000000
600 x 310 x 110	CA-470	1474005000	1474000000
600 x 310 x 180	CA-480	1484005000	1484000000

### Technical Data:

- Protection class depending on type of seal IP 66 to IEC 60529
- Identification
  - Ⓔ II 2G Ex e IIC Gb
  - Ⓔ II 2D Ex tb IIC Db
- Impact strength > 7 Joules
- Operating temperature depending on type of seal -55 °C to +100 °C
- Enclosure colour RAL 7001 (silver grey)
- Powder-coating corrosion protection



## EX-U certified standard polyester CP enclosures

BERNSTEIN CPG and CPS enclosures have been tested by an internationally recognised and certified inspection authority and certified through type approval testing for use in areas with potentially explosive dust and gas atmospheres. Used as terminal and control enclosures, the glass-fibre reinforced polyester enclosures are designed to accept corresponding mechanical and electrical equipment. The enclosures come with operating instructions, type identification plate and CE Declaration of Conformity. Either an EPDM or silicone seal can be used. The enclosures can be fitted at the factory with external hinges.

External dimensions in mm	Type	Art. No. with silicone seal	Art. No. with EPDM seal	Type	Art. No. with silicone seal	Art. No. with EPDM seal
80 x 75 x 55	CP-140	4144005000	4144000000	CPS-140	5144005000	5144000000
80 x 75 x 75	CP-145	4144005050	4144000050	CPS-145	5144005050	5144000050
110 x 75 x 55	CP-150	4154005000	4154000000	CPS-150	5154005000	5154000000
110 x 75 x 75	CP-155	4154005050	4154000050	CPS-155	5154005050	5154000050
160 x 75 x 55	CP-170	4174005000	4174000000	CPS-170	5174005000	5174000000
160 x 75 x 75	CP-175	4174005050	4174000050	CPS-175	5174005050	5174000050
190 x 75 x 55	CP-190	4194005000	4194000000	CPS-190	5194005000	5194000000
190 x 75 x 75	CP-195	4194005050	4194000050	CPS-195	5194005050	5194000050
122 x 120 x 90	CP-220	4224005000	4224000000	CPS-220	5224005000	5224000000
220 x 120 x 90	CP-240	4244005000	4244000000	CPS-240	5244005000	5244000000
160 x 160 x 90	CP-280	4284005000	4284000000	CPS-280	5284005000	5284000000
260 x 160 x 90	CP-300	4304005000	4304000000	CPS-300	5304005000	5304000000
360 x 160 x 90	CP-320	4324005000	4324000000	CPS-320	5324005000	5324000000
560 x 160 x 90	CP-330	4334005000	4334000000	CPS-330	5334005000	5334000000
255 x 250 x 120	CP-370	4374005000	4374000000	CPS-370	5374005000	5374000000
400 x 250 x 120	CP-400	4404005000	4404000000	CPS-400	5404005000	5404000000
400 x 405 x 120	CP-450	4454005000	4454000000	CPS-450	5454005000	5454000000
400 x 405 x 165	CP-460	4464005000	4464000000	CPS-460	5464005000	5464000000

### Technical Data:

- Protection class depending on type of seal IP 66 to IEC 60529
- Identification
  - ⊕ II 2G Ex e IIC Gb
  - ⊕ II 1D Ex ta IIIC Da
- Up to CP 230 tested at 4 Joules
- As from CP 240 tested at 7 Joules
- Operating temperature depending on type of seal -55 °C to +100 °C
- Enclosure colour RAL 7000 (squirrel grey) CPG
- Enclosure colour RAL 9005 (jet black) CPS

## Enclosure selection criteria

The following questions are designed to help you find the optimum enclosure for your specific application. In addition to the given criteria, your individual requirements are also of decisive importance.

### 1. How big should the enclosure be?

- PC-board size
- Number of terminals
- Number of screwed cable glands per side
- etc.

### 2. What ambient conditions should be taken into account?

- Moisture
- Climatic conditions
- Temperature
- Chemical exposure in the form of cleaning agents, oils, lubricants, etc.
- Electromagnetic compatibility
- etc.

### 3. What mechanical loads will the enclosure be subjected to?

- Impact
- Pressure
- Bending
- etc.

### 4. What additional features are required?

- Special coating:  
Special colour, special finish (chromalizing, EMC protective paint, etc.), screenprint and labels etc.
- Connectors
- Screw connections (number per side)
- Inspection window
- Preassembly with mounting panel, mounting rails, terminals, external and internal articulated hinges, etc.
- etc.

### 5. What other components can be installed for you?

- Power supply systems
- Operating and control elements
- Membrane keypads
- Displays, power supply and data cables
- I/O assemblies
- Ethernet components
- PLC/IPC solutions of all renowned manufacturers
- etc.

You will find further details in Section "System Solutions" from Page 12 onwards.

### 6. Which type of approval do you need?

You find all current approvals on [www.bernstein.eu](http://www.bernstein.eu)

### 7. What else can we install for you?

Talk to us. We will help you realise your challenge.

## Definition of Protection Classes in accordance with IEC 60529, VDE 470 T 1

The protection class of an enclosed device denotes the degree of protection. The degree of protection includes the protection of persons against contact with parts under voltage and the protection of equipment against the infiltration of foreign bodies and water. BERNSTEIN standard enclosures largely correspond to protection class IP 65.

### Protection class designation

In accordance with DIN EN 60529 the protection class designation consists of a two-digit code.

Meaning of 1<sup>st</sup> digit:

Protection class against contact and infiltration of foreign bodies

Meaning of 2<sup>nd</sup> digit:

Protection class against infiltration of water

### Example: Protection class IP 65

1. Digit (6):

Complete protection against contact with components under voltage or with internal moving parts = protection against dust infiltration

2. Digit (5):

A water jet directed from all directions at the enclosure must not have damaging effects = protection against water jets (hoseproof)

Foreign body protection			Moisture protection		
1 <sup>st</sup> digit	Meaning	Explanation	2 <sup>nd</sup> digit	Meaning	Explanation
IP0X	No protection		IPX0	No protection	
IP1X	Protection against foreign bodies with a diameter of 50 mm or greater	Solid object (sphere, Ø 50 mm) must not fully penetrate	IPX1	Protection against dripping water	Vertically falling droplets must not have a damaging effect
IP2X	Protection against foreign bodies with a diameter of 12.5 mm or greater	Solid object (sphere, Ø 12.5 mm) must not fully penetrate	IPX2	Protection against dripping water when the enclosure is tilted at an angle of up to 15°	Vertically falling droplets must not have a damaging effect when the enclosure is tilted at an angle of up to 15° either side of the perpendicular
IP3X	Protection against foreign bodies with a diameter of 2.5 mm or greater	Solid object (sphere, Ø 2.5 mm) must not fully penetrate	IPX3	Protection against spray water	Water sprayed at an angle of up to 60° either side of the perpendicular must not have a damaging effect
IP4X	Protection against foreign bodies with a diameter of 1 mm or greater	Solid object (sphere, Ø 1 mm) must not fully penetrate	IPX4	Protection against splash water	Water sprayed against the enclosure from any direction must not have a damaging effect
IP5X	Protection against harmful dust deposits	Dust penetration is not completely prevented. However, the amount of penetration must not impair the function or safety of the device.	IPX5	Protection against hose water	Water sprayed in jet from against the enclosure from any direction must not have a damaging effect
IP6X	Protection against dust penetration, dustproof	No penetration of dust at a negative pressure of 20 mbar in the enclosure	IPX6	Protection against strong hose water	Water sprayed in strong jet from against the enclosure from any direction must not have a damaging effect
			IPX7	Protection against the effect when temporarily submerged in water	Water must not enter in harmful quantities when the enclosure is submerged under standardised pressure and time conditions
			IPX8	Protection against the effects of continuous immersion in water	Water may not ingress in a volume that would cause harmful effects when the shell is continuously submerged in water under conditions <b>agreed between manufacturer and user</b> . The conditions must, however, be more difficult than those for code number IPX7.
			IPX9K	Protection against water during high pressure/steam jet cleaning (as per DIN EN 40050, Part 9)	Water sprayed at greatly increased pressure against the enclosure from any direction must not have a damaging effect

## General Technical Information

### Mechanical strength

Selection is based on the corresponding properties of the material to be used. The table below provides an overview of the main material properties of aluminium, polycarbonate, ABS, polyester and stainless steel.

Material property	Standard	Unit	Aluminium	Polycarbonate	ABS	Polyester	Stainless steel
Density	DIN 53479	g/cm <sup>3</sup>	2.65	1.2	1.05	1.8	7.9
Impact resistance	DIN 53453	mJ/mm <sup>2</sup>	150 – 300	65	60	80	
Toughness	DIN 53453	mJ/mm <sup>2</sup>	90 – 200	20	10	4	
Tensile strength	DIN 53455	N/mm <sup>2</sup>	180 – 300	65	43	45	500 – 700
Elongation of break	DIN 53455	%	60 – 90	90	20	20	< 60
Modulus of elasticity (bending test)	DIN 53457	N/mm <sup>2</sup>	75000	2300	2100	6500	200000
Flexural stress at given strain	DIN 53452	N/mm <sup>2</sup>		95	90	100	
Flammability	UL 94	Class		V 2	HB	V 0	
Volume resistivity	DIN 53482	Ohm x cm		10 <sup>15</sup>	10 <sup>13</sup>	3 x 10 <sup>14</sup>	
Surface resistance	DIN 53482	Ohm x cm		≥ 10 <sup>15</sup>	4 x 10 <sup>14</sup>	> 10 <sup>12</sup>	
Dielectric strength	DIN 53481	kV/mm		25 – 40	24	25 – 40	
Thermal conductivity (20°C)	DIN 52612	W/mK	120 – 160	0.21	0.18	0.25	16.3
Electrical conductivity (20°C)		m/Ohm mm <sup>2</sup>	15 – 22				

## Chemical resistance

The table below provides an overview of the chemical resistance of BERNSTEIN aluminium, polycarbonate, ABS, polyester and stainless steel enclosures to chemicals commonly used. The specified values are reference values relating to different concentrations and ambient temperatures that have varying influences on materials. This also applies to simultaneous exposure to several chemicals. Corresponding trials are therefore recommended.

All tests were carried out at room temperature. The chemical resistance may change in combination with different media. Therefore, no responsibility can be accepted for the correctness of this information.

Chemical	ABS	Polycarbonate	Polyester	Aluminium	Stainless steel
Acetone	-	-	-	+	+
Formic acid	40%	-	+	o	+
Ammonia	25%	-	-	+	□
Benzine	-	o	+	+	+
Benzene	-	-	+	+	+
Brake fluid	o	-	+	□	(+)
Butane	+	+	+	+	(+)
Butanol	□	□	+	□	(+)
Calcium chloride	+	+	+	+	o
Chlorobenzene	-	-	+	+	+
Diesel oil	+	o	+	□	(+)
Acetic acid	25%	10%	5%	+	+
Formaldehyde	30%	□	30%	+	+
Freon 113	-	+	+	□	□
Fruit juice	+	+	+	□	+
Glycerine	+	o	+	+	+
Fuel oil	o	o	+	+	+
Hydraulic oil	□	+	+	□	+
Caustic potash solution	50%	-	-	□	□
Potassium chloride	□	+	+	o	o
Potassium hydroxide	< = 50 %	□	5%	-	+
Linseed oil	+	+	+	+	+
Methanol	+	-	+	+	+
Methylene chloride	-	-	+	+	□
Lactic acid	80%	+	+	+	o
Mineral oils	+	+	+	□	+
Engine oils	+	+	+	□	+
Sodium carbonate	+	+	10%	o	+
Sodium chloride	+	+	+	o	+
Sodium hydroxide	+	□	5%	+	+
Caustic soda	50%	-	40%	□	□
Nitric acid	-	10%	10%	+	+
Hydrochloric acid	o	20%	+	+	-
Lubricating oil	□	+	+	+	+
Carbon disulphide	-	-	-	+	+
Sulphuric acid	50%	50%	10%	o	+
Soap solution	□	o	+	□	□
Detergent	□	+	□	□	(+)
Turpentine oil	□	o	+	□	+
Carbon tetrachloride	-	-	+	+	+
Toluene	-	-	+	+	□
Trichloroethylene	-	-	+	+	+
Water (distilled water, river water, tap water, sea water)	+	+	+	□	+
Tartaric acid	+	+	+	□	+
Xylene	-	-	+	+	+
Zinc sulphate	+	+	+	o	+
Citric acid	+	10%	+	+	o

+: Resistant to all concentrations  
 %: Resistant to max. % concentrations  
 o: Conditionally resistant  
 -: Not resistant  
 □: No data  
 (): Estimated value

# General Technical Information

## Chemical resistance of enclosure seals

The following table provides an overview of the chemical resistance of enclosure seals. The specified values are reference values relating to different concentrations and ambient temperatures. This also applies to simultaneous exposure to several chemicals. Corresponding trials are therefore recommended.

All tests were carried out at room temperature. The chemical resistance may change in combination with different media. Therefore, no responsibility can be accepted for the correctness of this information.

Chemical	CR	Silicone	EPDM	NBR	Polyurethane	PVC
Acetone	o	-	+	-	-	-
Formic acid	o	+	o	-	-	-
Ammonia	10%	+	+	o	+/-	o
Benzine	o	-	-	o	-	+
Benzene	-	-	-	-	□	-
Brake fluid	o	+	+	-	-	□
Butane	+	-	-	+	□	50%
Butanol	+	-	+	o	-	o
Calcium chloride	□	□	+	+	+(watery)	+
Chlorobenzene	-	-	-	-	-	-
Diesel oil	o	-	-	□	o	o
Acetic acid	-	o	-	-	+/-	+
Formaldehyde	□	+	40%	o	□	-
Freon 113	o	□	□	+	□	□
Fruit juice	+	+	+	o	□	+
Glycerine	+	+	+	+	+	+
Fuel oil	o	o	-	+	□	o
Hydraulic oil	□	o	-	o	□	□
Caustic potash solution	+	-	< 50%	o	□	+
Potassium chloride	+	+	+	+	□	+
Potassium hydroxide	o	o	+	+	-	□
Linseed oil	+	+	o	+	o	+
Methanol	+	+	+	o	+/-	+
Methylene chloride	-	-	-	-	-	-
Lactic acid	+	□	< 10%	o	□	10%
Mineral oils	o	o	-	+	+/-	+
Engine oils	o	+	-	+	□	+
Sodium carbonate	□	+	+	+	□	□
Sodium chloride	+	+	+	+	+	+
Sodium hydroxide	50%	o	+	o	-	+
Caustic soda	50%	< 10%	+	o	□	60%
Nitric acid	-	< 10%	-	-	-	< 30%
Hydrochloric acid	o	< 10%	+	-	o < 10%	< 20%
Lubricating oil	o	+	o	+	□	+
Carbon disulphide	-	-	-	-	□	-
Sulphuric acid	50%	o	-	-	-(concentrated)	< 60%
Soap solution	□	+	□	+	+	o
Detergent	o	+	o	+	□	□
Turpentine oil	□	-	-	o	+/-	+
Carbon tetrachloride	-	-	-	-	-	-
Toluene	-	-	-	-	-	-
Trichloroethylene	-	-	-	-	-	-
Water (distilled water, river water, tap water, sea water)	+	+	+	80°C	+	40°C
Tartaric acid	o	+	+	+	□	+
Xylene	-	-	-	-	-	-
Zinc sulphate	+	+	+	+	□	+
Citric acid	+	+	+	+	+	10%

+: Resistant to all concentrations

o: Resistant to max. % concentrations

o: Conditionally resistant

-: Not resistant

□: No data

+/-: Suitability strongly influenced by the specific substance or concentration

## Quality manufacturing guarantee

### **Reliable, flexible, personal: BERNSTEIN System Solutions**

Outsourcing is a matter of trust. You need a competent service provider who you can rely on, who is flexible and who is always prepared to listen.

BERNSTEIN is your dependable partner.

With more than 30 years of experience to look back on, we offer comprehensive know-how in enclosure technology and corresponding applications.

Take advantage of the BERNSTEIN system solution service for enclosures with personal on-site support.

### **Benefit from all the advantages offered by BERNSTEIN!**

**You will find further information on system solutions on Page 12.**

## Our range of services for standard enclosure modifications:

- Standard enclosures perfectly tailored to your requirements
- Mechanical machining (even complicated contours) by CNC machining centres
- RoHS-compliant surface treatment for use in corrosive environments
- Special coating in accordance with RAL specification
- Screen print or engraving of enclosure surface
- Special coating and conductive seal for HF-proof version
- Installation of individual components from the BERNSTEIN range of accessories as well as other customer-specific components
- Electrical wiring of components according to your specifications

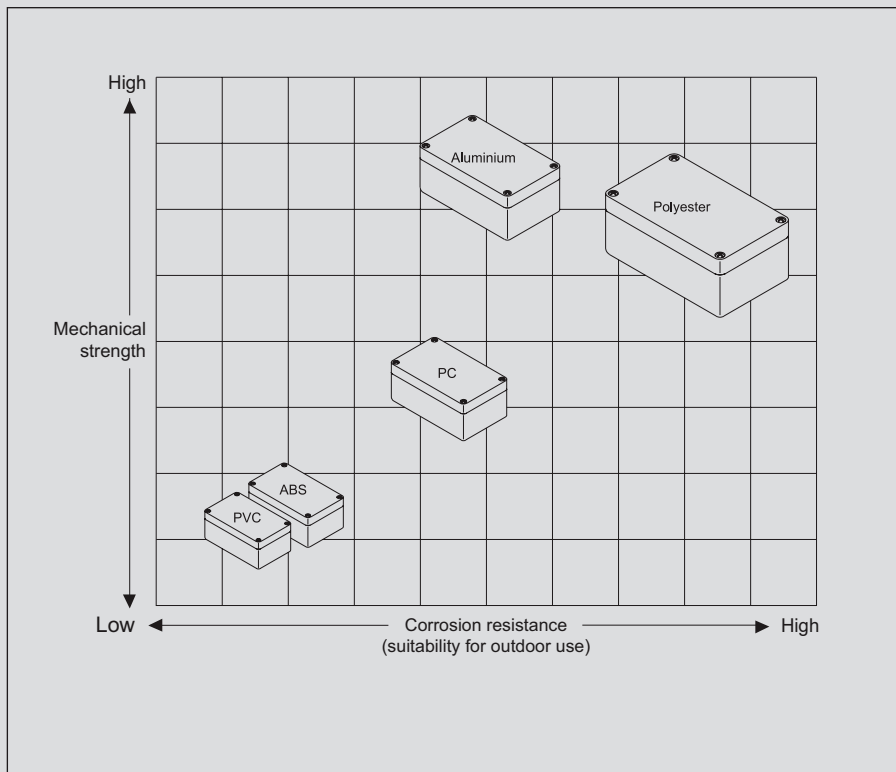
## Your benefits:

- Personal advice on site
- Reduced vertical integration
- The enclosure modified to your specification can be directly incorporated in your production process

# Standard Enclosures – General Technical Information

## Mechanical strength of standard enclosures

The illustration shows the suitability of different enclosure materials (standard enclosure) in terms of mechanical stress and corrosive environments.



## Manufacturing standard for standard enclosures

### Technical information on enclosure manufacture

As an ISO-9001-2008-certified company, BERNSTEIN has defined a manufacturing standard that applies to all machining orders (unless other requirements are specified).

### Dimension tolerances

When preparing details for enclosure machining (see following drawings, showing orientation of enclosure when set up for machining), tolerances used for the first machining operation on each set up, are according to ISO 2768-mH.

If other dimensions or reference edges are used, the following maximum general tolerances are applicable for the first machining operation on each enclosure per set up (see table below).

Tolerances between further machining operations compared to each other can be limited to  $\pm 0.1$  mm.

### General tolerances Standard range

Material/enclosure type	General tolerance
CA-020 to CA-480	DIN 1688
Cast aluminium	
CT-50 to CT-91	DIN 16901
PC/ABS	
CP-140 to CP-460	
Polyester mats	DIN 16901

### Minimum purchase quantities

In order to keep enclosure machining as cost-effective for the user as possible, the following minimum purchase quantities are suggested:

Designation	Minimum purchase quantity
CA-020 ... CA-080	20 pieces
CA-100 ... CA-190	10 pieces
CA-210 ... CA-310	10 pieces
CA-330 ... CA-480	5 pieces
CP-140 ... CP-195	20 pieces
CP-220 ... CP-320	10 pieces
CP-330 ... CP-460	5 pieces
CT-50 ... CT-76	20 pieces
CT-78 ... CT-89	10 pieces

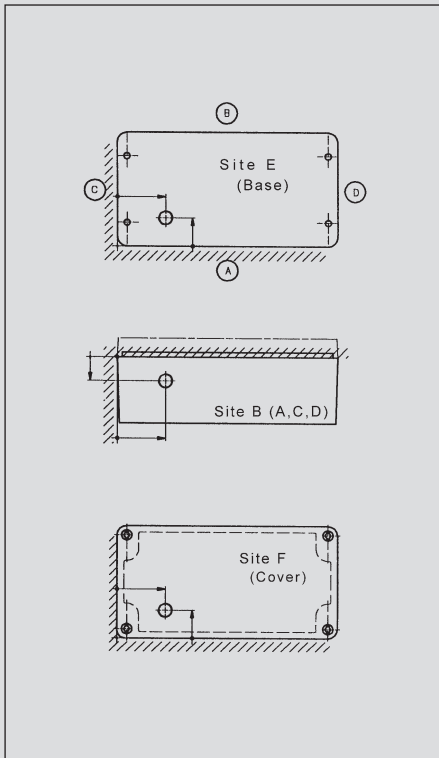
These quantities should be regarded as the minimum, if the customised enclosures are to be produced economically. Production includes mechanical machining, special coating, screen-printing, engraving or assembly of accessories. BERNSTEIN will of course be pleased to advise you.



## Reference edges for manufacturing standard

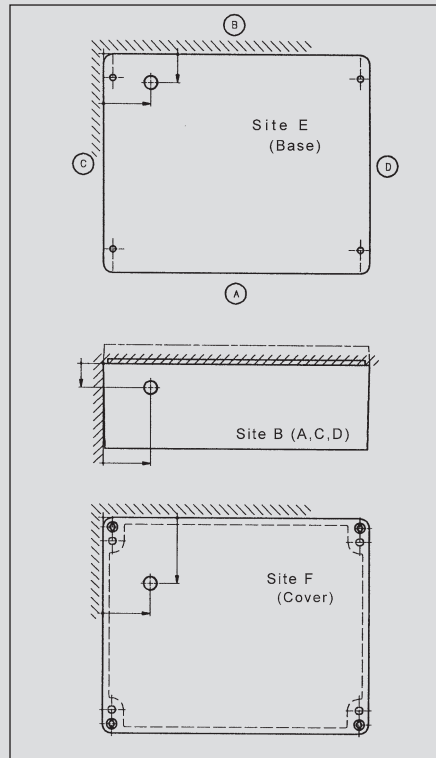
### Series

CA-020 to CA-240, CA-270 to CA-300  
CT-50 to CT-82, CP-140 to CP-300



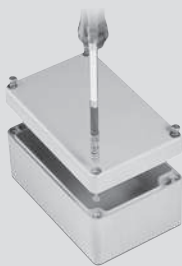
### Series

CA-250, CA-310 to CA-480  
CT-84 to CT-91, CP-320 to CPS-590



## The BERNSTEIN quick-release fastener and flexible internal articulated hinge

Invented and patented by BERNSTEIN – the quick-release fastener and its internal articulated hinge



- Reduced time and costs
- Easy to use

### 1. Press and turn by 90°

- Easy opening and closing

### 2. Simple connection check

- No need for mechanical testing

### 3. Safe

- Quick-release fastener is tensioned and snaps firmly in. Cover will not open when subjected to shaking and vibration.

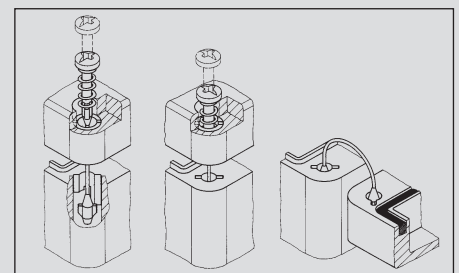
### 4. Effortless mounting

- Self-latching and locking function ensures straightforward mounting or retrofit.

### Quick-release fastener/internal articulated hinge – for securing covers to enclosure bodies.

- Subsequent mounting possible without the need for mechanical machining.
- Strain relief and captive mounting of the cover are guaranteed.

The flexible internal articulated hinges can be easily fitted in the enclosures without the need for mechanical machining and reliably hold the enclosure cover after opening. The hinges provide effective strain relief and captive mounting of the enclosure cover



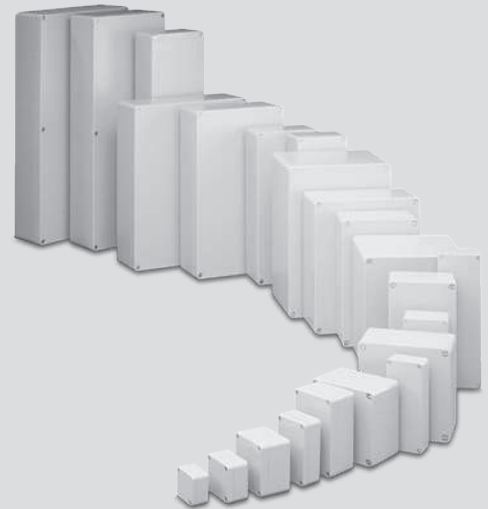
# Aluminium Enclosure Series CA

BERNSTEIN aluminium enclosures have a well proven record of success in encapsulating electrical, electronic or pneumatic components, while also being ideally suited for applications in potentially explosive atmospheres. All enclosures comply with protection class IP 66 according to DIN EN 60529 (optionally IP 67).

BERNSTEIN aluminium enclosures feature earthing screws (copper-plated, M4 or M6) in the body and in the cover for connecting PE conductors. The surfaces under the earthing screws are left blank. The screws for mounting the covers on BERNSTEIN enclosures are made from stainless steel and are held captive by the self-latching hinge integrated in the cover. The protection class (on the standard enclosure) is ensured by a factory-fitted seal. BERNSTEIN aluminium enclosures are finished as standard in RAL 7001 (silver grey).

BERNSTEIN uses pressure die-casting or gravity die-casting moulds to manufacture the aluminium enclosures.

The mounting flanges or even the earthing socket on the inside of the enclosure can be used for mounting and securing built-in components (mounting rail, mounting plate, pc board etc.). These mounting points on the inside of the enclosures are located at different levels and in different positions. The dimensioned drawings on the following pages show the relevant positions.



## Technical data

### Material

Aluminium pressure die-casting or gravity die-casting

### Seal

Foamed PUR seal  
Neoprene (CR) round cord (silicone-free),  
silicone round cord, EPDM round cord

### Cover screws

Stainless steel, captive, cross recessed head

Optionally:

- Stainless steel, captive hexagon socket head cap screws
- Sealed cover screws, steel (9 S 20 K), slot head (on request)

### Coating

Standard: RAL 7001 (silver grey)

Optionally:

- Special RAL colours
- Special coatings

### Temperature range of CA enclosures, standard powder-coated finish

-30°C to +80°C

Please contact us for higher temperature ranges.

### Temperature range of seals

Standard:

-40°C bis +100°C (PUR seal)

Alternatively:

-30°C to +80°C (Neoprene seal)

-60 °C to +130°C (silicone seal)

or rather -35°C to +100°C (EPDM seal)

### Protection class

IP 66

IP 67 with PUR seal

### Approbations

Germanischer Lloyd

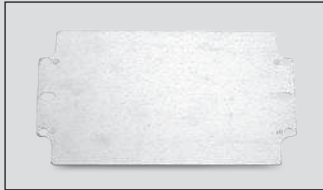
UL (Label on demand)

ATEX



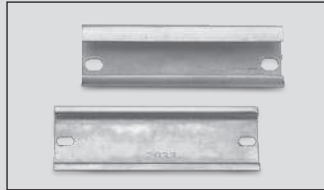
Aluminium enclosure						
Dimensions/mm					Article number	Type
L	x	W	x	H		
50	x	45	x	30	1020000000	CA-020
58	x	64	x	36	1060000000	CA-060
98	x	64	x	36	1080000000	CA-080
150	x	64	x	36	1100000000	CA-100
75	x	80	x	57	1130000000	CA-130
75	x	80	x	57	1140000000	CA-140
125	x	80	x	57	1150000000	CA-150
125	x	80	x	57	1160000000	CA-160
175	x	80	x	57	1170000000	CA-170
175	x	80	x	57	1180000000	CA-180
250	x	80	x	57	1190000000	CA-190
122	x	122	x	80	1210000000	CA-210
122	x	122	x	90	1210000050	CA-215
122	x	122	x	80	1220000000	CA-220
220	x	122	x	80	1230000000	CA-230
220	x	122	x	90	1230000050	CA-235
220	x	122	x	80	1240000000	CA-240
360	x	122	x	80	1250000000	CA-250
160	x	160	x	90	1270000000	CA-270
160	x	160	x	90	1280000000	CA-280
260	x	160	x	90	1290000000	CA-290
260	x	160	x	90	1300000000	CA-300
360	x	160	x	90	1310000000	CA-310
560	x	160	x	90	1330000000	CA-330
200	x	230	x	110	1350000000	CA-350
200	x	230	x	180	1360000000	CA-360
280	x	230	x	110	1370000000	CA-370
330	x	230	x	110	1380000000	CA-380
330	x	230	x	180	1390000000	CA-390
401	x	230	x	110	1400000000	CA-400
600	x	230	x	110	1420000000	CA-420
402	x	310	x	110	1450000000	CA-450
402	x	310	x	180	1460000000	CA-460
600	x	310	x	110	1470000000	CA-470
600	x	310	x	180	1480000000	CA-480

This is just a selection of possible assembly components that BERNSTEIN offers. Contact us, we can incorporate components from all leading manufacturers to satisfy your individual demand. You find further information about "System solutions" on page 12.



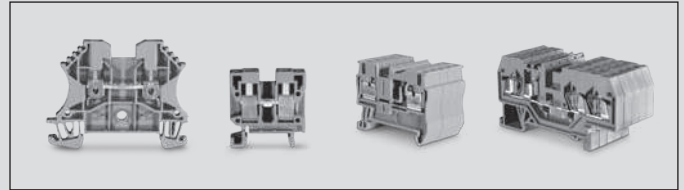
### Mounting plates

made from galvanised steel plate (thickness: CA-060 to CA-310, CA-350 to CA-400: 1.5 mm; CA-330, CA-420 to CA-480: 2.5 mm) for versatile mounting of built-in components.



### Mounting rails

conforming to Standards TS 15 or TS 32 and TS 35 made from steel; surface treated for accepting terminal blocks.



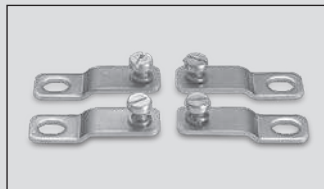
### Terminal blocks

of all renowned manufacturers are used.



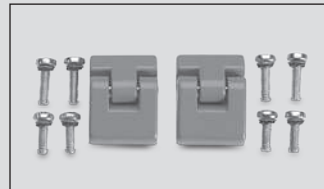
### Earthing bars

made from galvanised steel for combining and connecting PE conductors.



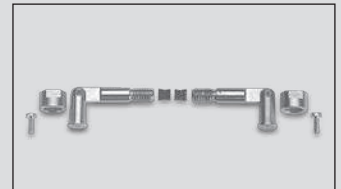
### External mounting brackets

made from stainless steel for mounting enclosures without opening the covers. Variable mounting in 90°-steps thanks to contour in base of enclosure.



### External articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 155°. Cast aluminium (painted in RAL 7001 – specific colour according to enclosure specification possible). Machining is required for mounting on enclosures.



### Internal articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 95°. Stainless steel. Machining is required for mounting on enclosures.



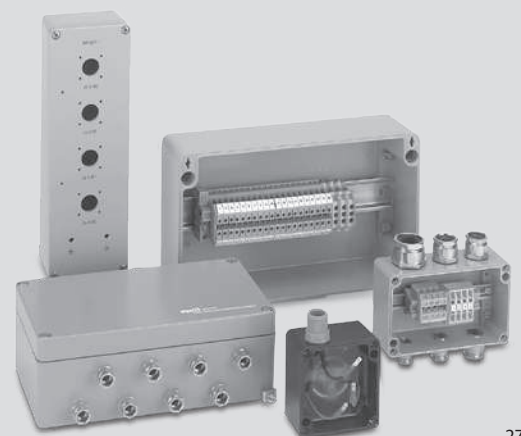
### Silicon, EPDM or HF seal

with increased temperature resistance (see indications left side) or to protect sensitive electronic equipment against high-frequency radiation (HF seal). For a conductive connection, grooves and springs of the enclosure must be left blank.



### Cable glands

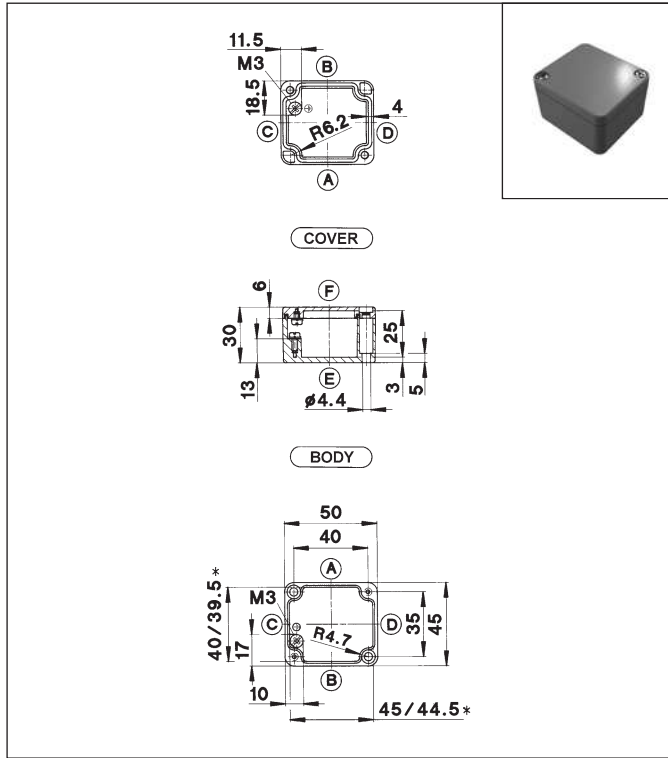
plastic cable glands (polyamide PAGV-2, RAL 7001) or brass cable glands. Sealing element CR/NBR. Temperature range: -20°C to +100°C (see also page 71). Other cable glands on demand.



# Aluminium Enclosures – Series CA

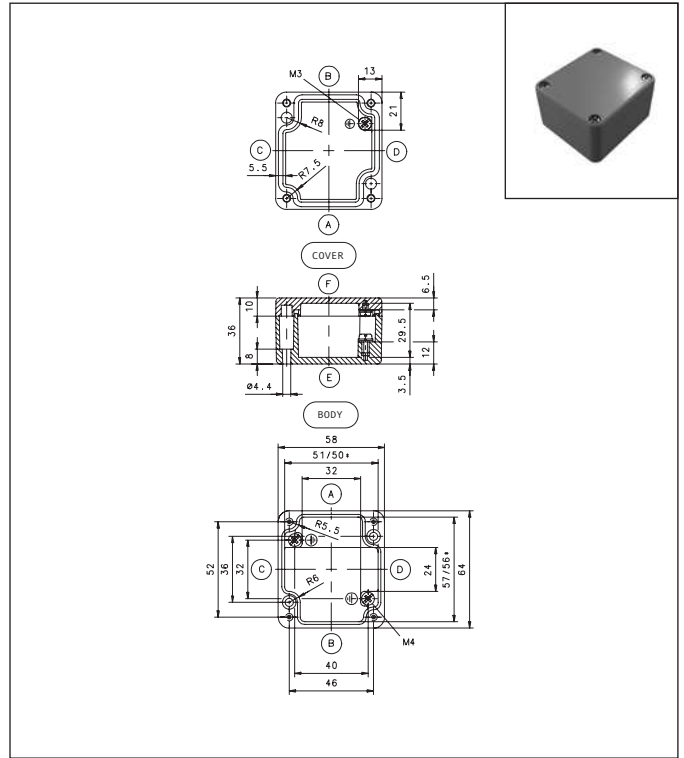
## 50 x 45 x 30 mm

### CA-020 Aluminium enclosures



## 58 x 64 x 36 mm

### CA-060 Aluminium enclosures



\* Smaller dimension at mounting plate support

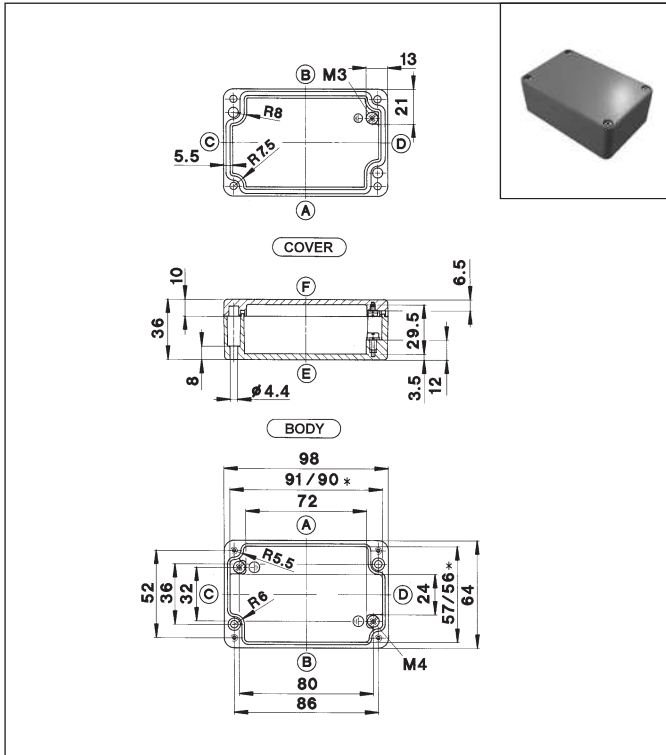
Type	CA-020
Weight (g)	70
External dimension (mm)	50 x 45 x 30
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1020000000</b>
unwashed, not painted, loose accessories	<b>1020034000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	-
Mounting rail TS 15	-
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	-
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	1 0 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

\* Smaller dimension at mounting plate support

Type	CA-060
Weight (g)	160
External dimension (mm)	58 x 64 x 36
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1060000000</b>
unwashed, not painted, loose accessories	<b>1060038000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511001000</b>
Mounting rail TS 15	<b>9820000000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	2 1 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

## 98 x 64 x 36 mm

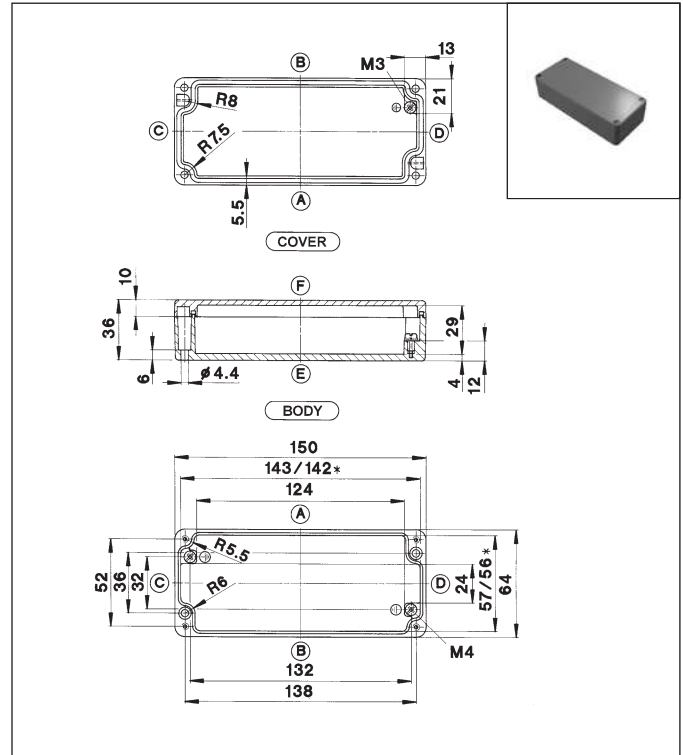
CA-080  
Aluminium enclosures



## 150 x 64 x 36 mm

CA-100  
Aluminium enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

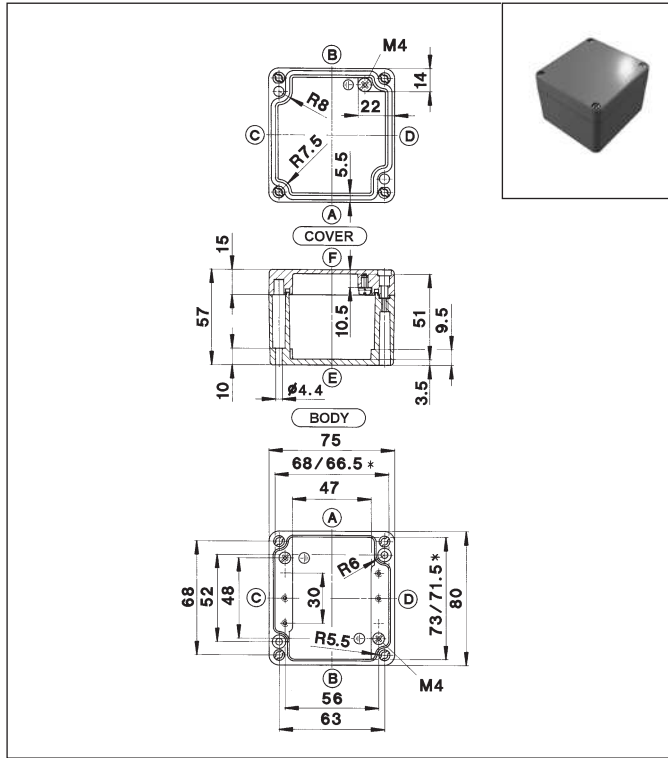
Type	CA-080
Weight (g)	220
External dimension (mm)	98 x 64 x 36
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1080000000</b>
unwashed, not painted, loose accessories	<b>1080042000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511002000</b>
Mounting rail TS 15	<b>9820005000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	4 3 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

Type	CA-100
Weight (g)	330
External dimension (mm)	150 x 64 x 36
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1100000000</b>
unwashed, not painted, loose accessories	<b>1100053000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511003000</b>
Mounting rail TS 15	<b>9820011000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	6 4 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

# Aluminium Enclosures – Series CA

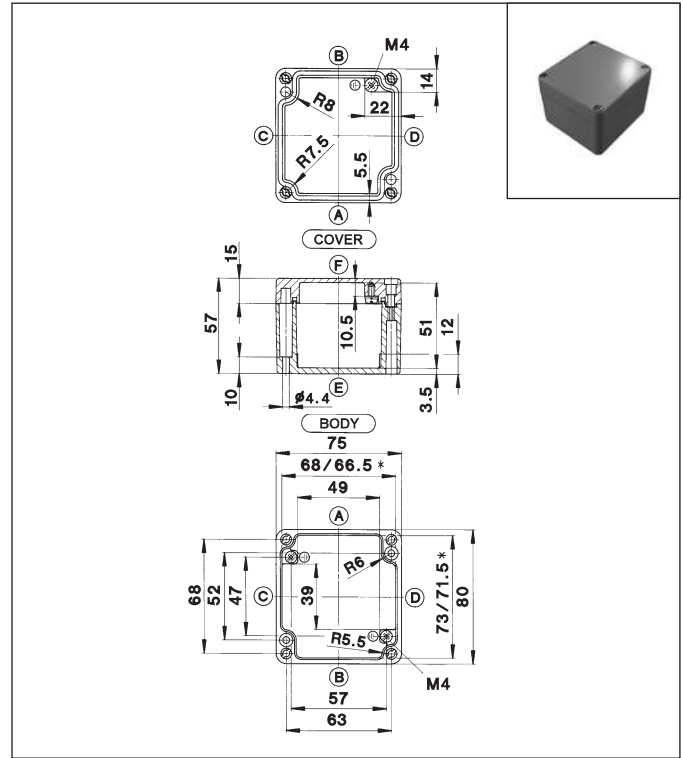
## 75 x 80 x 57 mm

### CA-130 Aluminium enclosures



## 75 x 80 x 57 mm

### CA-140 Aluminium enclosures



\* Smaller dimension at mounting plate support

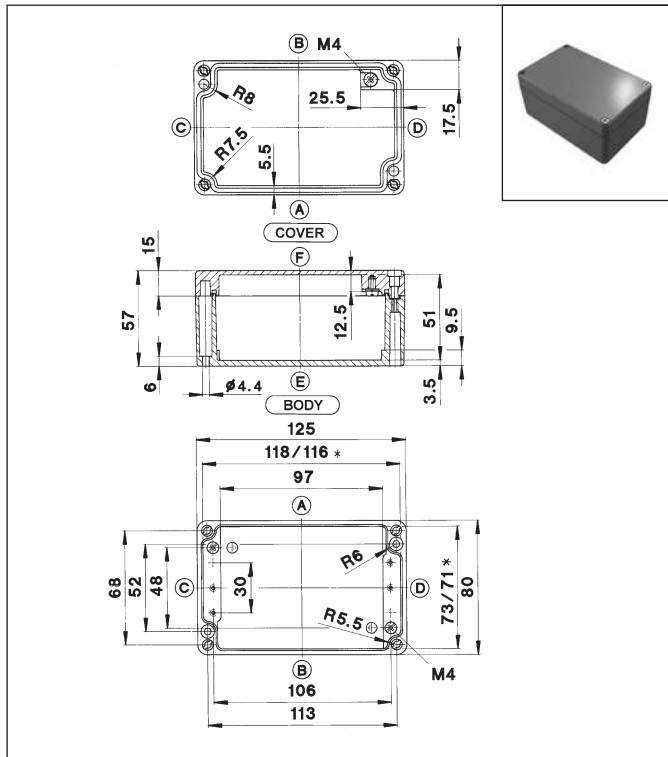
\* Smaller dimension at mounting plate support

Type	CA-130
Weight (g)	280
External dimension (mm)	75 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1130000000</b>
unwashed, not painted, loose accessories	<b>1130057000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9823015000</b>
Mounting rail TS 15	<b>9820002000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	<b>9801044000</b>
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	5 2 1 0 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0
** Enclosure preparation required	

Type	CA-140
Weight (g)	280
External dimension (mm)	75 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1140000000</b>
unwashed, not painted, loose accessories	<b>1140080000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511004000</b>
Mounting rail TS 15	<b>9820035000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	<b>9801044000</b>
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	5 2 1 1 0 0 0 0
Side C/D	3 2 1 1 0 0 0 0
** Enclosure preparation required	

## 125 x 80 x 57 mm

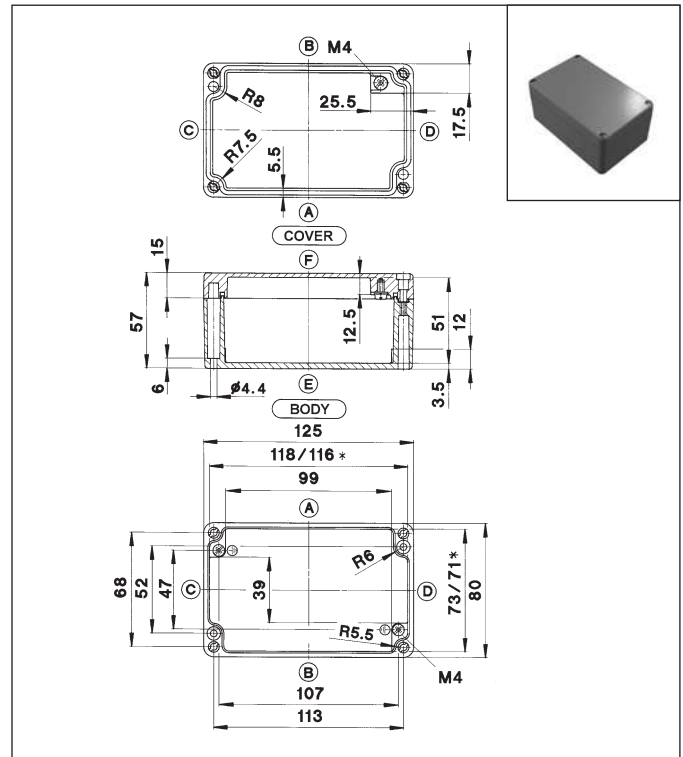
### CA-150 Aluminium enclosures



## 125 x 80 x 57 mm

### CA-160 Aluminium enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

Type	CA-150
Weight (g)	435
External dimension (mm)	125 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> 1150000000
unwashed, not painted, loose accessories	1150019000
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	9823016000
Mounting rail TS 15	9820010000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	10 4 3 2 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0

\*\* Enclosure preparation required

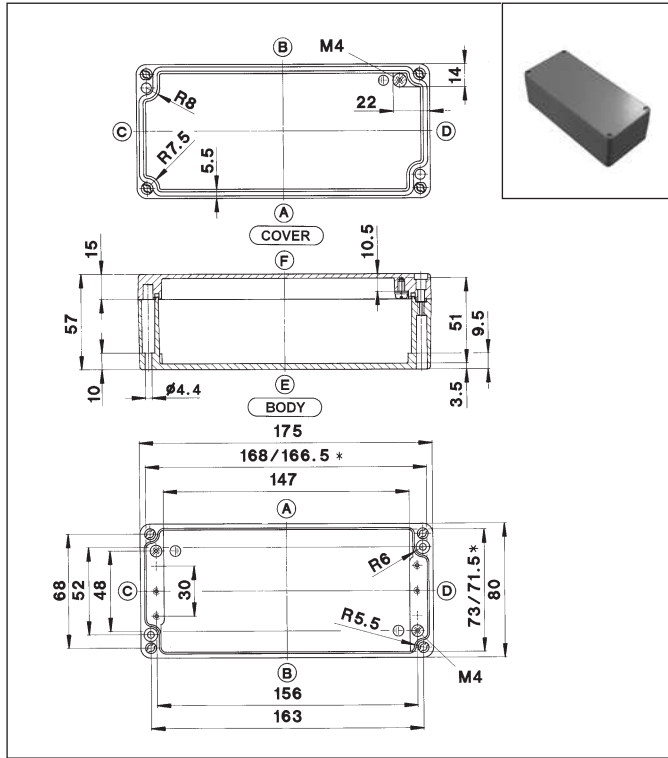
Type	CA-160
Weight (g)	435
External dimension (mm)	125 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> 1160000000
unwashed, not painted, loose accessories	1160045000
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	9511005000
Mounting rail TS 15	9820036000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	10 4 3 2 0 0 0 0
Side C/D	4 2 1 1 0 0 0 0

\*\* Enclosure preparation required

# Aluminium Enclosures – Series CA

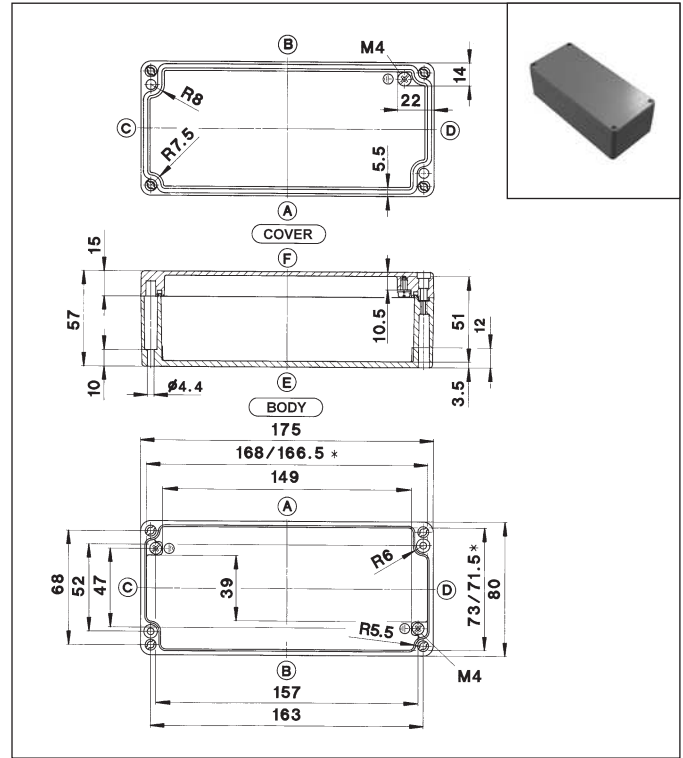
## 175 x 80 x 57 mm

CA-170  
Aluminium enclosures



## 175 x 80 x 57 mm

CA-180  
Aluminium enclosures



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

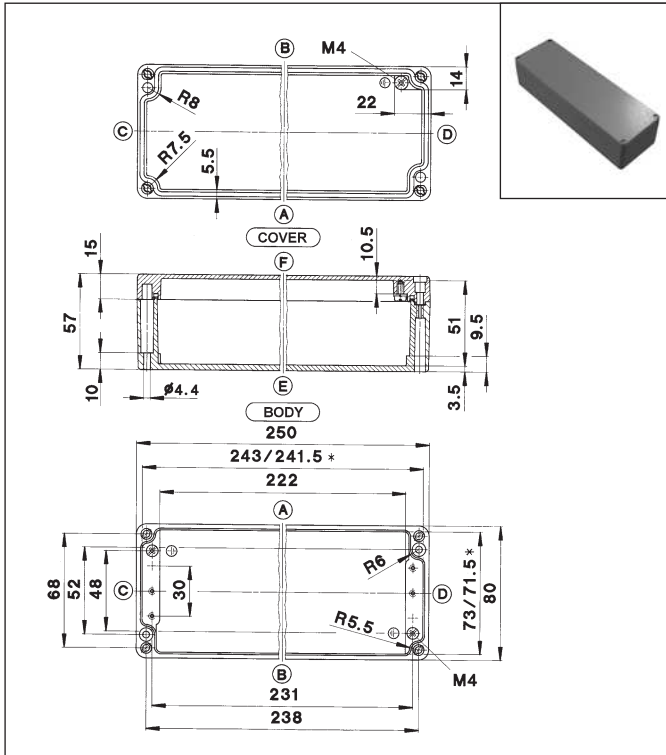
Type	CA-170
Weight (g)	530
External dimension (mm)	175 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1170000000</b>
unwashed, not painted, loose accessories	<b>1170016000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9823017000</b>
Mounting rail TS 15	<b>9820014000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	<b>9801044000</b>
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	14 6 4 4 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0
** Enclosure preparation required	

Type	CA-180
Weight (g)	530
External dimension (mm)	175 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1180000000</b>
unwashed, not painted, loose accessories	<b>1180040000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511006000</b>
Mounting rail TS 15	<b>9820037000</b>
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	<b>9801044000</b>
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	14 6 4 4 0 0 0 0
Side C/D	4 2 1 1 0 0 0 0
** Enclosure preparation required	



## 250 x 80 x 57 mm

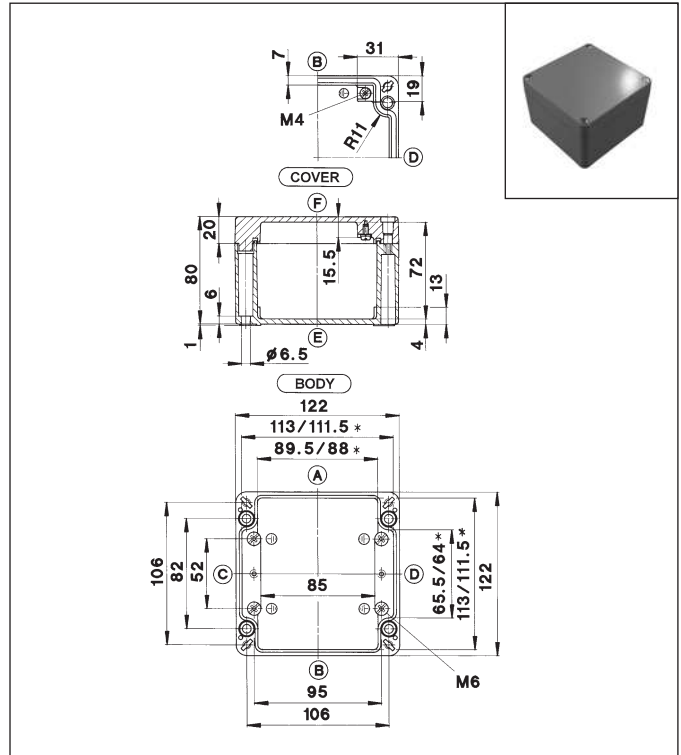
CA-190  
Aluminium enclosures



## 122 x 122 x 80 mm

CA-210  
Aluminium enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CA-190
Weight (g)	710
External dimension (mm)	250 x 80 x 57
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> 1190000000
Unwashed, not painted, loose accessories	1190026000
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	9823021000
Mounting rail TS 15	9820019000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	22 9 7 5 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

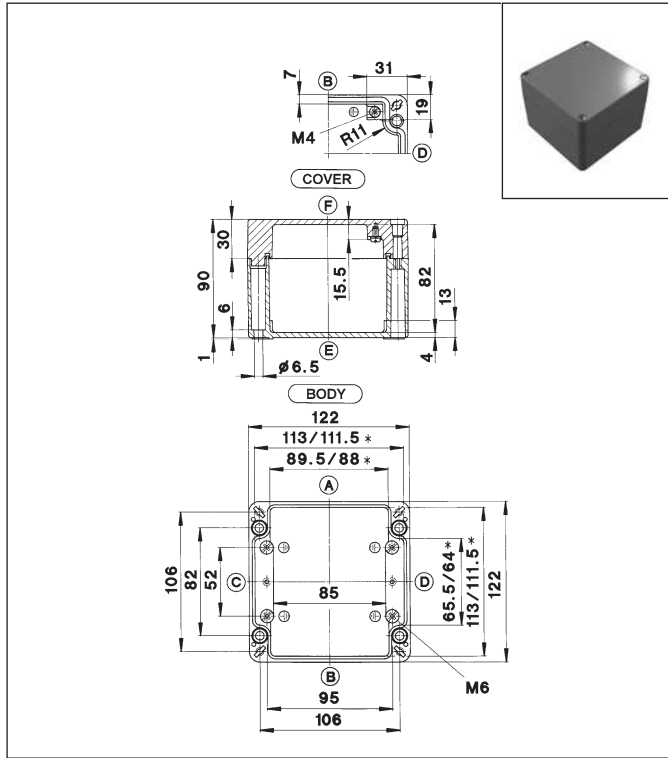
Type	CA-210
Weight (g)	940
External dimension (mm)	122 x 122 x 80
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> 1210000000
Unwashed, not painted, loose accessories	1210016000
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	9511150000
Mounting rail TS 15	9820019000
Mounting rail TS 32	9821000000
Mounting rail TS 35	9822001000
Earthing rail	9810002000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	12 6 4 2 2 0 0 0
Side C/D	5 2 2 1 0 0 0 0

\*\* Enclosure preparation required

# Aluminium Enclosures – Series CA

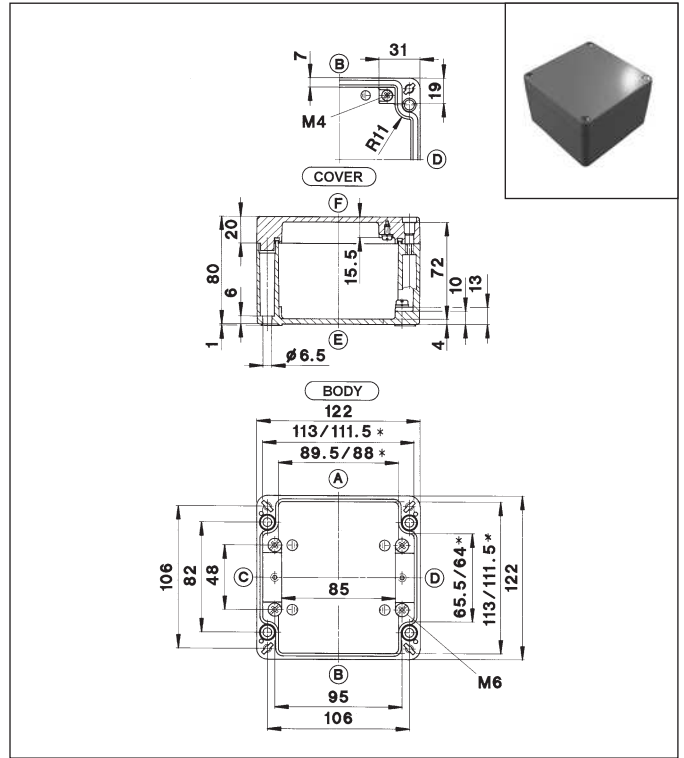
## 122 x 122 x 90 mm

### CA-215 Aluminium enclosures



## 122 x 122 x 80 mm

### CA-220 Aluminium enclosures



\* Smaller dimension at mounting plate support

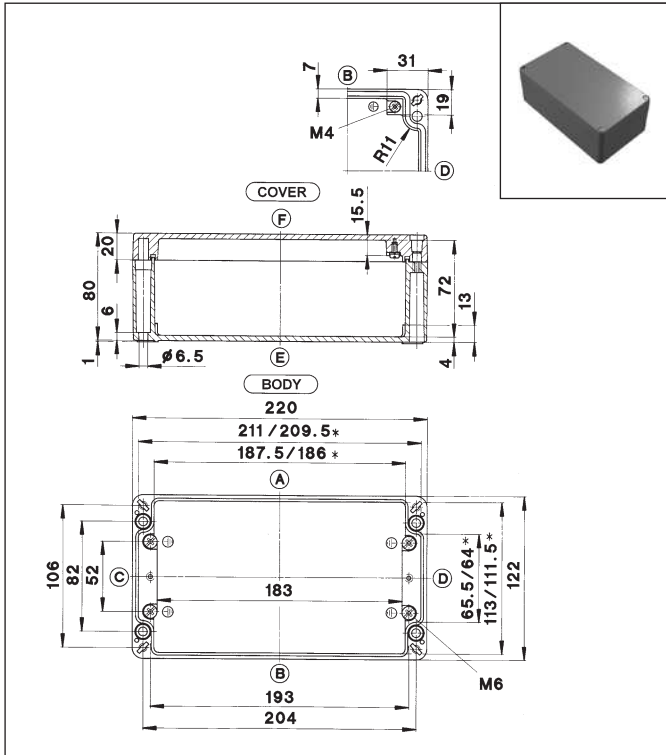
\* Smaller dimension at mounting plate support

Type	CA-215
Weight (g)	940
External dimension (mm)	122 x 122 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1210000050</b>
unwashed, not painted, loose accessories	<b>1210012050</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511150000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821000000</b>
Mounting rail TS 35	<b>9822001000</b>
Earthing rail	<b>9810002000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801031000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	12 6 4 2 2 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

Type	CA-220
Weight (g)	940
External dimension (mm)	122 x 122 x 80
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1220000000</b>
unwashed, not painted, loose accessories	<b>1220061000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511008000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821000000</b>
Mounting rail TS 35	<b>9822001000</b>
Earthing rail	<b>9810002000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801031000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	12 6 4 2 2 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

## 220 x 122 x 80 mm

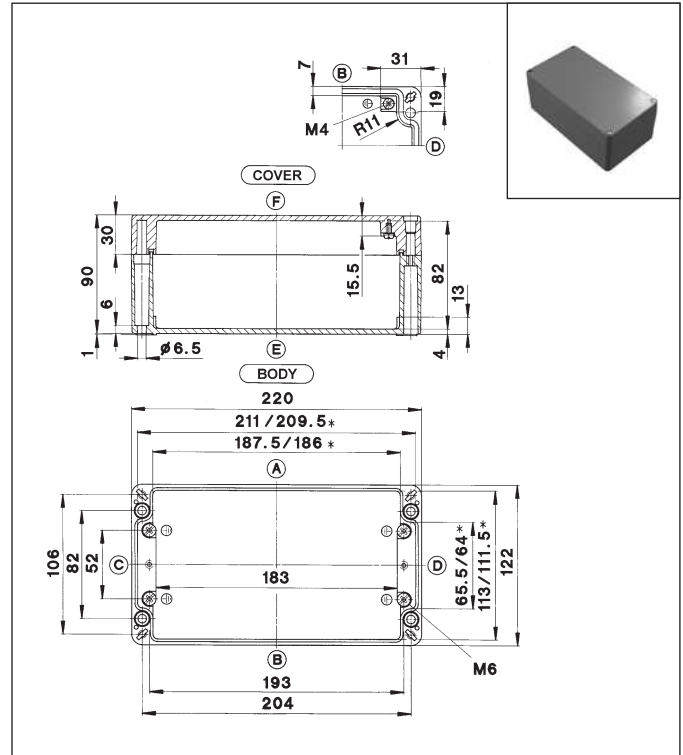
CA-230  
Aluminium enclosures



## 220 x 122 x 90 mm

CA-235  
Aluminium enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

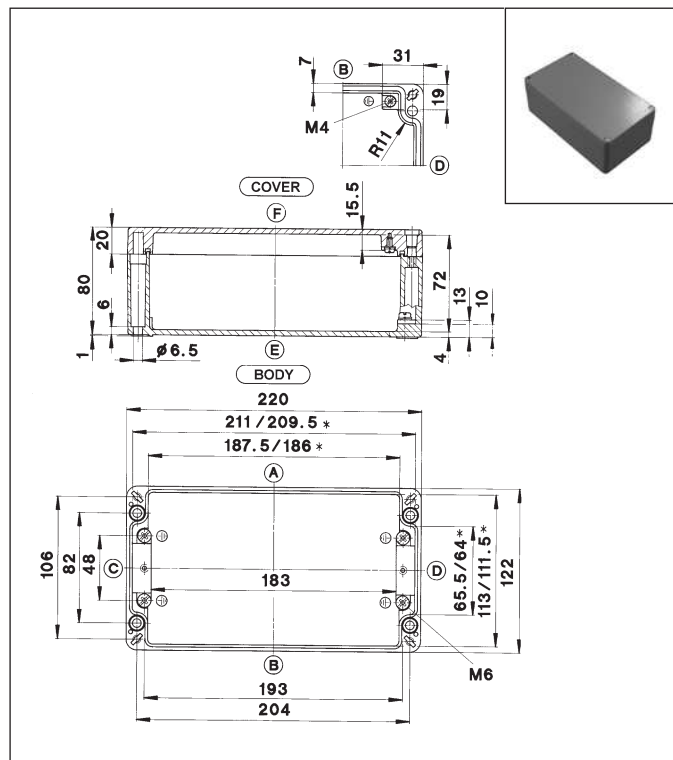
Type	CA-230
Weight (g)	1410
External dimension (mm)	220 x 122 x 80
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1230000000</b>
unwashed, not painted, loose accessories	<b>1230015000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511095000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821005000</b>
Mounting rail TS 35	<b>9822007000</b>
Earthing rail	<b>9810008000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801031000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	27 12 8 5 4 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

Type	CA-235
Weight (g)	1410
External dimension (mm)	220 x 122 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1230000050</b>
unwashed, not painted, loose accessories	<b>1230012050</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511095000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821005000</b>
Mounting rail TS 35	<b>9822007000</b>
Earthing rail	<b>9810008000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801031000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	27 12 8 5 4 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

# Aluminium Enclosures – Series CA

## 220 x 122 x 80 mm

### CA-240 Aluminium enclosures

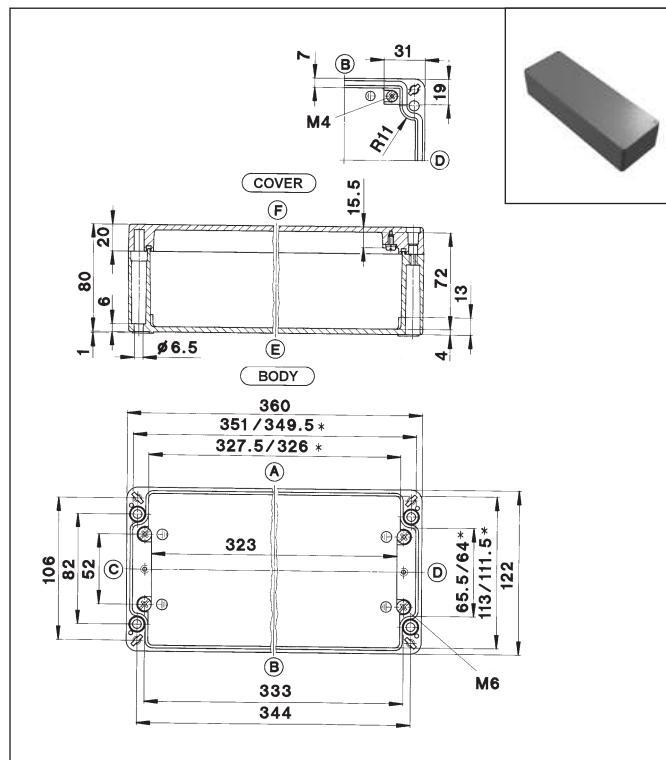


\* Smaller dimension at mounting plate support

Type	CA-240
Weight (g)	1410
External dimension (mm)	220 x 122 x 80
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1240000000</b>
unwashed, not painted, loose accessories	<b>1240082000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511009000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821005000</b>
Mounting rail TS 35	<b>9822007000</b>
Earthing rail	<b>9810008000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801031000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	27 12 8 5 4 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

## 360 x 122 x 80 mm

### CA-250 Aluminium enclosures

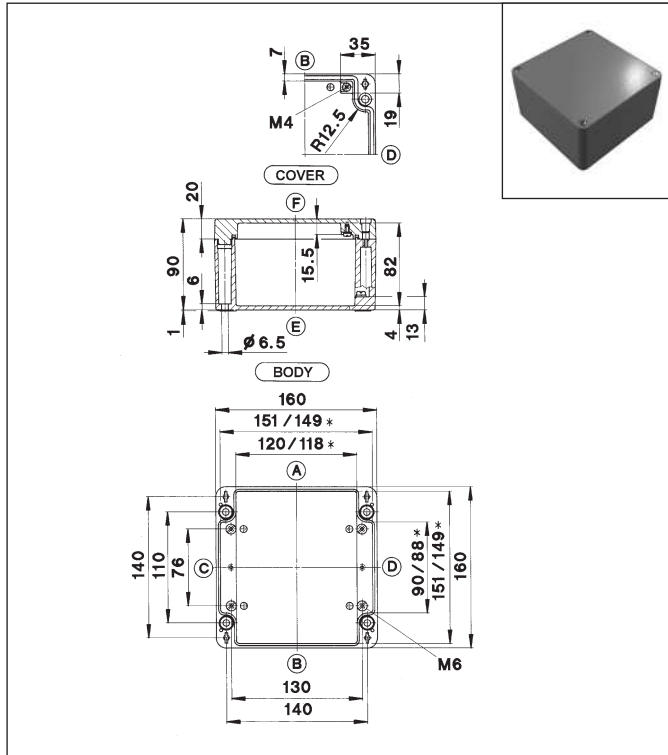


\* Smaller dimension at mounting plate support

Type	CA-250
Weight (g)	1860
External dimension (mm)	360 x 122 x 80
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1250000000</b>
unwashed, not painted, loose accessories	<b>1250011000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511174000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821012000</b>
Mounting rail TS 35	<b>9822015000</b>
Earthing rail	<b>9810014000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801031000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	48 21 16 9 6 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

## 160 x 160 x 90 mm

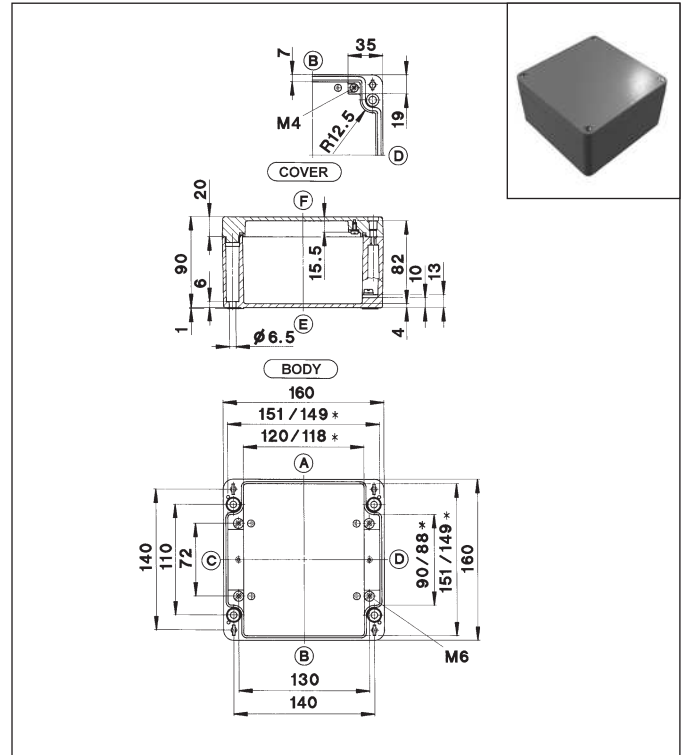
**CA-270**  
Aluminium enclosures



## 160 x 160 x 90 mm

**CA-280**  
Aluminium enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CA-270
Weight (g)	1410
External dimension (mm)	160 x 160 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1270000000</b>
unwashed, not painted, loose accessories	<b>1270013000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511149000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821002000</b>
Mounting rail TS 35	<b>9822003000</b>
Earthing rail	<b>9810004000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	20 9 6 4 2 2 1 0
Side C/D	8 4 3 2 2 0 0 0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

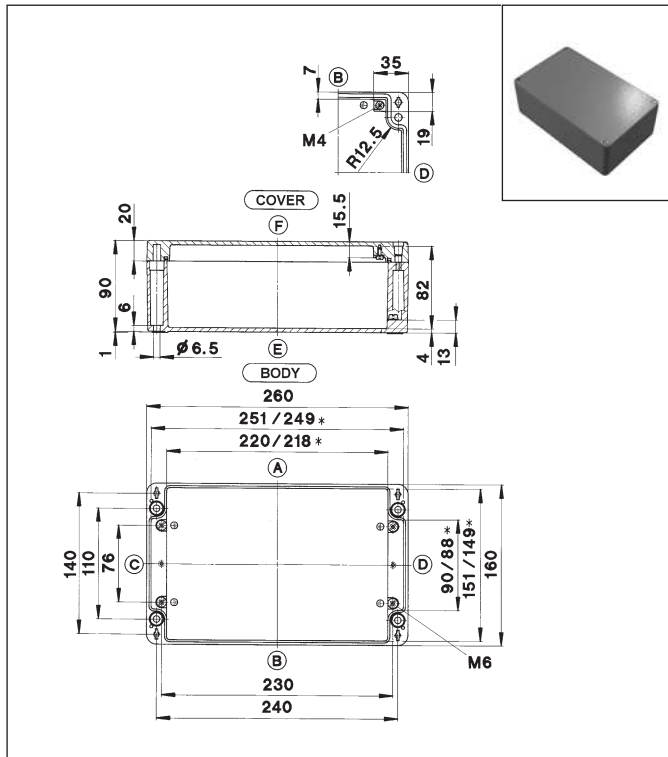
Type	CA-280
Weight (g)	1410
External dimension (mm)	160 x 160 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1280000000</b>
unwashed, not painted, loose accessories	<b>1280033000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511011000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821002000</b>
Mounting rail TS 35	<b>9822003000</b>
Earthing rail	<b>9810004000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	20 9 6 4 2 2 1 0
Side C/D	8 4 3 2 2 0 0 0

\*\* Enclosure preparation required

# Aluminium Enclosures – Series CA

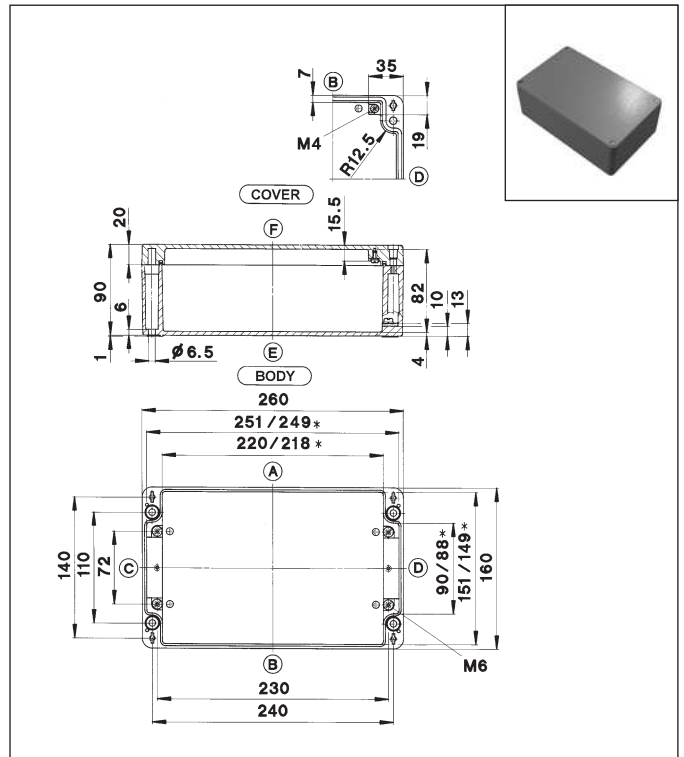
## 260 x 160 x 90 mm

### CA-290 Aluminium enclosures



## 260 x 160 x 90 mm

### CA-300 Aluminium enclosures



\* Smaller dimension at mounting plate support

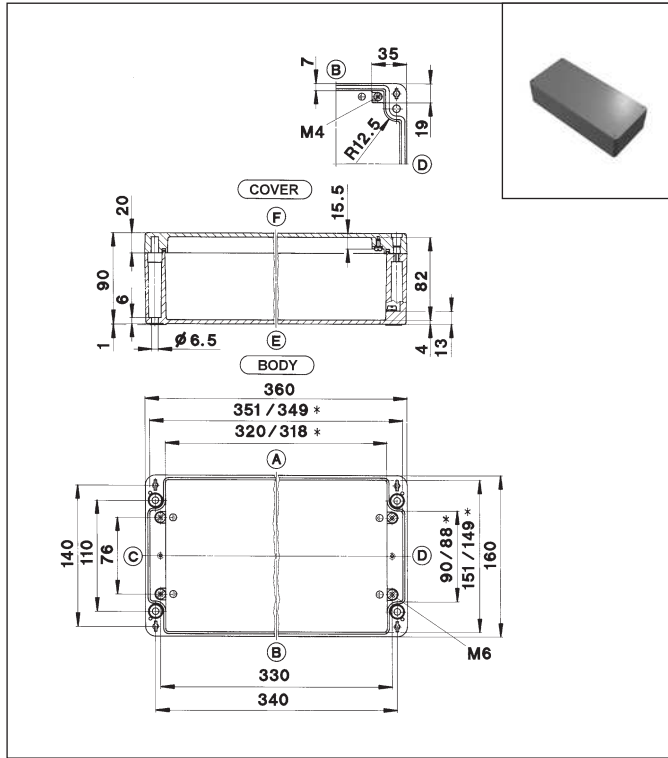
\* Smaller dimension at mounting plate support

Type	CA-290
Weight (g)	1960
External dimension (mm)	260 x 160 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1290000000</b>
unwashed, not painted, loose accessories	<b>1290011000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511096000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821008000</b>
Mounting rail TS 35	<b>9822011000</b>
Earthing rail	<b>9810010000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	36 17 12 7 4 3 3 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

Type	CA-300
Weight (g)	1960
External dimension (mm)	260 x 160 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1300000000</b>
unwashed, not painted, loose accessories	<b>1300041000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511012000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821008000</b>
Mounting rail TS 35	<b>9822011000</b>
Earthing rail	<b>9810010000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	36 17 12 7 4 3 3 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

### 360 x 160 x 90 mm

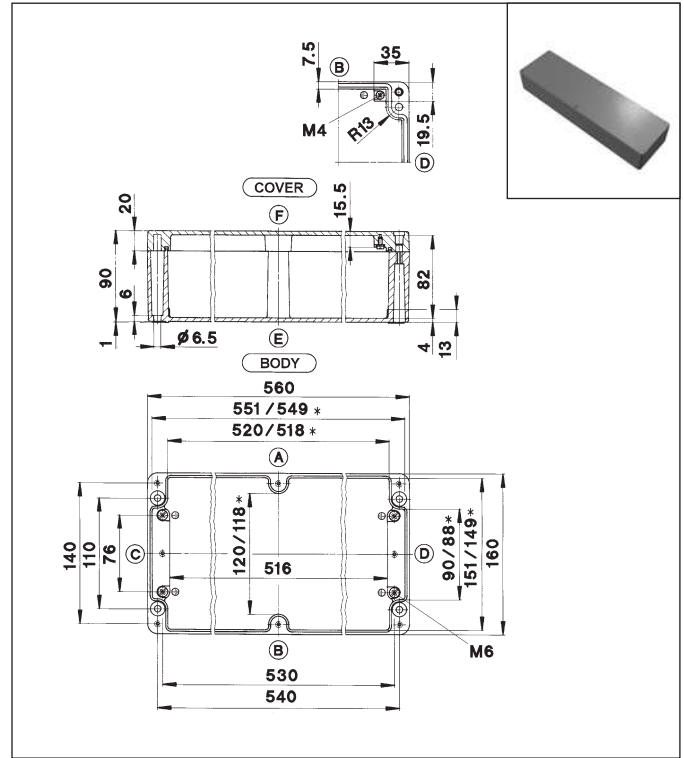
**CA-310**  
Aluminium enclosures



### 560 x 160 x 90 mm

**CA-330**  
Aluminium enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

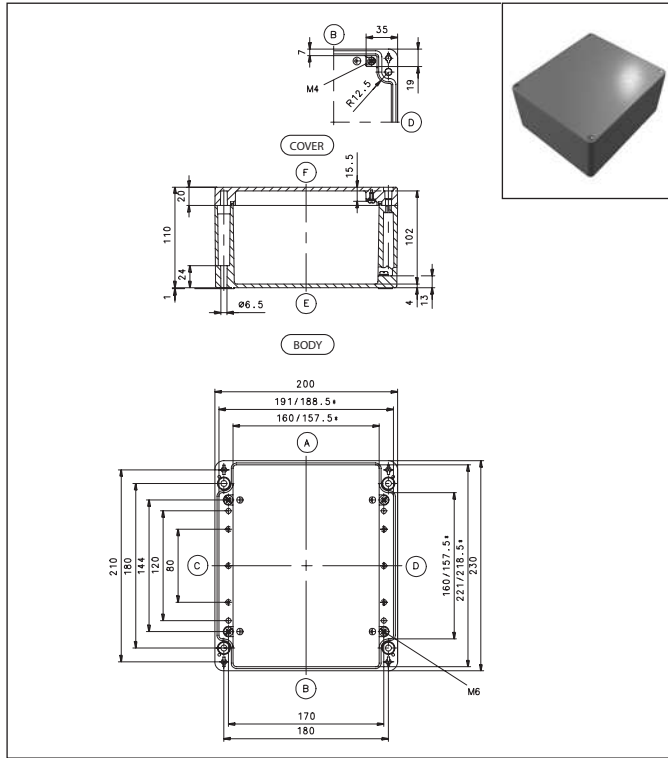
Type	CA-310
Weight (g)	2550
External dimension (mm)	360 x 160 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1310000000</b>
unwashed, not painted, loose accessories	<b>1310071000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511175000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821012000</b>
Mounting rail TS 35	<b>9822015000</b>
Earthing rail	<b>9810042000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	54 26 18 11 6 5 4 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

Type	CA-330
Weight (g)	4310
External dimension (mm)	560 x 160 x 90
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1330000000</b>
unwashed, not painted, loose accessories	<b>1330022000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511014000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821015000</b>
Mounting rail TS 35	<b>9822018000</b>
Earthing rail	<b>9810016000</b>
External mounting brackets	<b>9824024000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	84 40 28 16 10 8 6 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

# Aluminium Enclosures – Series CA

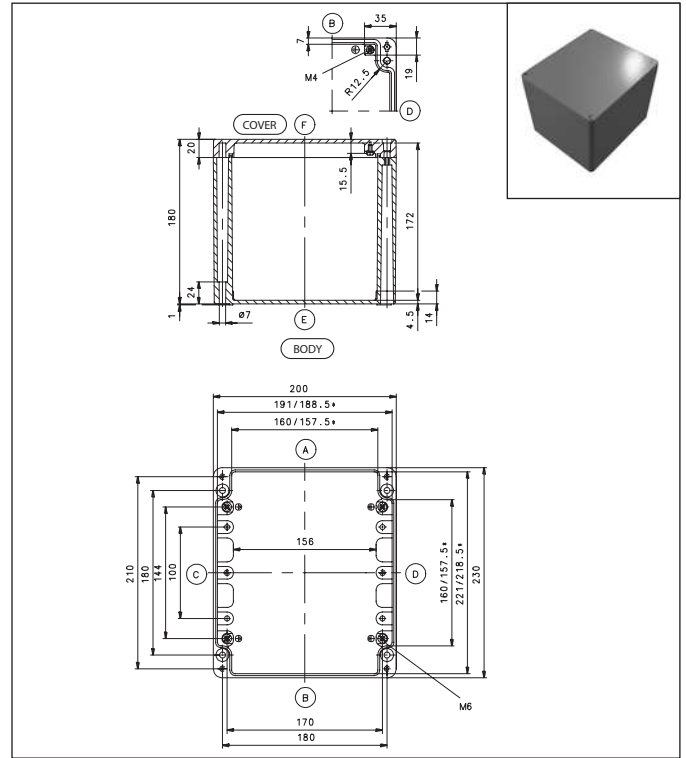
## 200 x 230 x 110 mm

### CA-350 Aluminium enclosures



## 200 x 230 x 180 mm

### CA-360 Aluminium enclosures



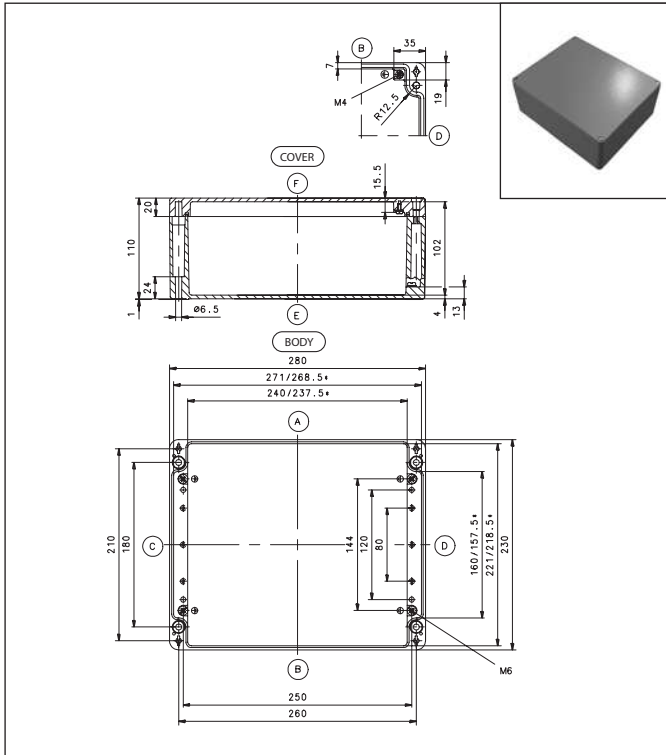
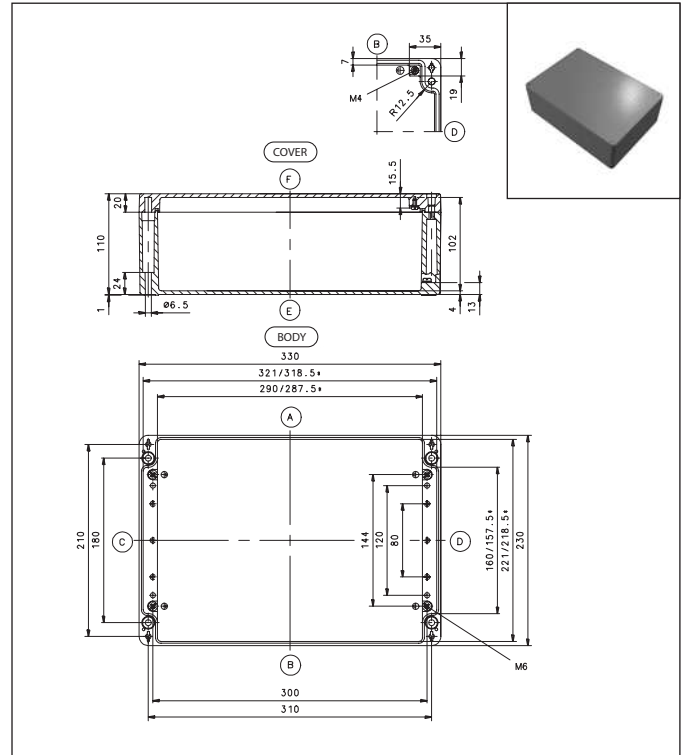
\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

Type	CA-350
Weight (g)	2730
External dimension (mm)	200 x 230 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>135000000</b>
unwashed, not painted, loose accessories	<b>1350017000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511015000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821003000</b>
Mounting rail TS 35	<b>9822005000</b>
Earthing rail	<b>9810007000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	35 15 12 8 4 3 2 2
Side C/D	26 12 8 5 3 2 2 1
** Enclosure preparation required	

Type	CA-360
Weight (g)	3680
External dimension (mm)	200 x 230 x 180
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1360000000</b>
unwashed, not painted, loose accessories	<b>1360043000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511015000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821003000</b>
Mounting rail TS 35	<b>9822005000</b>
Earthing rail	<b>9810007000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	56 32 20 13 9 5 4 4
Side C/D	52 27 18 12 8 5 3 3
** Enclosure preparation required	



**280 x 230 x 110 mm**
**CA-370**  
**Aluminium enclosures**

**330 x 230 x 110 mm**
**CA-380**  
**Aluminium enclosures**
**CAD files available**  
**at [www.bernstein.eu](http://www.bernstein.eu)**


\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

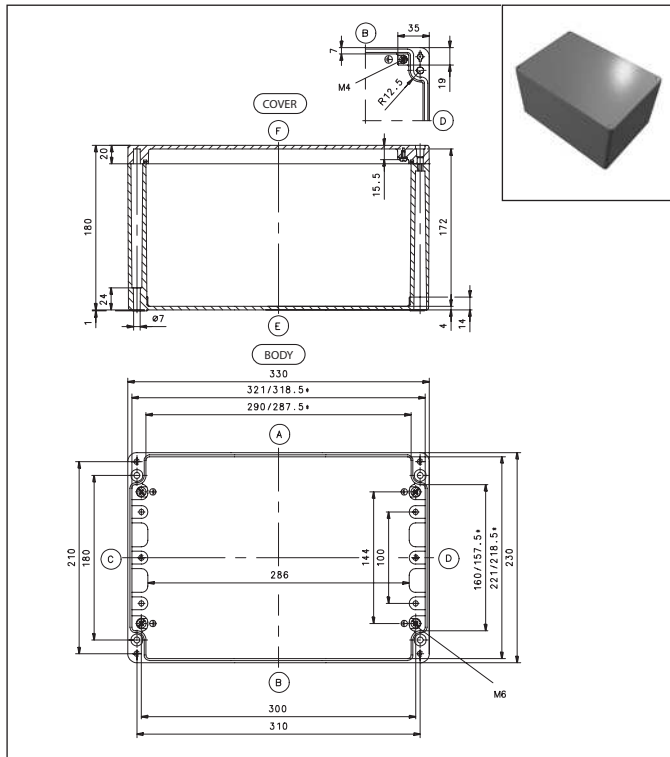
Type	CA-370
Weight (g)	3840
External dimension (mm)	280 x 230 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1370000000</b>
unwashed, not painted, loose accessories	<b>1370015000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511016000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821009000</b>
Mounting rail TS 35	<b>9822012000</b>
Earthing rail	<b>9810011000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	53 25 18 11 7 4 3 3
Side C/D	26 12 8 5 3 2 2 1
** Enclosure preparation required	

Type	CA-380
Weight (g)	4270
External dimension (mm)	330 x 230 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1380000000</b>
unwashed, not painted, loose accessories	<b>1380014000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511017000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821011000</b>
Mounting rail TS 35	<b>9822014000</b>
Earthing rail	<b>9810013000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	65 30 23 12 9 5 4 3
Side C/D	24 12 8 5 3 2 2 1
** Enclosure preparation required	

# Aluminium Enclosures – Series CA

## 330 x 230 x 180 mm

### CA-390 Aluminium enclosures

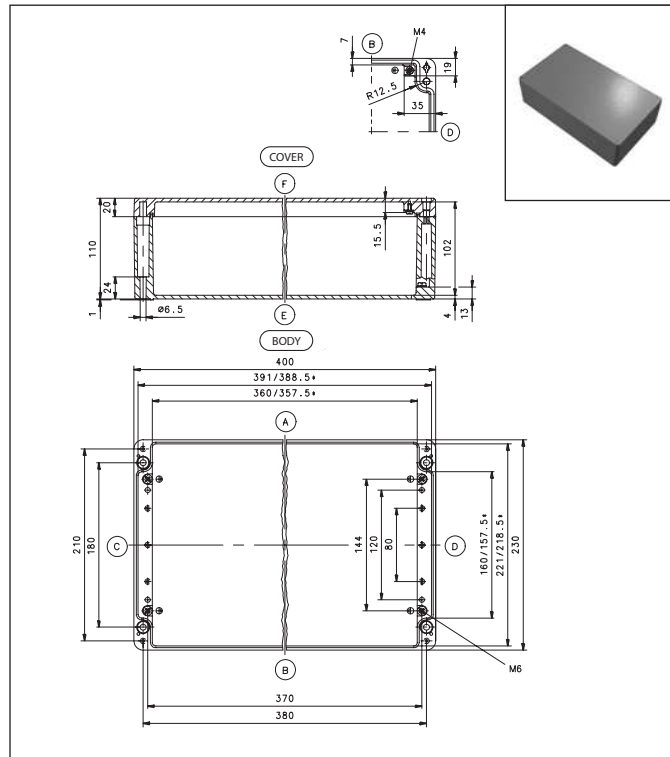


\* Smaller dimension at mounting plate support

Type	CA-390
Weight (g)	5300
External dimension (mm)	330 x 230 x 180
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1390000000</b>
unwashed, not painted, loose accessories	<b>1390012000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511017000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821011000</b>
Mounting rail TS 35	<b>9822014000</b>
Earthing rail	<b>9810013000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	108 54 40 25 15 9 8 6
Side C/D	52 27 18 12 8 5 3 3
** Enclosure preparation required	

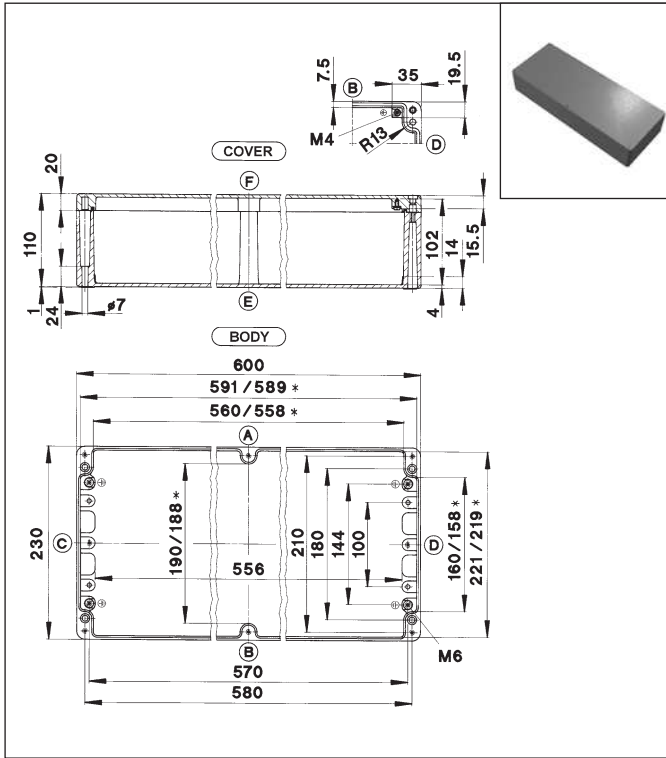
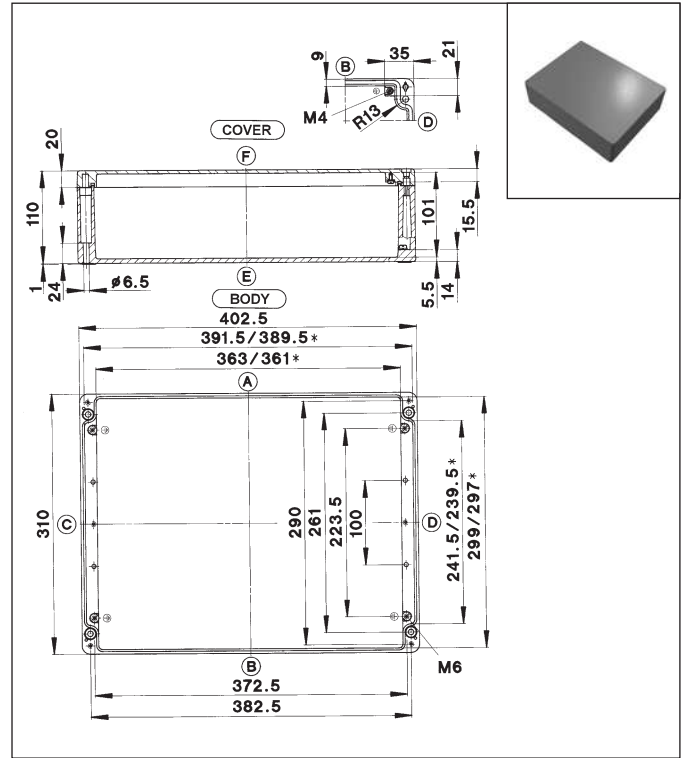
## 400 x 230 x 110 mm

### CA-400 Aluminium enclosures



\* Smaller dimension at mounting plate support

Type	CA-400
Weight (g)	4870
External dimension (mm)	400 x 230 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1400000000</b>
unwashed, not painted, loose accessories	<b>1400013000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511294000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821014000</b>
Mounting rail TS 35	<b>9822017000</b>
Earthing rail	<b>9810015000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	80 38 27 17 11 6 5 4
Side C/D	26 12 8 5 3 2 2 1
** Enclosure preparation required	

**600 x 230 x 110 mm**
**CA-420**  
**Aluminium enclosures**

**402,5 x 310 x 110 mm**
**CA-450**  
**Aluminium enclosures**
**CAD files available**  
**at [www.bernstein.eu](http://www.bernstein.eu)**


\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

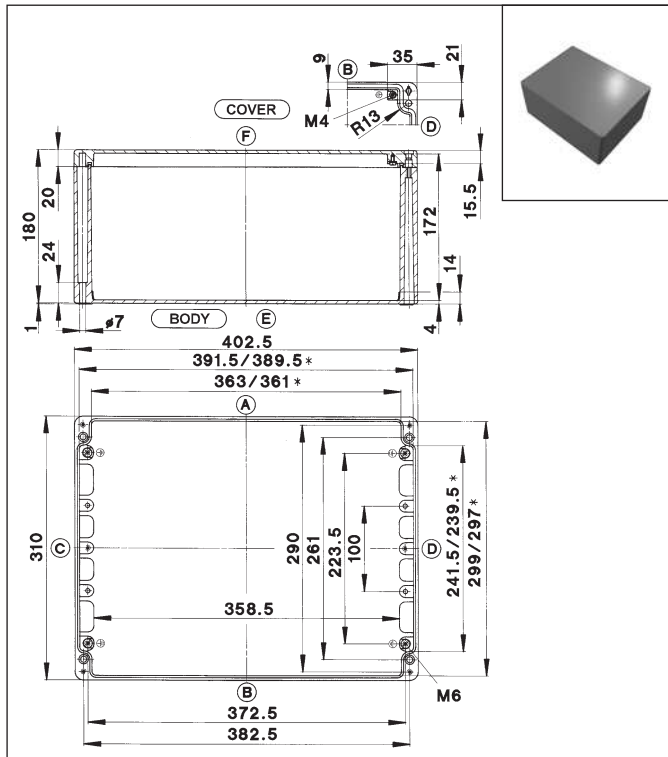
Type	CA-420
Weight (g)	6380
External dimension (mm)	600 x 230 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1420000000</b>
Unwashed, not painted, loose accessories	<b>1420011000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511019000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821016000</b>
Mounting rail TS 35	<b>9822019000</b>
Earthing rail	<b>9810017000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	120 56 42 24 16 8 8 6
Side C/D	28 13 8 5 3 2 2 1
** Enclosure preparation required	

Type	CA-450
Weight (g)	5810
External dimension (mm)	402,5 x 310 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> <b>1450000000</b>
Unwashed, not painted, loose accessories	<b>1450025000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511020000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821014000</b>
Mounting rail TS 35	<b>9822017000</b>
Earthing rail	<b>9810015000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	80 38 27 17 11 6 5 4
Side C/D	38 21 13 7 5 4 3 2
** Enclosure preparation required	

# Aluminium Enclosures – Series CA

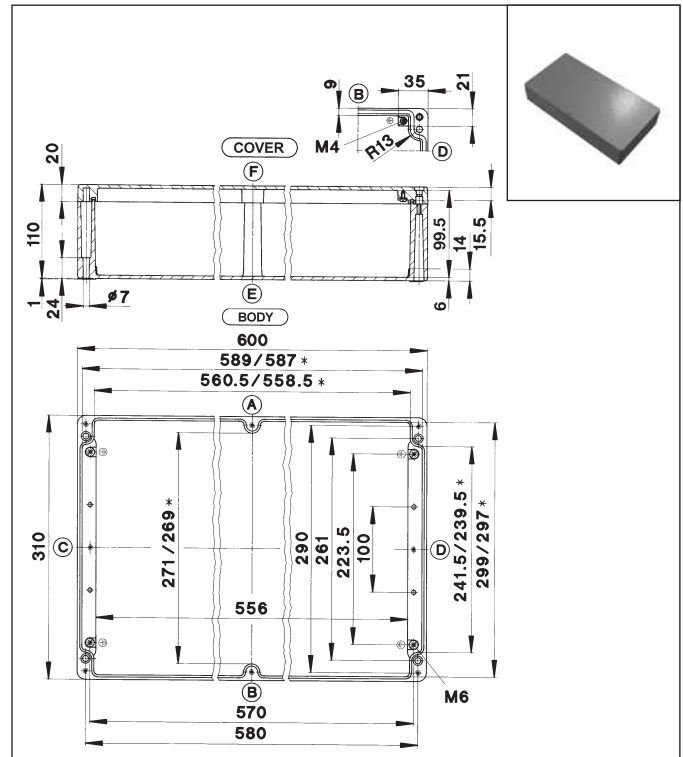
## 402,5 x 310 x 180 mm

CA-460  
Aluminium enclosures



## 600 x 310 x 110 mm

CA-470  
Aluminium enclosures



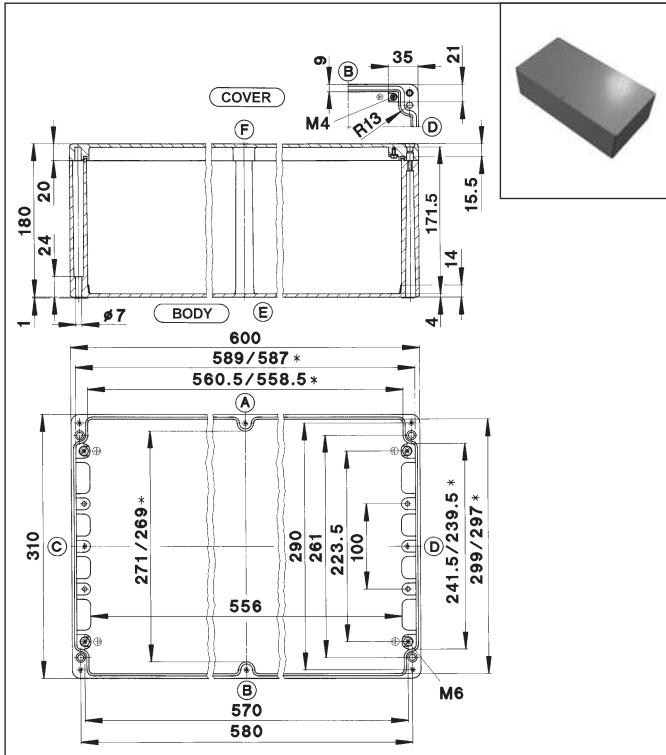
\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

Type	CA-460
Weight (g)	7420
External dimension (mm)	402,5 x 310 x 180
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> 1460000000
unwashed, not painted, loose accessories	1460049000
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	9511020000
Mounting rail TS 15	-
Mounting rail TS 32	9821014000
Mounting rail TS 35	9822017000
Earthing rail	9810015000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	136 68 50 30 21 12 10 8
Side C/D	74 38 28 18 12 8 6 3
** Enclosure preparation required	

Type	CA-470
Weight (g)	8480
External dimension (mm)	600 x 310 x 110
<b>Ordering data</b> Enclosure (painted) with seal (PUR) with cover screws	<b>Part number</b> 1470000000
unwashed, not painted, loose accessories	1470062000
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	9511021000
Mounting rail TS 15	-
Mounting rail TS 32	9821016000
Mounting rail TS 35	9822019000
Earthing rail	9810017000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	120 56 42 24 16 8 8 6
Side C/D	38 17 13 7 5 4 3 2
** Enclosure preparation required	

**600 x 310 x 180 mm**

 CAD files available  
 at [www.bernstein.eu](http://www.bernstein.eu)
**CA-480**  
**Aluminium enclosures**


\* Smaller dimension at mounting plate support

<b>Type</b>	<b>CA-480</b>
Weight (g)	10840
External dimension (mm)	600 x 310 x 180
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>
with cover screws	<b>1480000000</b>
unwashed, not painted, loose accessories	<b>1480017000</b>
<b>Accessories</b> (individual part or installation kit)	
Mounting plate	<b>9511021000</b>
Mounting rail TS 15	-
Mounting rail TS 32	<b>9821016000</b>
Mounting rail TS 35	<b>9822019000</b>
Earthing rail	<b>9810017000</b>
External mounting brackets	<b>9824023000</b>
External articulated hinges	<b>9801047000</b>
Internal articulated hinges with cover guide**	<b>9801030000</b>
Silicone seal for extended temperature range (by the metre)	<b>on request</b>
<b>Maximum possible number of threads</b>	
ISO M	12 16 20 25 32 40 50 63
Side A/B	200 100 76 46 30 18 14 12
Side C/D	74 38 28 18 12 8 6 5
** Enclosure preparation required	

# Polycarbonate and ABS Enclosures – Series CT

BERNSTEIN Series CT plastic enclosures are manufactured from high-grade polycarbonate or ABS. They are particularly suitable for encapsulating electrical and electronic components as well as complete small-scale controllers. All enclosures are available with a transparent polycarbonate cover. The enclosures correspond to protection class IP 65 in accordance with DIN EN 60529.

Attachment bosses are provided on the base of the plastic enclosures for mounting built-in components. The components can be simply secured with the self-tapping mounting screws that come with the enclosure. With their attachment bosses in the base, BERNSTEIN plastic enclosures offer many direct mounting options. Mounting rails can be installed without mounting plates on the central bosses.

BERNSTEIN Series CT enclosures are supplied as standard with the quick-release fastener developed and patented by BERNSTEIN. The quick-release fasteners that come with the enclosure are simply pressed and locked into the holes in the cover. They are made from stainless steel. The protection class (on the standard enclosure) is ensured by a factory-fitted seal. BERNSTEIN polycarbonate and ABS enclosures are produced as standard in the colour RAL 7035 (light grey). On account of its material properties, the polycarbonate version offers specific advantages in terms of impact strength, UV resistance and operating temperature range. Thanks to the many attachment bosses in the body, both versions provide many direct mounting options.

## Technical data

### Material

Polycarbonate, transparent polycarbonate or ABS

### Seal

Foamed PUR seal  
Neoprene (CR) round cord (silicone-free)  
Silicone round cord

### Quick-release fastener

Stainless steel, self-locking, cross recessed head

Optionally:

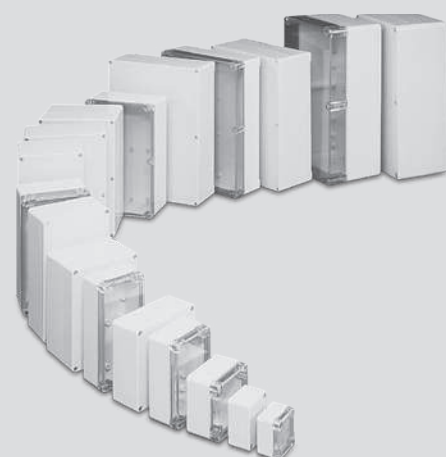
Stainless steel cover screw, cross recessed head  
Sealed cover screws, galvanised steel, (9 S 20 K), slot head

### Colour

RAL 7035 (light grey)  
Other colours (dyeing) for large quantities available on request

### Temperature range of CT enclosures

–40°C to +120°C (Polycarbonate)  
–40°C to +80°C (ABS)



### Temperature range of seals

Standard:  
–40°C to +100°C (PUR seal)  
Optionally:  
–30°C to +80°C (Neoprene seal)  
–60°C to +130°C (silicone seal)

### Protection class

IP 65

### Approbations

(Label on demand)  
c UL us (polycarbonate enclosures)  
c CSA us (polycarbonate enclosures)



				Polycarbonate enclosure		Polycarbonate enclosure with transparent cover (PC)		ABS enclosure		ABS enclosure with transparent cover (PC)		
Dimensions/mm				Article number	Type	Article number	Type	Article number	Type	Article number	Type	
L	x	W	x	H								
52	x	50	x	35	2500000000	CT-501	2501000000	CT-501 T	3500000000	CT-502	3501000000	CT-502 T
65	x	50	x	35	2520000000	CT-521	2521000000	CT-521 T	3520000000	CT-522	3521000000	CT-522 T
82	x	80	x	55	2540000000	CT-541	2541000000	CT-541 T	3540000000	CT-542	3541000000	CT-542 T
82	x	80	x	85	2560000000	CT-561	2561000000	CT-561 T	3560000000	CT-562	3561000000	CT-562 T
120	x	80	x	55	2580000000	CT-581	2581000000	CT-581 T	3580000000	CT-582	3581000000	CT-582 T
120	x	80	x	85	2600000000	CT-601	2601000000	CT-601 T	3600000000	CT-602	3601000000	CT-602 T
160	x	80	x	55	2620000000	CT-621	2621000000	CT-621 T	3620000000	CT-622	3621000000	CT-622 T
160	x	80	x	85	2640000000	CT-641	2641000000	CT-641 T	3640000000	CT-642	3641000000	CT-642 T
122	x	120	x	55	2660000000	CT-661	2661000000	CT-661 T	3660000000	CT-662	3661000000	CT-662 T
122	x	120	x	85	2680000000	CT-681	2681000000	CT-681 T	3680000000	CT-682	3681000000	CT-682 T
160	x	120	x	90	2720000000	CT-721	2721000000	CT-721 T	3720000000	CT-722	3721000000	CT-722 T
200	x	120	x	75	2760000000	CT-761	2761000000	CT-761 T	3760000000	CT-762	3761000000	CT-762 T
200	x	120	x	90	2780000000	CT-781	2781000000	CT-781 T	3780000000	CT-782	3781000000	CT-782 T
240	x	120	x	100	2800000000	CT-801	2801000000	CT-801 T	3800000000	CT-802	3801000000	CT-802 T
200	x	150	x	75	2820000000	CT-821	2821000000	CT-821 T	3820000000	CT-822	3821000000	CT-822 T
240	x	160	x	90	2840000000	CT-841	2841000000	CT-841 T	3840000000	CT-842	3841000000	CT-842 T
240	x	160	x	120	2860000000	CT-861	2861000000	CT-861 T	3860000000	CT-862	3861000000	CT-862 T
250	x	160	x	90	2900000000	CT-901	2901000000	CT-901 T	3900000000	CT-902	3901000000	CT-902 T
250	x	160	x	120	2910000000	CT-911	2911000000	CT-911 T	3910000000	CT-912	3911000000	CT-912 T
360	x	200	x	150	2880000000	CT-881	2881000000	CT-881 T	3880000000	CT-882	3881000000	CT-882 T
300	x	230	x	86	2870000000	CT-871	2871000000	CT-871 T	3870000000	CT-872	3871000000	CT-872 T
300	x	230	x	110	2890000000	CT-891	2891000000	CT-891 T	3890000000	CT-892	3891000000	CT-892 T

This is just a selection of possible assembly components that BERNSTEIN offers. Contact us, we can incorporate components from all leading manufacturers to satisfy your individual demand. You find further information about "System solutions" on page 12.



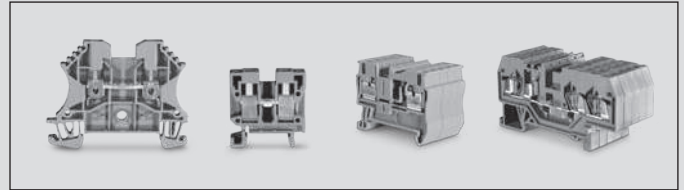
### Mounting plates

Made from laminated paper (Pertinax) (thickness: CT-50 to CT-60: 1.5 mm; CT-62 to CT-78: 2.0 mm; CT-80 to CT-91: 2.5 mm) for versatile mounting of built-in components.



### Mounting rails

conforming to standards TS15 or TS32 and TS 35 made from steel; surface treated for accepting terminal blocks.



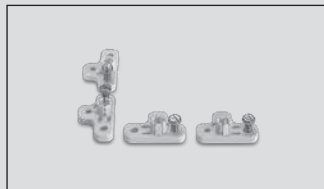
### Terminal blocks

of all renowned manufacturers are used.



### Earthing bars

made from galvanised steel for combining and connecting PE conductors.



### External mounting brackets

made from polycarbonate for mounting enclosures without opening the covers. Different bracket arrangement options offset by 90°. Colour RAL 7035.



### External articulated hinges

made from polycarbonate for hinged mounting of enclosure cover. Opening range of cover approx. 195°, latching at 170°, articulated hinges are simply pressed into holes (CT-88: secured by screws).



### Flexible quick-release fastener/internal articulated hinges

for captive mounting and strain relief for enclosure cover. Cover opening range > 180°. Stainless steel with injection-moulded polyamide ends.



### Silicon, EPDM or HF seal

with increased temperature resistance (see indications left side) or to protect sensitive electronic equipment against high-frequency radiation (HF seal). If a HF seal is used, an additional coating of the inside of the enclosure is required.



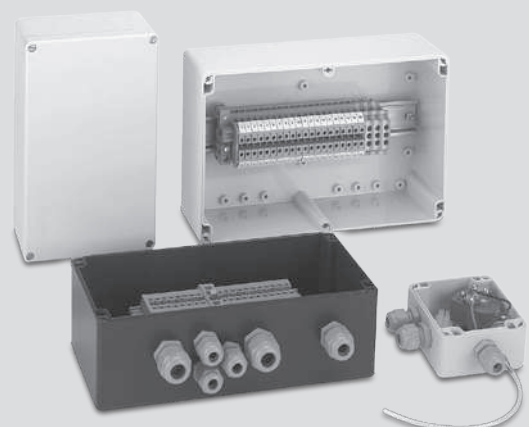
### Brass press-in bushes

with metric fastening screws M3 (M4 on CT-88), for mounting built-in components with metric screws in the mounting bushes in the enclosure body.



### Cable glands

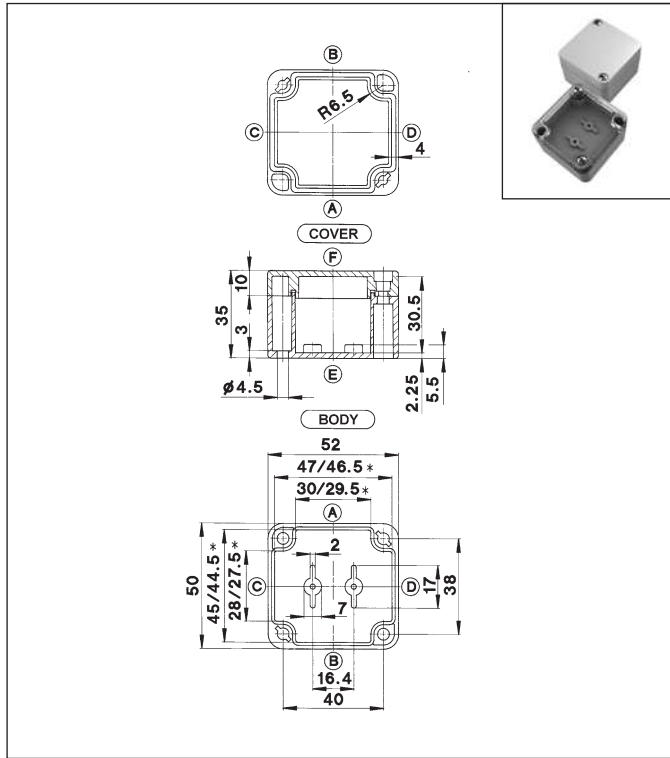
Euro-2000 (Euro-Top) screwed cable glands, plastic (polyamide 6, RAL 7035), including integrated strain relief. Sealing element NEOPRENE. Temperature range: -30°C bis +80°C (see also page 71). Other cable glands on demand.



# Polycarbonate and ABS Enclosures – Series CT

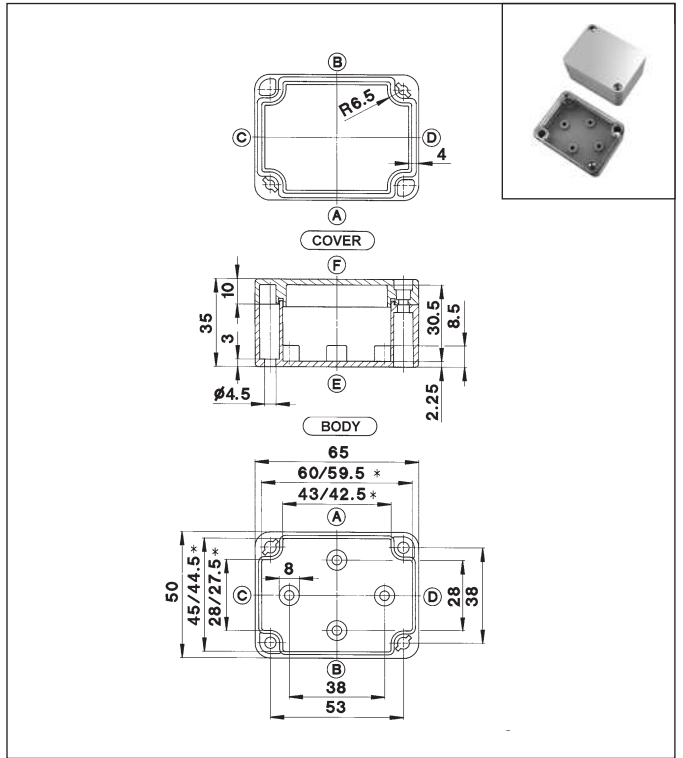
## 52 x 50 x 35 mm

CT-501 Polycarbonate enclosures  
CT-502 ABS enclosures



## 65 x 50 x 35 mm

CT-521 Polycarbonate enclosures  
CT-522 ABS enclosures



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

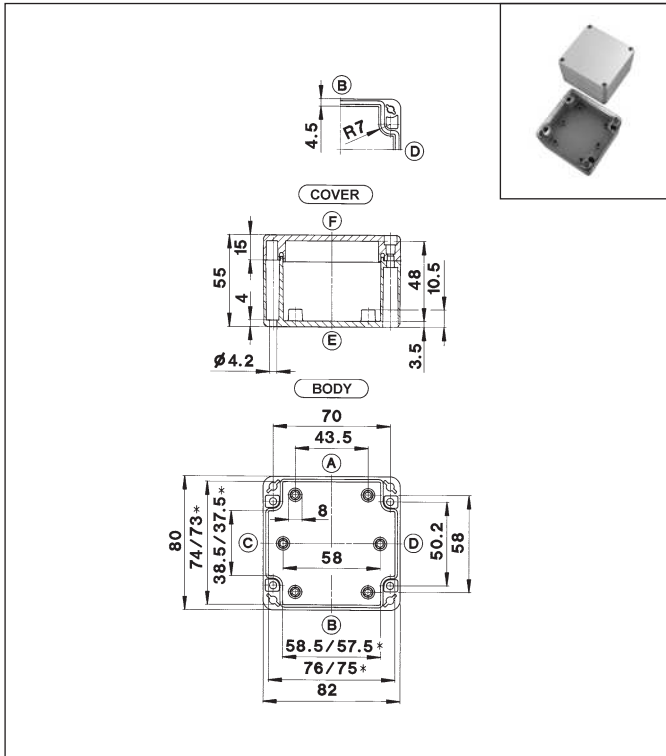
Type	CT-501 PC	CT-502 ABS
Weight (g)	40 (PC)	38 (ABS)
External dimension (mm)	52 x 50 x 35	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2500000000	
PC, with screw fastener	2500001000	
PC, with transparent cover (PC) and quick-release fastener	2501000000	
ABS, with quick-release fastener	3500000000	
ABS, with screw fastener	3500001000	
ABS, with transparent cover (PC) and quick-release fastener	3501000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512009000	
Mounting rail TS 15	-	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	-	
External articulated hinges**	-	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	-	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	-	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	1	0 0 0 0 0 0 0 0
Side C/D	1	0 0 0 0 0 0 0 0
** Enclosure preparation required		

Type	CT-521 PC	CT-522 ABS
Weight (g)	50 (PC)	47 (ABS)
External dimension (mm)	65 x 50 x 35	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2520000000	
PC, with screw fastener	2520001000	
PC, with transparent cover (PC) and quick-release fastener	2521000000	
ABS, with quick-release fastener	3520000000	
ABS, with screw fastener	3520001000	
ABS, with transparent cover (PC) and quick-release fastener	3521000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512010000	
Mounting rail TS 15	9820001000	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	-	
External articulated hinges**	-	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	-	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	2	0 0 0 0 0 0 0 0
Side C/D	0	0 0 0 0 0 0 0 0
** Enclosure preparation required		



## 82 x 80 x 55 mm

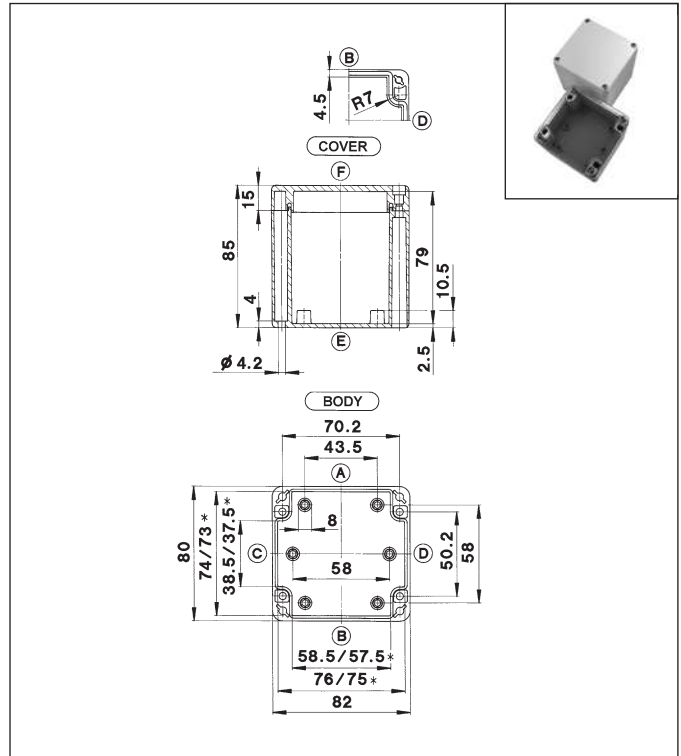
CT-541 Polycarbonate enclosures  
CT-542 ABS enclosures



## 82 x 80 x 85 mm

CT-561 Polycarbonate enclosures  
CT-562 ABS enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CT-541 PC	CT-542 ABS
Weight (g)	140 (PC)	116 (ABS)
External dimension (mm)	82 x 80 x 55	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2540000000	
PC, with screw fastener	2540001000	
PC, with transparent cover (PC) and quick-release fastener	2541000000	
ABS, with quick-release fastener	3540000000	
ABS, with screw fastener	3540001000	
ABS, with transparent cover (PC) and quick-release fastener	3541000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512011000	
Mounting rail TS 15	9820004000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822000000	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	5	2 2 0 0 0 0 0
Side C/D	2	1 0 0 0 0 0 0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

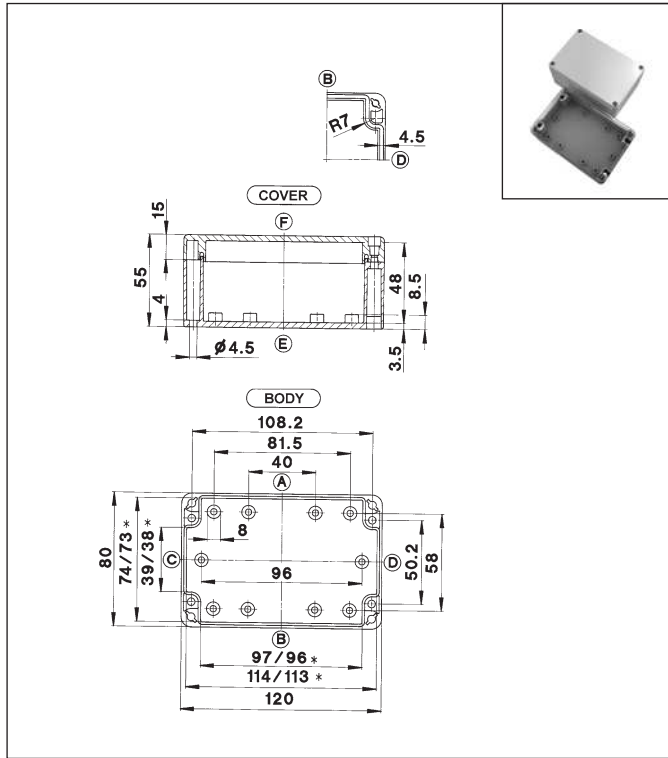
Type	CT-561 PC	CT-562 ABS
Weight (g)	175 (PC)	150 (ABS)
External dimension (mm)	82 x 80 x 85	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2560000000	
PC, with screw fastener	2560001000	
PC, with transparent cover (PC) and quick-release fastener	2561000000	
ABS, with quick-release fastener	3560000000	
ABS, with screw fastener	3560001000	
ABS, with transparent cover (PC) and quick-release fastener	3561000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512011000	
Mounting rail TS 15	9820004000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822000000	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	10	5 3 2 1 1 1 0
Side C/D	5	2 1 1 1 0 0 0

\*\* Enclosure preparation required

# Polycarbonate and ABS Enclosures – Series CT

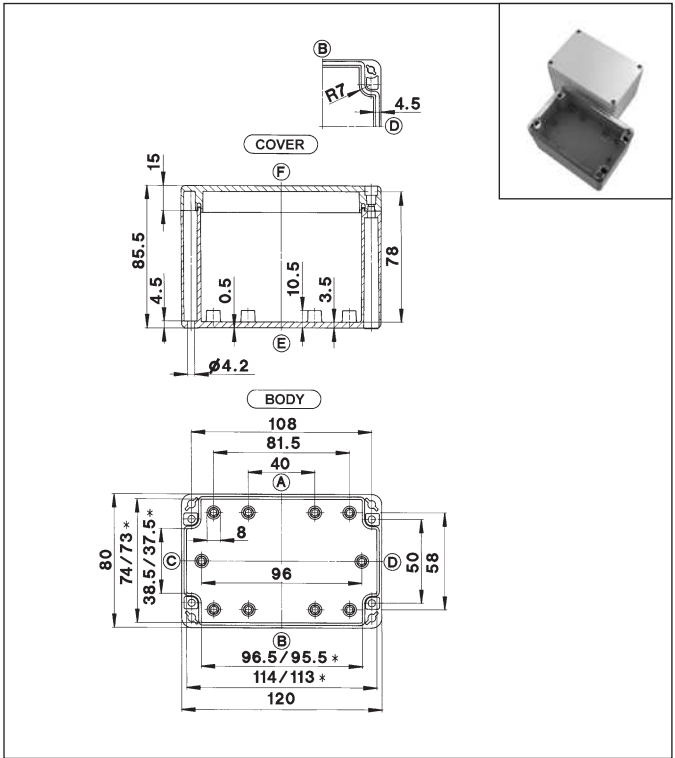
## 120 x 80 x 55 mm

CT-581 Polycarbonate enclosures  
CT-582 ABS enclosures



## 120 x 80 x 85 mm

CT-601 Polycarbonate enclosures  
CT-602 ABS enclosures



\* Smaller dimension at mounting plate support

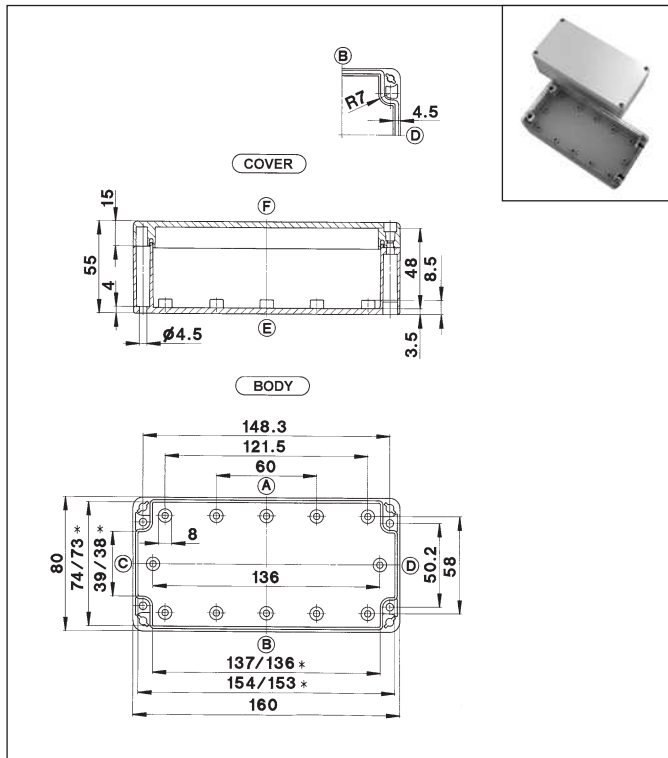
\* Smaller dimension at mounting plate support

Type	CT-581 PC	CT-582 ABS
Weight (g)	180 (PC)	135 (ABS)
External dimension (mm)	120 x 80 x 55	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2580000000	
PC, with screw fastener	2580001000	
PC, with transparent cover (PC) and quick-release fastener	2581000000	
ABS, with quick-release fastener	3580000000	
ABS, with screw fastener	3580001000	
ABS, with transparent cover (PC) and quick-release fastener	3581000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512012000	
Mounting rail TS 15	9820009000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810001000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	auf Anfrage	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	9 4 3 2 0 0 0 0	
Side C/D	2 1 1 0 0 0 0 0	
** Enclosure preparation required		

Type	CT-601 PC	CT-602 ABS
Weight (g)	225 (PC)	192 (ABS)
External dimension (mm)	120 x 80 x 85	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2600000000	
PC, with screw fastener	2600001000	
PC, with transparent cover (PC) and quick-release fastener	2601000000	
ABS, with quick-release fastener	3600000000	
ABS, with screw fastener	3600001000	
ABS, with transparent cover (PC) and quick-release fastener	3601000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512012000	
Mounting rail TS 15	9820009000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810001000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	15 6 6 3 2 1 1 0	
Side C/D	5 2 1 1 1 0 0 0	
** Enclosure preparation required		

## 160 x 80 x 55 mm

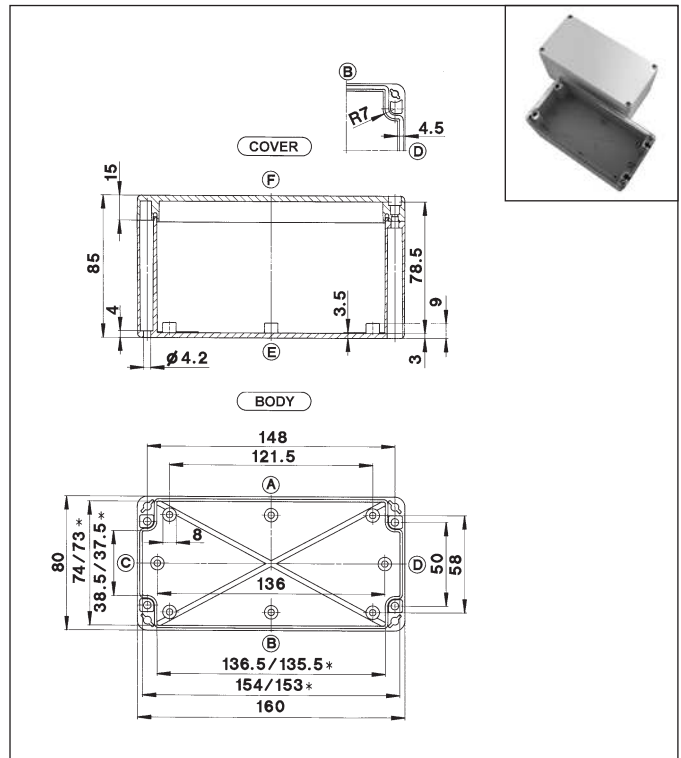
CT-621 Polycarbonate enclosures  
CT-622 ABS enclosures



## 160 x 80 x 85 mm

CT-641 Polycarbonate enclosures  
CT-642 ABS enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CT-621 PC	CT-622 ABS
Weight (g)	225 (PC)	199 (ABS)
External dimension (mm)	160 x 80 x 55	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2620000000	
PC, with screw fastener	2620001000	
PC, with transparent cover (PC) and quick-release fastener	2621000000	
ABS, with quick-release fastener	3620000000	
ABS, with screw fastener	3620001000	
ABS, with transparent cover (PC) and quick-release fastener	3621000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512013000	
Mounting rail TS 15	9820013000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822028000	
Earthing rail (secured on central bosses C/D)	9810005000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	11	5 4 3 0 0 0 0
Side C/D	2	1 1 0 0 0 0 0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

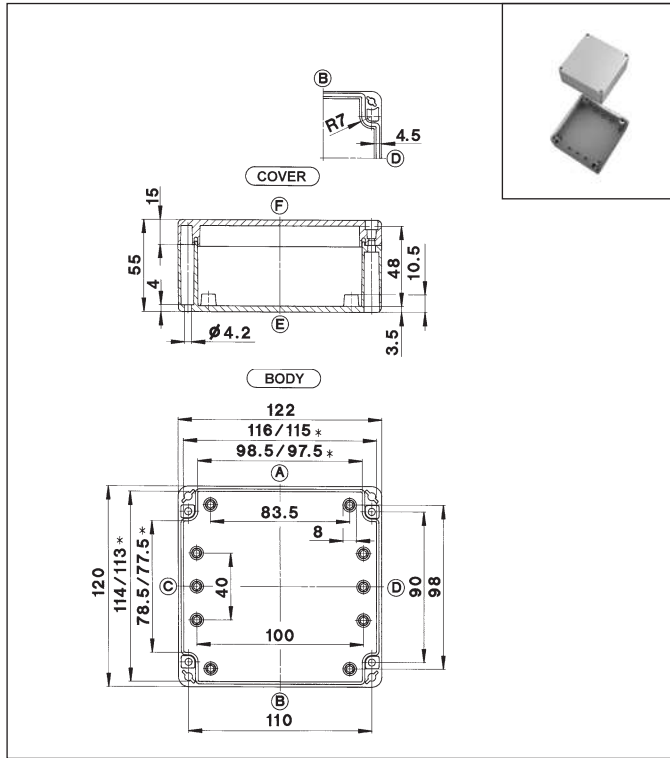
Type	CT-641 PC	CT-642 ABS
Weight (g)	240 (PC)	225 (ABS)
External dimension (mm)	160 x 80 x 85	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2640000000	
PC, with screw fastener	2640001000	
PC, with transparent cover (PC) and quick-release fastener	2641000000	
ABS, with quick-release fastener	3640000000	
ABS, with screw fastener	3640001000	
ABS, with transparent cover (PC) and quick-release fastener	3641000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512013000	
Mounting rail TS 15	9820013000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822028000	
Earthing rail (secured on central bosses C/D)	9810005000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	auf Anfrage	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	22	10 8 5 3 2 2 0
Side C/D	5	2 1 1 1 0 0 0

\*\* Enclosure preparation required

# Polycarbonate and ABS Enclosures – Series CT

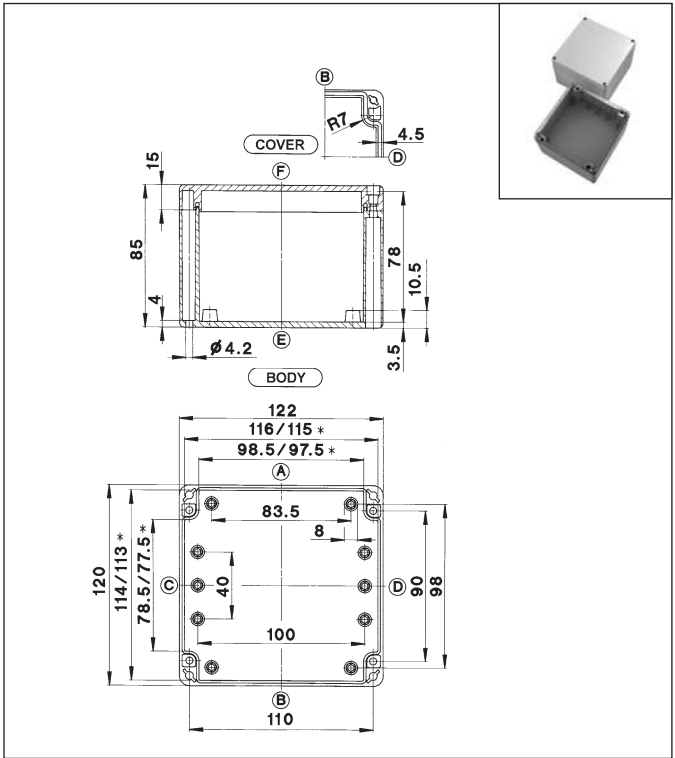
## 122 x 120 x 55 mm

CT-661 Polycarbonate enclosures  
CT-662 ABS enclosures



## 122 x 120 x 85 mm

CT-681 Polycarbonate enclosures  
CT-682 ABS enclosures



\* Smaller dimension at mounting plate support

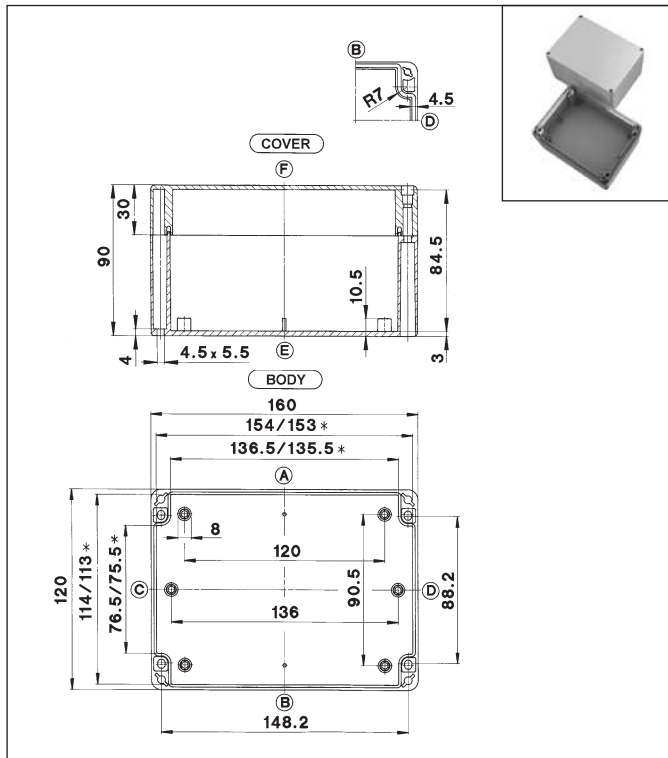
\* Smaller dimension at mounting plate support

Type	CT-661 PC	CT-662 ABS
Weight (g)	240 (PC)	218 (ABS)
External dimension (mm)	122 x 120 x 55	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2660000000	
PC, with screw fastener	2660001000	
PC, with transparent cover (PC) and quick-release fastener	2661000000	
ABS, with quick-release fastener	3660000000	
ABS, with screw fastener	3660001000	
ABS, with transparent cover (PC) and quick-release fastener	3661000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512014000	
Mounting rail TS 15	9820008000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810003000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	9 4 3 2 0 0 0 0	
Side C/D	4 3 2 0 0 0 0 0	
** Enclosure preparation required		

Type	CT-681 PC	CT-682 ABS
Weight (g)	295 (PC)	269 (ABS)
External dimension (mm)	122 x 120 x 85	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2680000000	
PC, with screw fastener	2680001000	
PC, with transparent cover (PC) and quick-release fastener	2681000000	
ABS, with quick-release fastener	3680000000	
ABS, with screw fastener	3680001000	
ABS, with transparent cover (PC) and quick-release fastener	3681000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512014000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821001000	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810003000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	15 6 6 3 20 1 1 0	
Side C/D	10 3 3 2 1 0 0 0	
** Enclosure preparation required		

## 160 x 120 x 90 mm

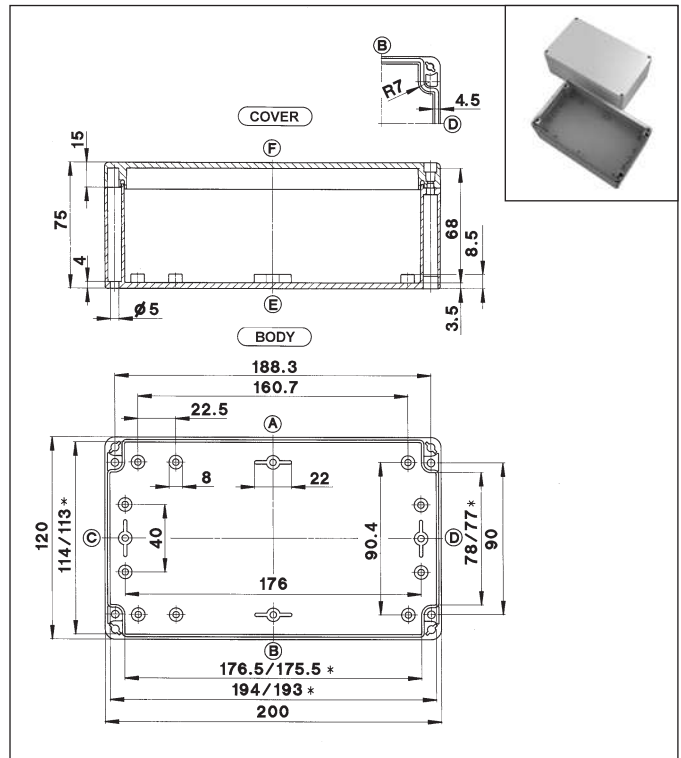
CT-721 Polycarbonate enclosures  
CT-722 ABS enclosures



## 200 x 120 x 75 mm

CT-761 Polycarbonate enclosures  
CT-762 ABS enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CT-721 PC	CT-722 ABS
Weight (g)	360 (PC)	310 (ABS)
External dimension (mm)	160 x 120 x 90	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2720000000	
PC, with screw fastener	2720001000	
PC, with transparent cover (PC) and quick-release fastener	2721000000	
ABS, with quick-release fastener	3720000000	
ABS, with screw fastener	3720001000	
ABS, with transparent cover (PC) and quick-release fastener	3721000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512036000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821025000	
Mounting rail TS 35	9822028000	
Earthing rail (secured on central bosses C/D)	9810040000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801079000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	18 10 7 3 3 0 0 0	
Side C/D	9 5 2 2 1 0 0 0	

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

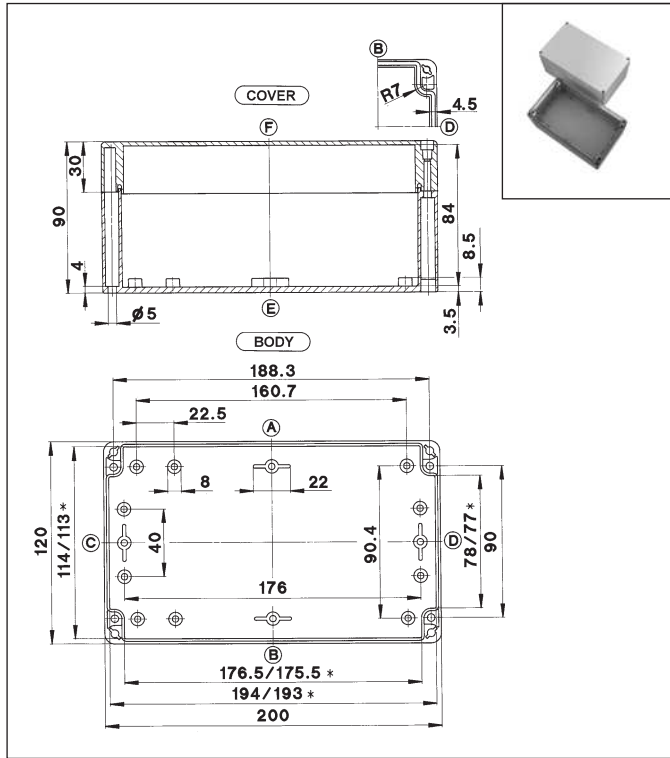
Type	CT-761 PC	CT-762 ABS
Weight (g)	400 (PC)	373 (ABS)
External dimension (mm)	200 x 120 x 75	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2760000000	
PC, with screw fastener	2760001000	
PC, with transparent cover (PC) and quick-release fastener	2761000000	
ABS, with quick-release fastener	3760000000	
ABS, with screw fastener	3760001000	
ABS, with transparent cover (PC) and quick-release fastener	3761000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512015000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821004000	
Mounting rail TS 35	9822006000	
Earthing rail (secured on central bosses C/D)	9810006000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	26 12 8 5 3 0 0 0	
Side C/D	10 5 2 2 1 0 0 0	

\*\* Enclosure preparation required

# Polycarbonate and ABS Enclosures – Series CT

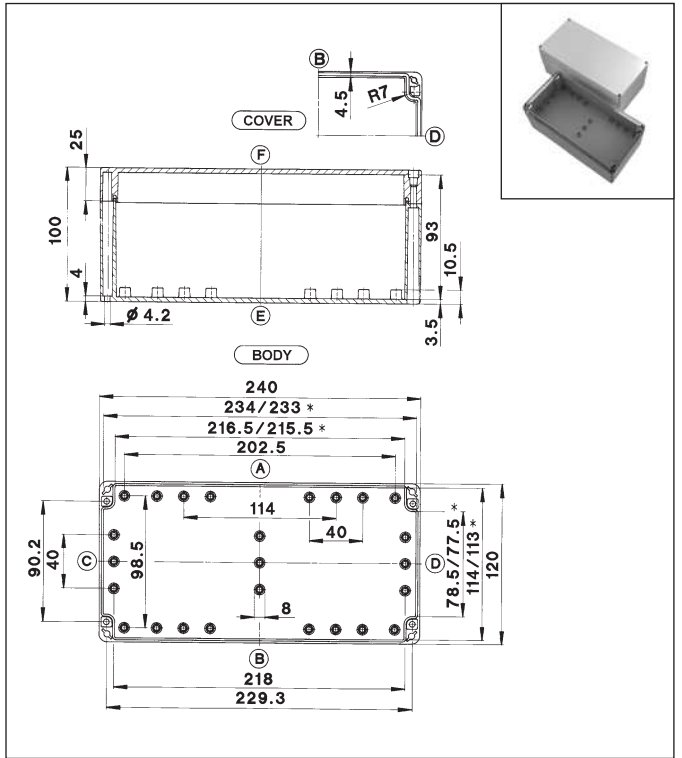
## 200 x 120 x 90 mm

CT-781 Polycarbonate enclosures  
CT-782 ABS enclosures



## 240 x 120 x 100 mm

CT-801 Polycarbonate enclosures  
CT-802 ABS enclosures



\* Smaller dimension at mounting plate support

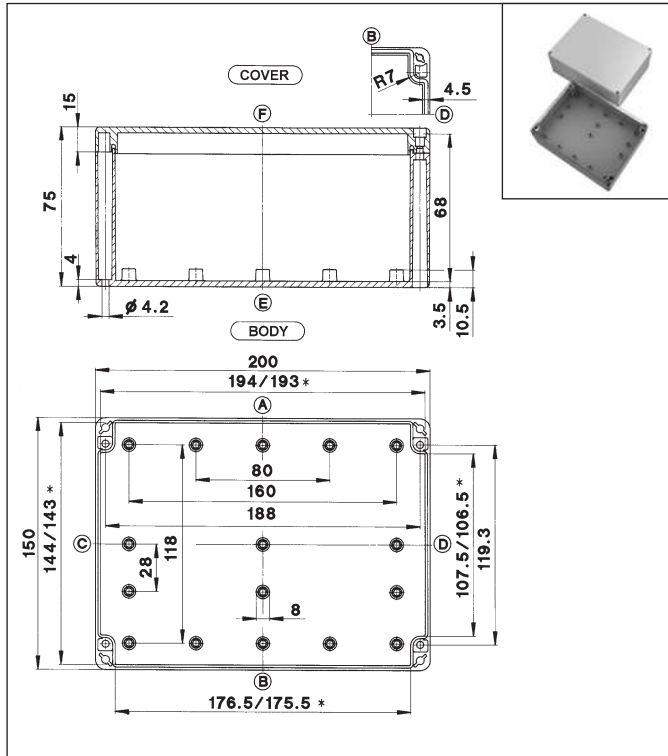
\* Smaller dimension at mounting plate support

Type	CT-781 PC	CT-782 ABS
Weight (g)	420 (PC)	365 (ABS)
External dimension (mm)	200 x 120 x 90	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2780000000	
PC, with screw fastener	2780001000	
PC, with transparent cover (PC) and quick-release fastener	2781000000	
ABS, with quick-release fastener	3780000000	
ABS, with screw fastener	3780001000	
ABS, with transparent cover (PC) and quick-release fastener	3781000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512015000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821004000	
Mounting rail TS 35	9822006000	
Earthing rail (secured on central bosses C/D)	9810006000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801079000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	26	12 8 5 3 0 0 0
Side C/D	10	5 2 2 1 0 0 0
** Enclosure preparation required		

Type	CT-801 PC	CT-802 ABS
Weight (g)	540 (PC)	478 (ABS)
External dimension (mm)	240 x 120 x 100	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2800000000	
PC, with screw fastener	2800001000	
PC, with transparent cover (PC) and quick-release fastener	2801000000	
ABS, with quick-release fastener	3800000000	
ABS, with screw fastener	3800001000	
ABS, with transparent cover (PC) and quick-release fastener	3801000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512016000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801078000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	34	17 12 6 5 3 3 2
Side C/D	10	6 3 2 1 1 0 0
** Enclosure preparation required		

## 200 x 150 x 75 mm

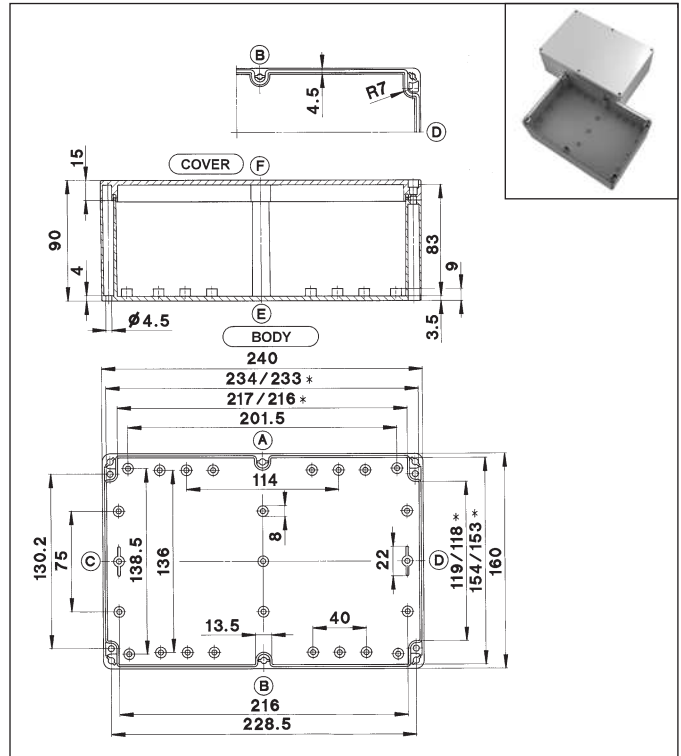
CT-821 Polycarbonate enclosures  
CT-822 ABS enclosures



## 240 x 160 x 90 mm

CT-841 Polycarbonate enclosures  
CT-842 ABS enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

Type	CT-821 PC	CT-822 ABS
Weight (g)	475 (PC)	425 (ABS)
External dimension (mm)	200 x 150 x 75	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2820000000	
PC, with screw fastener	2820001000	
PC, with transparent cover (PC) and quick-release fastener	2821000000	
ABS, with quick-release fastener	3820000000	
ABS, with screw fastener	3820001000	
ABS, with transparent cover (PC) and quick-release fastener	3821000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512017000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821017000	
Mounting rail TS 35	9822020000	
Earthing rail (secured on central bosses C/D)	9810006000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	22	12 9 5 3 0 0 0
Side C/D	12	6 3 2 2 0 0 0

\*\* Enclosure preparation required

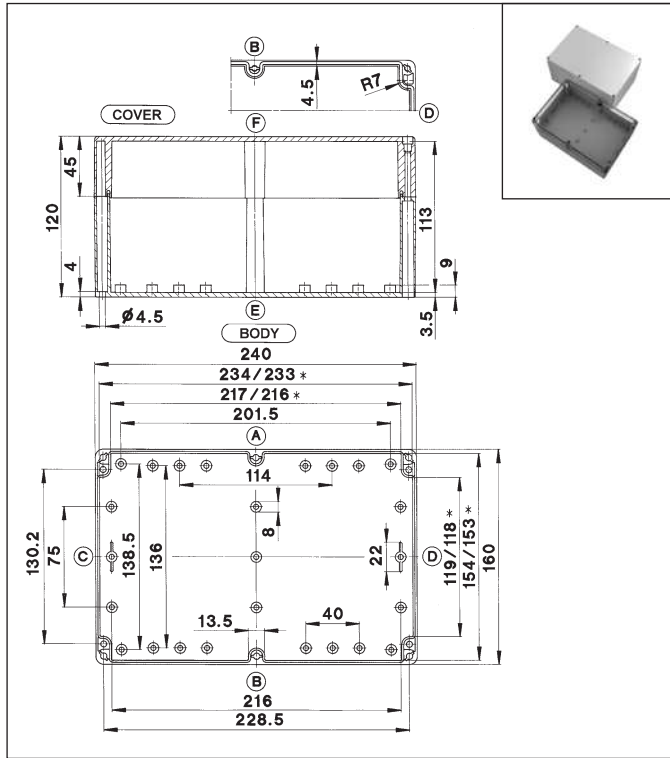
Type	CT-841 PC	CT-842 ABS
Weight (g)	650 (PC)	528 (ABS)
External dimension (mm)	240 x 160 x 90	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2840000000	
PC, with screw fastener	2840001000	
PC, with transparent cover (PC) and quick-release fastener	2841000000	
ABS, with quick-release fastener	3840000000	
ABS, with screw fastener	3840001000	
ABS, with transparent cover (PC) and quick-release fastener	3841000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512018000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	36	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0

\*\* Enclosure preparation required

# Polycarbonate and ABS Enclosures – Series CT

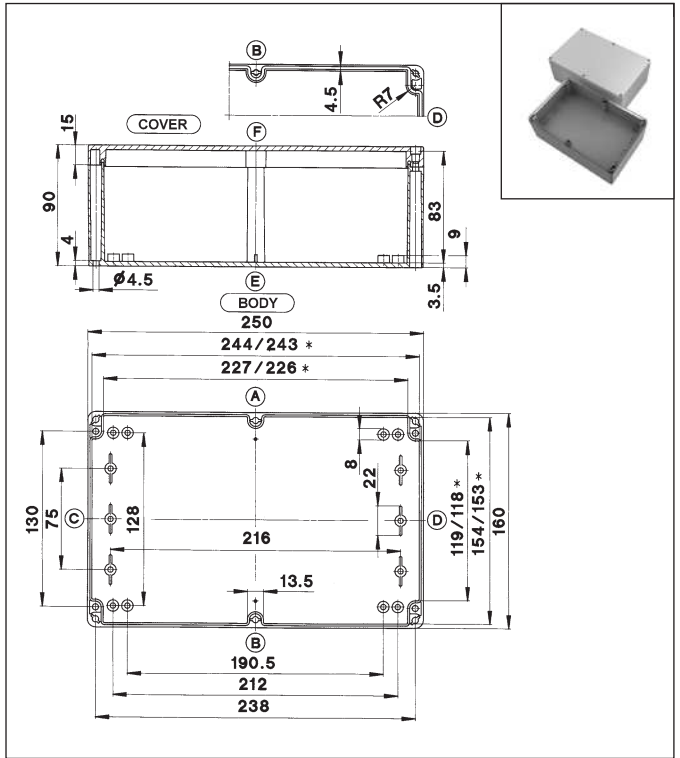
## 240 x 160 x 120 mm

CT-861 Polycarbonate enclosures  
CT-862 ABS enclosures



## 250 x 160 x 90 mm

CT-901 Polycarbonate enclosures  
CT-902 ABS enclosures



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

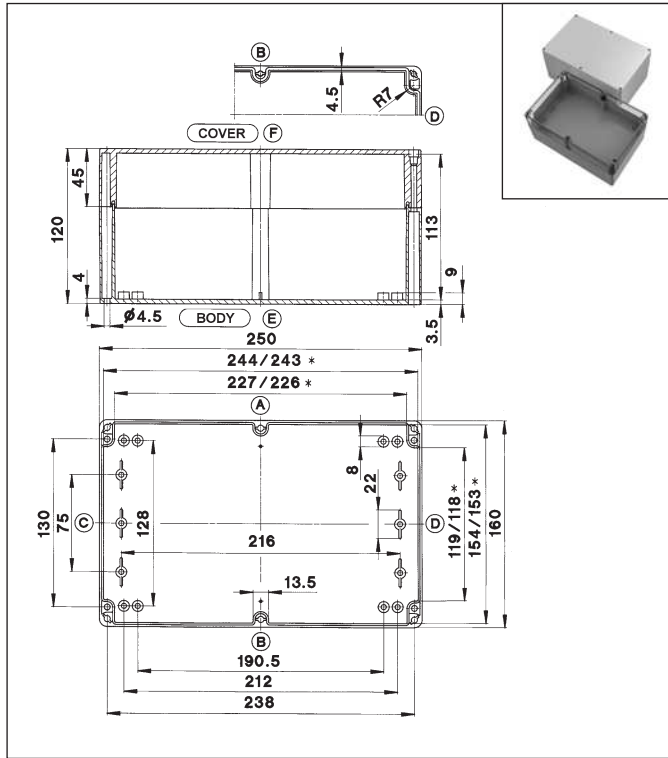
Type	CT-861 PC	CT-862 ABS
Weight (g)	785 (PC)	636 (ABS)
External dimension (mm)	240 x 160 x 120	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2860000000	
PC, with screw fastener	2860001000	
PC, with transparent cover (PC) and quick-release fastener	2861000000	
ABS, with quick-release fastener	3860000000	
ABS, with screw fastener	3860001000	
ABS, with transparent cover (PC) and quick-release fastener	3861000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512018000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801080000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	36	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0
** Enclosure preparation required		

Type	CT-901 PC	CT-902 ABS
Weight (g)	680 (PC)	550 (ABS)
External dimension (mm)	250 x 160 x 90	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2900000000	
PC, with screw fastener	2900001000	
PC, with transparent cover (PC) and quick-release fastener	2901000000	
ABS, with quick-release fastener	3900000000	
ABS, with screw fastener	3900001000	
ABS, with transparent cover (PC) and quick-release fastener	3901000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512187000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	38	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0
** Enclosure preparation required		



## 250 x 160 x 120 mm

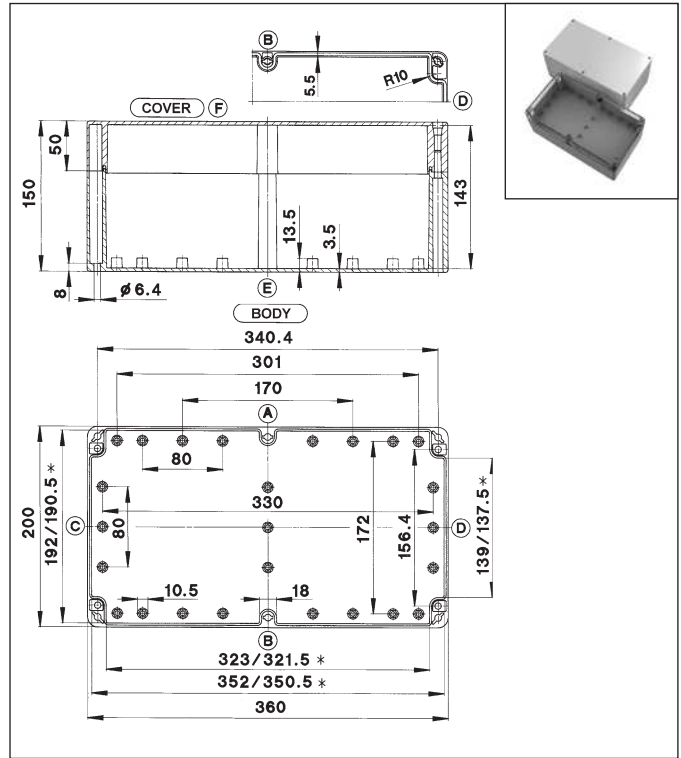
CT-911 Polycarbonate enclosures  
CT-912 ABS enclosures



## 360 x 200 x 150 mm

CT-881 Polycarbonate enclosures  
CT-882 ABS enclosures

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CT-911 PC	CT-912 ABS
Weight (g)	830 (PC)	660 (ABS)
External dimension (mm)	250 x 160 x 120	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2910000000	
PC, with screw fastener	2910001000	
PC, with transparent cover (PC) and quick-release fastener	2911000000	
ABS, with quick-release fastener	3910000000	
ABS, with screw fastener	3910001000	
ABS, with transparent cover (PC) and quick-release fastener	3911000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512187000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801080000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	38	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

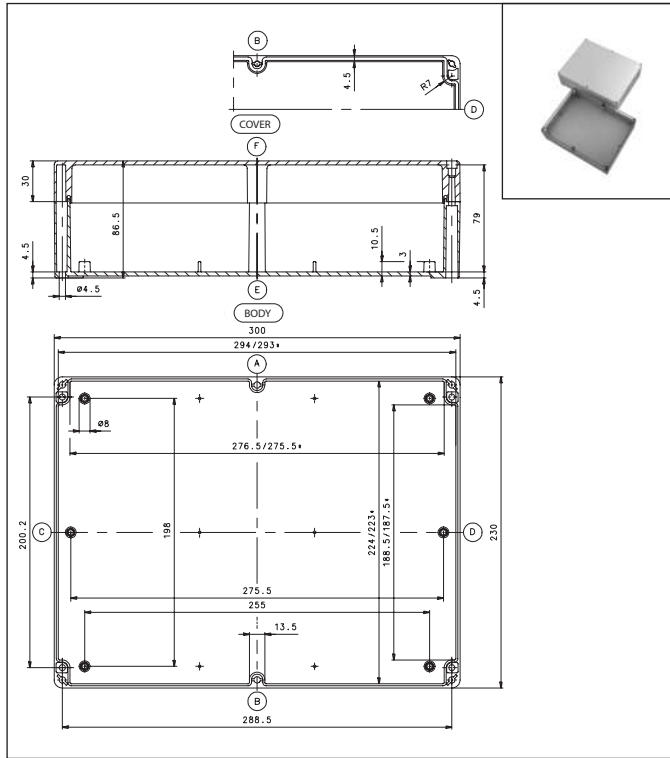
Type	CT-881 PC	CT-882 ABS
Weight (g)	1550 (PC)	1375 (ABS)
External dimension (mm)	360 x 200 x 150	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2880000000	
PC, with screw fastener	2880001000	
PC, with transparent cover (PC) and quick-release fastener	2881000000	
ABS, with quick-release fastener	3880000000	
ABS, with screw fastener	3880001000	
ABS, with transparent cover (PC) and quick-release fastener	3881000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512020000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821013000	
Mounting rail TS 35	9822016000	
Earthing rail (secured on central bosses C/D)	9810034000	
External mounting brackets	-	
External articulated hinges**	9802026000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	-	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800026000 (M4 x 8)	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	70	32 24 16 10 6 4 4
Side C/D	26	11 8 5 3 2 2 1

\*\* Enclosure preparation required

# Polycarbonate and ABS Enclosures – Series CT

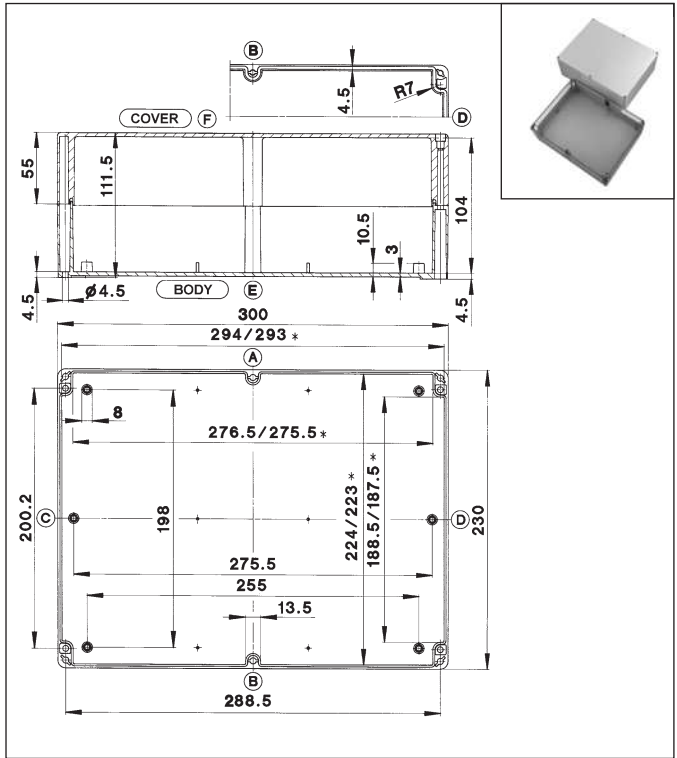
## 300 x 230 x 86 mm

CT-871 Polycarbonate enclosures  
CT-872 ABS enclosures



## 300 x 230 x 110 mm

CT-891 Polycarbonate enclosures  
CT-892 ABS enclosures



\* Smaller dimension at mounting plate support

\* Smaller dimension at mounting plate support

Type	CT-871 PC	CT-872 ABS
Weight (g)	915 (PC)	850 (ABS)
External dimension (mm)	300 x 230 x 86	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2870000000	
PC, with screw fastener	2870001000	
PC, with transparent cover (PC) and quick-release fastener	2871000000	
ABS, with quick-release fastener	3870000000	
ABS, with screw fastener	3870001000	
ABS, with transparent cover (PC) and quick-release fastener	3871000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512019000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821010000	
Mounting rail TS 35	9822013000	
Earthing rail (secured on central bosses C/D)	9810012000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801079000	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	34	14 10 6 4 0 0 0
Side C/D	21	13 5 4 2 0 0 0
** Enclosure preparation required		

Type	CT-891 PC	CT-892 ABS
Weight (g)	1155 (PC)	1000 (ABS)
External dimension (mm)	300 x 230 x 110	
<b>Ordering data</b> Enclosure (painted) with seal (PUR)	<b>Part number</b>	
PC, with quick-release fastener	2890000000	
PC, with screw fastener	2890001000	
PC, with transparent cover (PC) and quick-release fastener	2891000000	
ABS, with quick-release fastener	3890000000	
ABS, with screw fastener	3890001000	
ABS, with transparent cover (PC) and quick-release fastener	3891000000	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	9512019000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821010000	
Mounting rail TS 35	9822013000	
Earthing rail (secured on central bosses C/D)	9810012000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801082000	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	9800025000	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	34	14 10 6 4 0 0 0
Side C/D	21	13 5 4 2 0 0 0
** Enclosure preparation required		



# Polyester Enclosures – Series CP

BERNSTEIN Series CP and CPS polyester enclosures are produced from highgrade glass fibre-reinforced polyester. Thanks to their reduced surface resistance ( $R_o < 109 \text{ Ohm}$ ), the black polyester enclosures meet the requirements for Ex applications. Polyester enclosures are therefore particularly suitable for accepting and encapsulating electrical and electronic components as well as control components in harsh environments or potentially explosive atmospheres (see Page 14). All enclosures achieve protection class IP 66 in accordance with DIN EN 60529 (optionally IP 67).

Corresponding to their size, BERNSTEIN polyester enclosures feature M4 or M6 mounting elements in the enclosure body. These mounting bushes are embedded in a flange on the narrow sides of the base and accept mounting plates, mounting rails, pc boards etc.

The captive stainless steel cover screws are retained by a self-latching element integrated in the cover. The threaded bushes for mounting the cover are also made from stainless steel. The protection class (on the standard enclosure) is ensured by a factory-fitted seal. The polyester enclosures are available as standard in grey (RAL 7000, squirrel grey) or black (RAL 9005, jet black) material.

## Technical data

### Material

Glass fibre-reinforced polyester in grey or black

### Seal

Foamed PUR seal  
Neoprene (CR) round cord (siliconized), EPDM round cord

### Cover screws

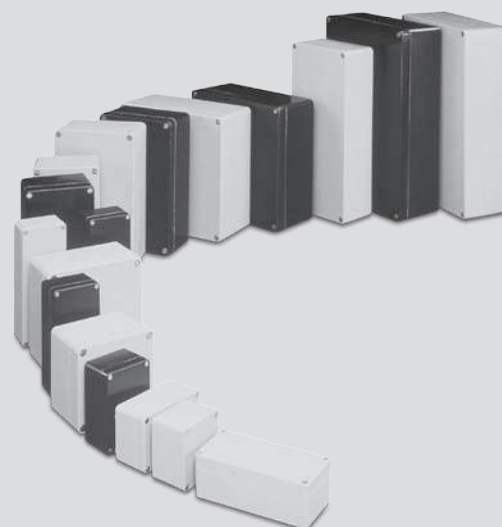
Stainless steel, captive, cross recessed head  
Optionally:  
Socket head cap screws, stainless steel, captive  
Sealed cover screws, stainless steel, slot head

### Colour

RAL 7000 (squirrel grey)  
bzw. RAL 9005 (jet black)  
Other colours (coating or dyeing) available on request for large quantities.

### Temperature range of CP enclosures

-60°C to +165°C



### Temperature range of seals

Standard:  
-40°C to +100°C (PUR seal)  
Optionally:  
-30°C to +80°C (Neoprene seal)  
-60°C to +130°C (silicone seal) or  
-35°C to +100°C (EPDM seal)

### Protection class

IP 66  
IP 67 with PUR seal

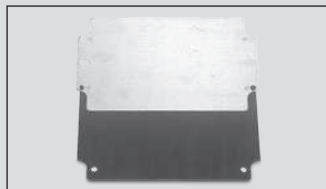
### Approbations

Germanischer Lloyd  
c UL us (Label on demand)  
c CSA us (Label on demand)  
ATEX, IECEx



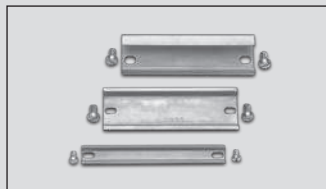
					Polyester enclosure (grey)		Polyester enclosure (black)	
Dimensions/mm					Article number	Type	Article number	Type
L	x	W	x	H				
80	x	75	x	55	4140000000	CP-140	5140000000	CPS-140
80	x	75	x	75	4140000050	CP-145	5140000050	CPS-145
110	x	75	x	55	4150000000	CP-150	5150000000	CPS-150
110	x	75	x	75	4150000050	CP-155	5150000050	CPS-155
160	x	75	x	55	4170000000	CP-170	5170000000	CPS-170
160	x	75	x	75	4170000050	CP-175	5170000050	CPS-175
190	x	75	x	55	4190000000	CP-190	5190000000	CPS-190
190	x	75	x	75	4190000050	CP-195	5190000050	CPS-195
122	x	120	x	90,5	4220000000	CP-220	5220000000	CPS-220
220	x	120	x	90,5	4240000000	CP-240	5240000000	CPS-240
160	x	160	x	91	4280000000	CP-280	5280000000	CPS-280
260	x	160	x	91	4300000000	CP-300	5300000000	CPS-300
360	x	160	x	91	4320000000	CP-320	5320000000	CPS-320
560	x	160	x	91	4330000000	CP-330	5330000000	CPS-330
255	x	250	x	120	4370000000	CP-370	5370000000	CPS-370
400	x	250	x	120	4400000000	CP-400	5400000000	CPS-400
400	x	405	x	120	4450000000	CP-450	5450000000	CPS-450
400	x	405	x	165	4460000000	CP-460	5460000000	CPS-460

This is just a selection of possible assembly components that BERNSTEIN offers. Contact us, we can incorporate components from all leading manufacturers to satisfy your individual demand. You find further information about "System solutions" on page 12.



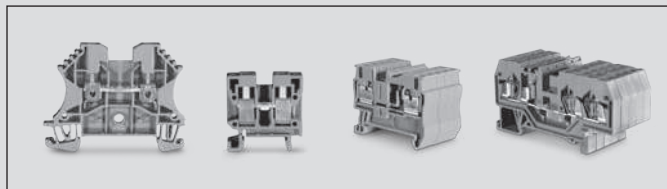
### Mounting plates

made from galvanised steel plate or laminated paper (thickness: CP-140 to CP 195 laminated paper 1.5 mm; CP-220 to CP-320 and CP-370 to CP-460 steel plate 1.5 mm; CP-330 steel plate 2.5 mm) for versatile mounting of built-in components.



### Mounting rails

conforming to Standards TS 15 or TS 32 and TS 35 made from steel; surface treated for accepting terminal blocks.



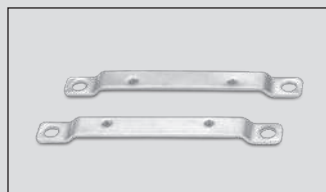
### Terminal blocks

of all renowned manufacturers are used.



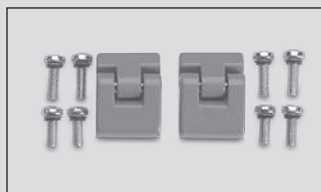
### Earthing bars

made from galvanised steel for combining and connecting PE conductors.



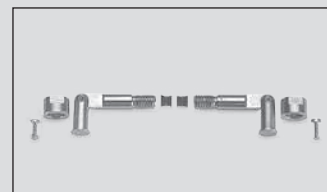
### External mounting brackets

made from metal for mounting enclosures without opening the covers. The brackets are always fitted across the shorter sides of the enclosure.



### External articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 155°. Cast aluminium (painted in RAL 7001 – specific colour according to enclosure specification possible). Machining is required for mounting on enclosures.



### Internal articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 95°. Stainless steel. Machining is required for mounting on enclosures.



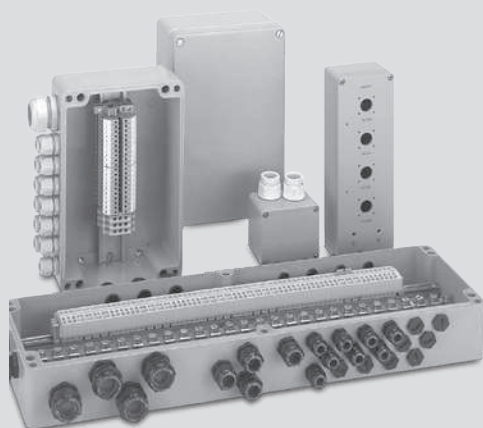
### Silicon, EPDM or HF seal

with increased temperature resistance (see indications left side) or to protect sensitive electronic equipment against high-frequency radiation (HF seal). If a HF seal is used, an additional coating of the inside of the enclosure is required.



### Cable glands

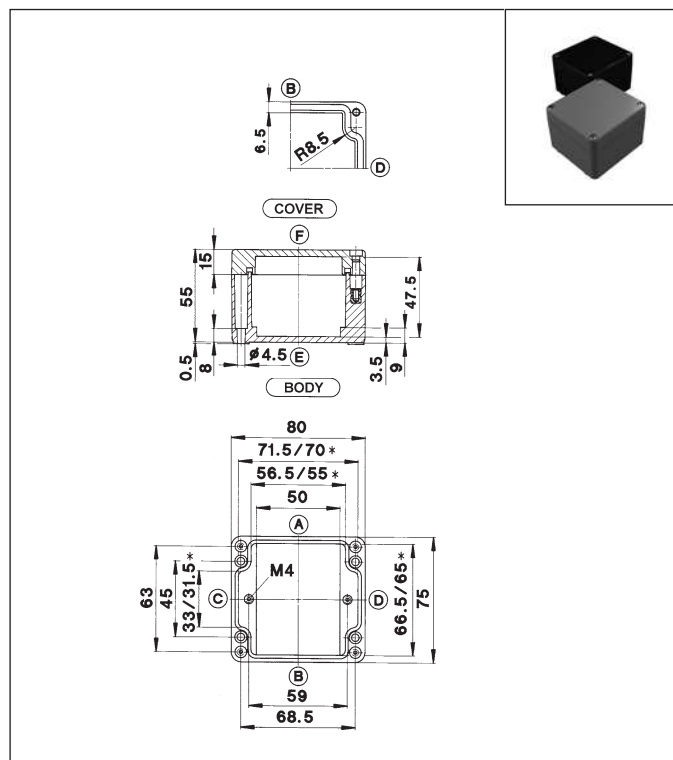
plastic cable glands (polyamide PAGV-2, RAL 7001) or brass cable glands. Sealing element CR/NBR. Temperature range: -20°C to +100°C (see also page 71). Other cable glands on demand.



# Polyester Enclosures – Series CP

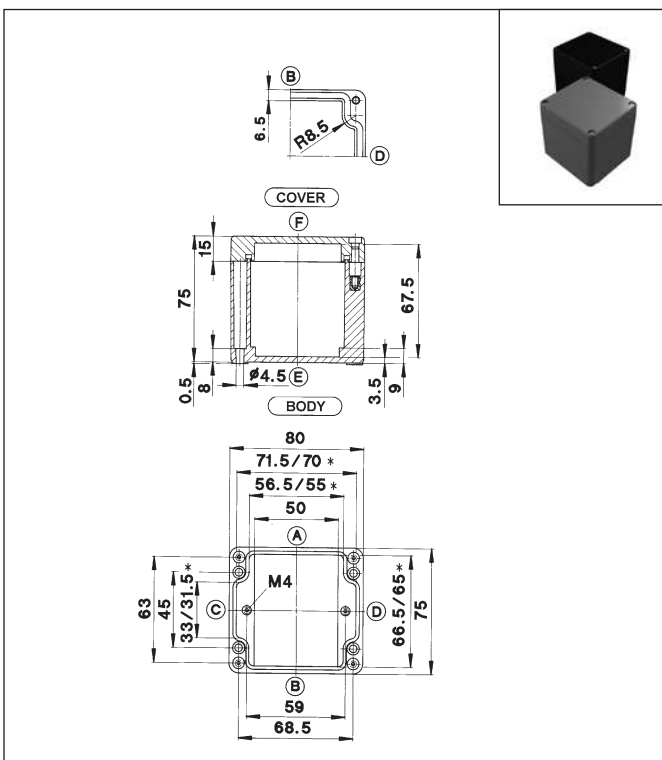
## 80 x 75 x 55 mm

CP-140 RAL 7000 (squirrel grey)  
CPS-140 RAL 9005 (jet black)



## 80 x 75 x 75 mm

CP-145 RAL 7000 (squirrel grey)  
CPS-145 RAL 9005 (jet black)



\* Smaller dimension at mounting plate support

Type	CP-140	CPS-140						
Weight (g)	230	230						
External dimension (mm)	80 x 75 x 55							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>414000000</b>							
RAL 9005 (jet black), with cover screws	<b>514000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>982300000</b>							
Mounting rail TS 15	<b>982000300</b>							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	<b>982400000</b>							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	5	2	2	1	0	0	0	0
Side C/D	2	1	1	0	0	0	0	0

\*\* Enclosure preparation required

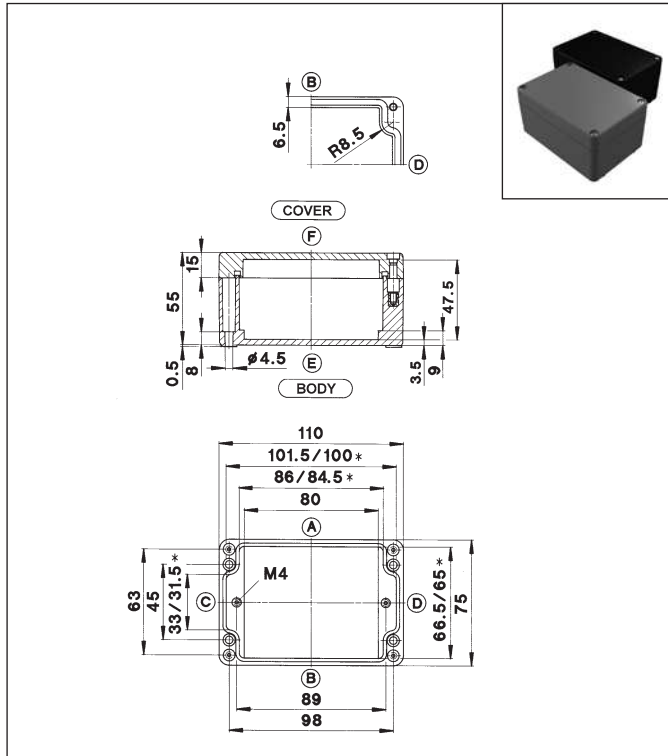
\* Smaller dimension at mounting plate support

Type	CP-145	CPS-145						
Weight (g)	300	300						
External dimension (mm)	80 x 75 x 75							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>414000050</b>							
RAL 9005 (jet black), with cover screws	<b>514000050</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>982300000</b>							
Mounting rail TS 15	<b>982000300</b>							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	<b>982400000</b>							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	8	4	2	1	1	0	0	0
Side C/D	4	1	1	1	1	0	0	0

\*\* Enclosure preparation required

## 110 x 75 x 55 mm

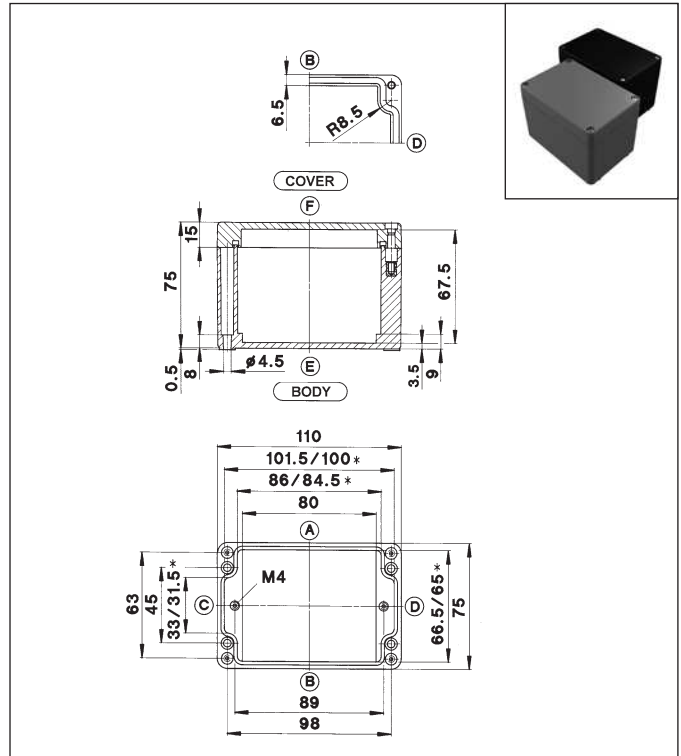
CP-150 RAL 7000 (squirrel grey)  
CPS-150 RAL 9005 (jet black)



## 110 x 75 x 75 mm

CP-155 RAL 7000 (squirrel grey)  
CPS-155 RAL 9005 (jet black)

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CP-150	CPS-150
Weight (g)	295	295
External dimension (mm)	110 x 75 x 55	
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>	
RAL 7000 (squirrel grey), with cover screws	<b>415000000</b>	
RAL 9005 (jet black), with cover screws	<b>515000000</b>	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	<b>9823001000</b>	
Mounting rail TS 15	<b>9820006000</b>	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail	-	
External mounting brackets	<b>9824000000</b>	
External articulated hinges for CP** enclosures	-	
External articulated hinges for CPS** enclosures	-	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	<b>on request</b>	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	8	3 2 2 0 0 0 0
Side C/D	2	1 1 0 0 0 0 0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

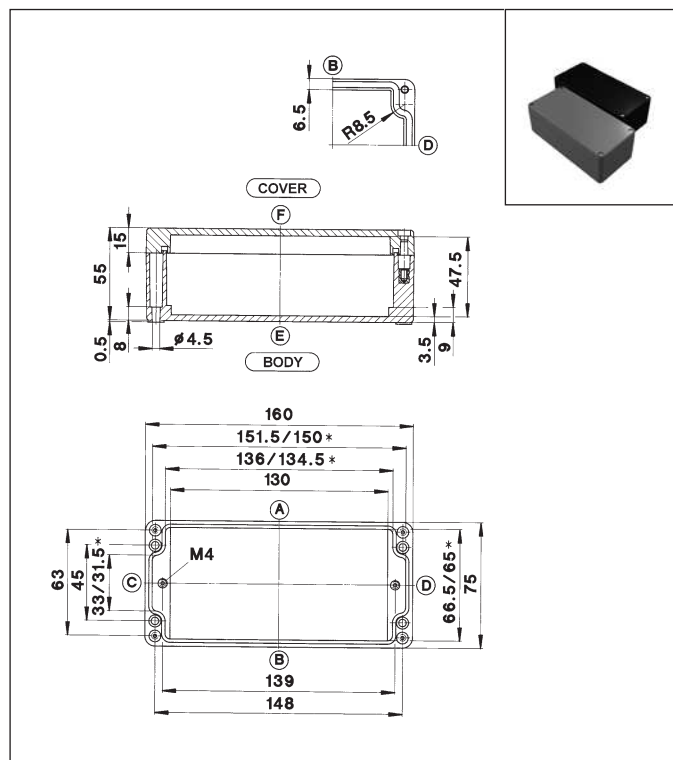
Type	CP-155	CPS-155
Weight (g)	360	360
External dimension (mm)	110 x 75 x 75	
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>	
RAL 7000 (squirrel grey), with cover screws	<b>4150000050</b>	
RAL 9005 (jet black), with cover screws	<b>5150000050</b>	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	<b>9823001000</b>	
Mounting rail TS 15	<b>9820006000</b>	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail	-	
External mounting brackets	<b>9824000000</b>	
External articulated hinges for CP** enclosures	-	
External articulated hinges for CPS** enclosures	-	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	<b>on request</b>	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	12	6 3 2 2 0 0 0
Side C/D	4	1 1 1 1 0 0 0

\*\* Enclosure preparation required

# Polyester Enclosures – Series CP

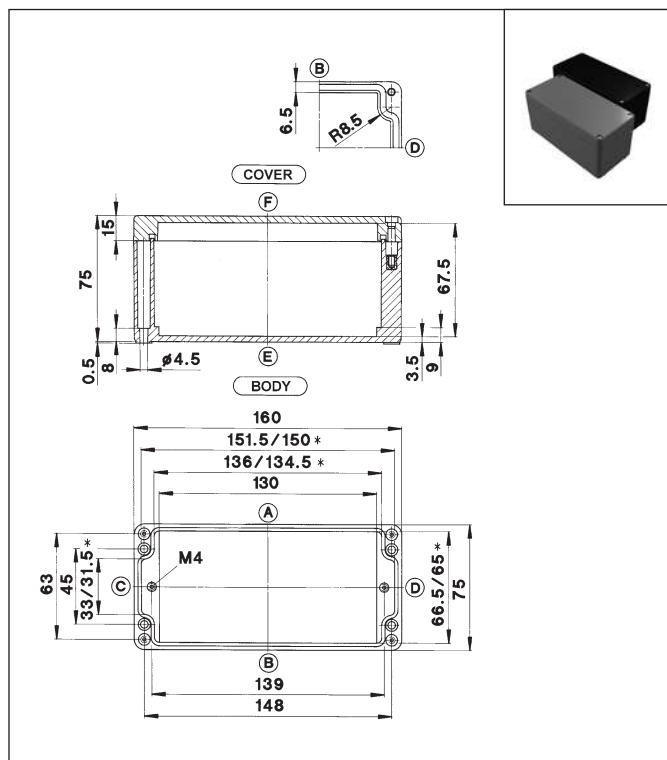
## 160 x 75 x 55 mm

CP-170 RAL 7000 (squirrel grey)  
CPS-170 RAL 9005 (jet black)



## 160 x 75 x 75 mm

CP-175 RAL 7000 (squirrel grey)  
CPS-175 RAL 9005 (jet black)



\* Smaller dimension at mounting plate support

Type	CP-170	CPS-170
Weight (g)	405	405
External dimension (mm)	160 x 75 x 55	
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>	
RAL 7000 (squirrel grey), with cover screws	<b>4170000000</b>	
RAL 9005 (jet black), with cover screws	<b>5170000000</b>	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	<b>9823002000</b>	
Mounting rail TS 15	<b>9820012000</b>	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail	-	
External mounting brackets	<b>9824000000</b>	
External articulated hinges for CP** enclosures	-	
External articulated hinges for CPS** enclosures	-	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	<b>on request</b>	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	12	5 4 3 0 0 0 0
Side C/D	2	1 1 0 0 0 0 0
** Enclosure preparation required		

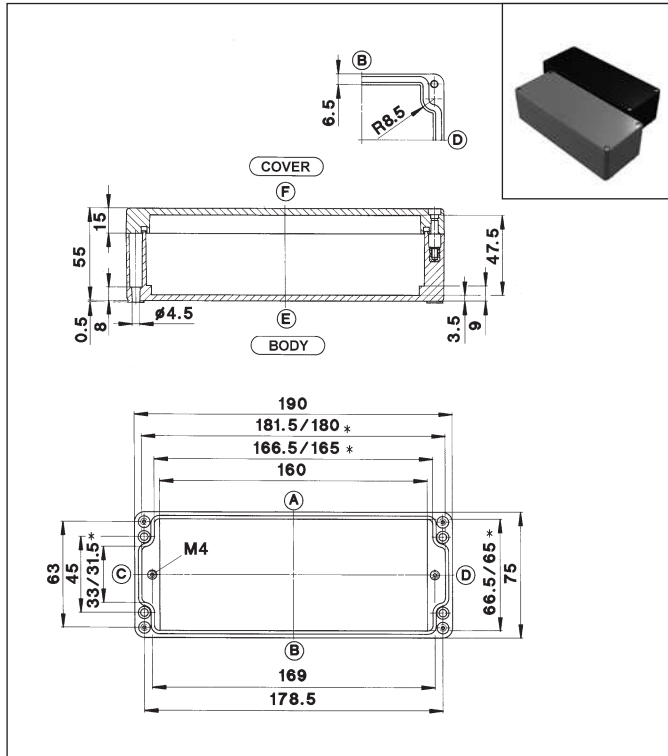
\* Smaller dimension at mounting plate support

Type	CP-175	CPS-175
Weight (g)	460	460
External dimension (mm)	160 x 75 x 75	
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>	
RAL 7000 (squirrel grey), with cover screws	<b>4170000050</b>	
RAL 9005 (jet black), with cover screws	<b>5170000050</b>	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	<b>9823002000</b>	
Mounting rail TS 15	<b>9820012000</b>	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail	-	
External mounting brackets	<b>9824000000</b>	
External articulated hinges for CP** enclosures	-	
External articulated hinges for CPS** enclosures	-	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	<b>on request</b>	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	18	10 6 4 3 0 0 0
Side C/D	4	1 1 1 1 0 0 0
** Enclosure preparation required		



## 190 x 75 x 55 mm

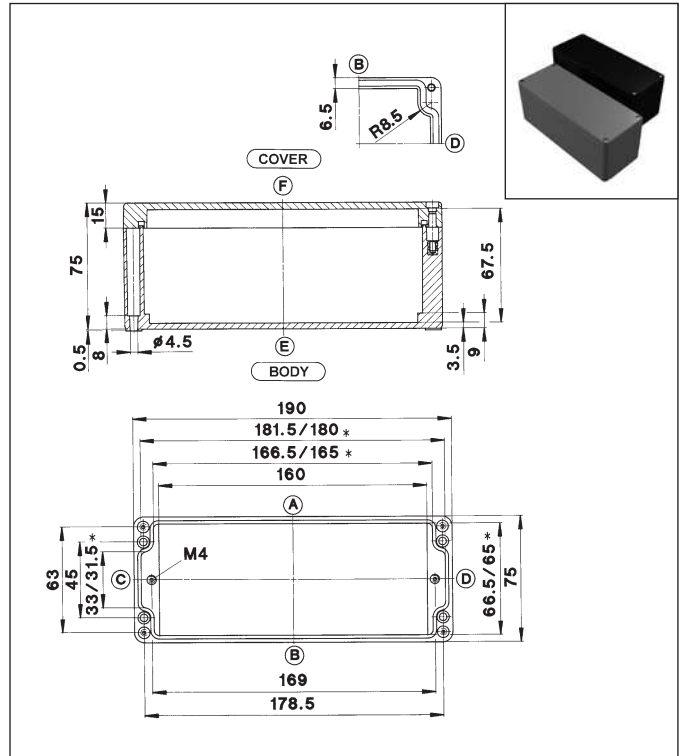
CP-190 RAL 7000 (squirrel grey)  
CPS-190 RAL 9005 (jet black)



## 190 x 75 x 75 mm

CP-195 RAL 7000 (squirrel grey)  
CPS-195 RAL 9005 (jet black)

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CP-190	CPS-190						
Weight (g)	450	450						
External dimension (mm)	190 x 75 x 55							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4190000000</b>							
RAL 9005 (jet black), with cover screws	<b>5190000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823003000</b>							
Mounting rail TS 15	<b>9820015000</b>							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	<b>9824000000</b>							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	16	7	5	4	0	0	0	0
Side C/D	2	1	1	0	0	0	0	0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

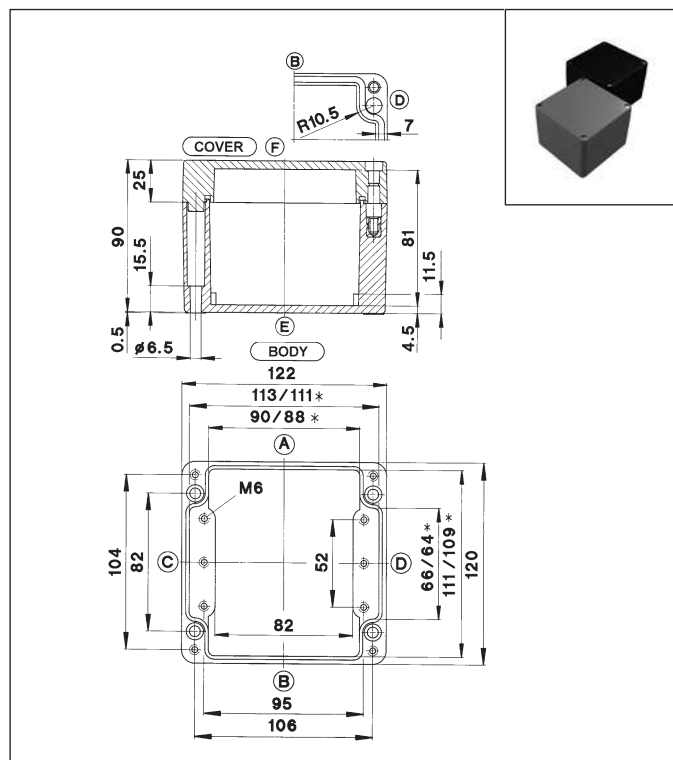
Type	CP-195	CPS-195						
Weight (g)	530	530						
External dimension (mm)	190 x 75 x 75							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4190000050</b>							
RAL 9005 (jet black), with cover screws	<b>5190000050</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823003000</b>							
Mounting rail TS 15	<b>9820015000</b>							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	<b>9824000000</b>							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	24	12	8	4	3	0	0	0
Side C/D	4	1	1	1	1	0	0	0

\*\* Enclosure preparation required

# Polyester Enclosures – Series CP

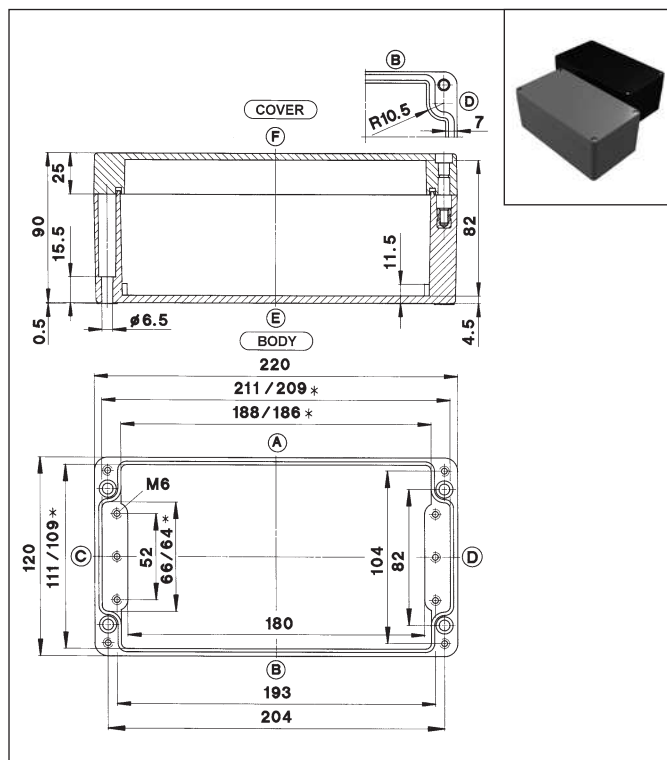
## 122 x 120 x 90,5 mm

CP-220 RAL 7000 (squirrel grey)  
CPS-220 RAL 9005 (jet black)



## 220 x 120 x 90,5 mm

CP-240 RAL 7000 (squirrel grey)  
CPS-240 RAL 9005 (jet black)



\* Smaller dimension at mounting plate support

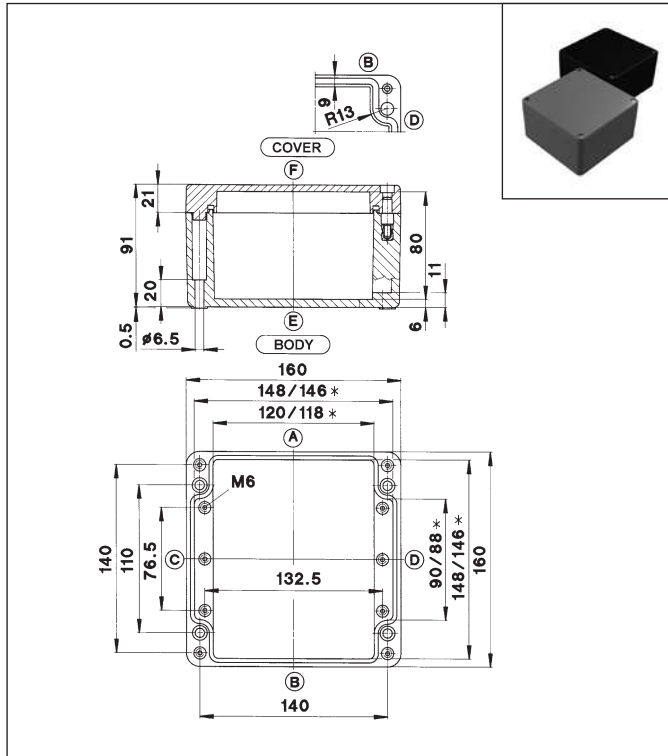
\* Smaller dimension at mounting plate support

Type	CP-220	CPS-220
Weight (g)	750	750
External dimension (mm)	122 x 120 x 90,5	
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>	
RAL 7000 (squirrel grey), with cover screws	<b>4220000000</b>	
RAL 9005 (jet black), with cover screws	<b>5220000000</b>	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	<b>9823004000</b>	
Mounting rail TS 15	-	
Mounting rail TS 32	<b>9821000000</b>	
Mounting rail TS 35	<b>9822001000</b>	
Earthing rail	<b>9810002000</b>	
External mounting brackets	<b>9824001000</b>	
External articulated hinges for CP** enclosures	<b>9801045000</b>	
External articulated hinges for CPS** enclosures	<b>9801046000</b>	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	<b>on request</b>	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	13	6 4 3 2 1 0 0
Side C/D	6	3 2 2 1 0 0 0
** Enclosure preparation required		

Type	CP-240	CPS-240
Weight (g)	1060	1060
External dimension (mm)	220 x 120 x 90,5	
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>	
RAL 7000 (squirrel grey), with cover screws	<b>4240000000</b>	
RAL 9005 (jet black), with cover screws	<b>5240000000</b>	
<b>Accessories</b> (individual part or installation kit)		
Mounting plate	<b>9823005000</b>	
Mounting rail TS 15	-	
Mounting rail TS 32	<b>9821005000</b>	
Mounting rail TS 35	<b>9822007000</b>	
Earthing rail	<b>9810008000</b>	
External mounting brackets	<b>9824001000</b>	
External articulated hinges for CP** enclosures	<b>9801045000</b>	
External articulated hinges for CPS** enclosures	<b>9801046000</b>	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	<b>on request</b>	
<b>Maximum possible number of threads</b>		
ISO M	12	16 20 25 32 40 50 63
Side A/B	27	12 9 6 4 3 0 0
Side C/D	6	3 2 2 1 0 0 0
** Enclosure preparation required		

## 160 x 160 x 91 mm

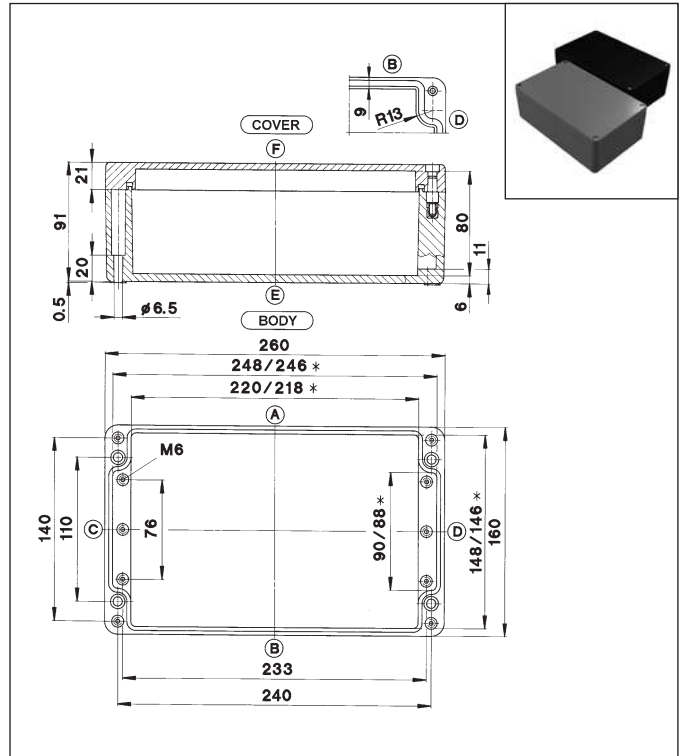
CP-280 RAL 7000 (squirrel grey)  
CPS-280 RAL 9005 (jet black)



## 260 x 160 x 91 mm

CP-300 RAL 7000 (squirrel grey)  
CPS-300 RAL 9005 (jet black)

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CP-280	CPS-280						
Weight (g)	1130	1130						
External dimension (mm)	160 x 160 x 91							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4280000000</b>							
RAL 9005 (jet black), with cover screws	<b>5280000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823006000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821002000</b>							
Mounting rail TS 35	<b>9822003000</b>							
Earthing rail	<b>9810004000</b>							
External mounting brackets	<b>9824004000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	18	8	6	4	2	2	1	0
Side C/D	9	4	3	2	2	1	0	0

\*\* Enclosure preparation required

\* Smaller dimension at mounting plate support

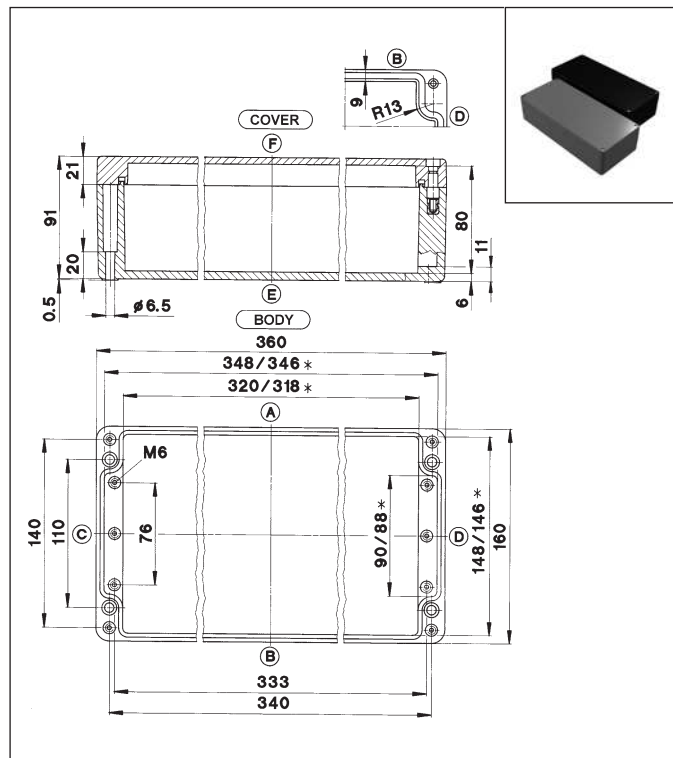
Type	CP-300	CPS-300						
Weight (g)	1710	1710						
External dimension (mm)	260 x 160 x 91							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4300000000</b>							
RAL 9005 (jet black), with cover screws	<b>5300000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823007000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821008000</b>							
Mounting rail TS 35	<b>9822011000</b>							
Earthing rail	<b>9810010000</b>							
External mounting brackets	<b>9824004000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	33	15	12	8	4	3	3	0
Side C/D	9	4	3	2	2	1	0	0

\*\* Enclosure preparation required

# Polyester Enclosures – Series CP

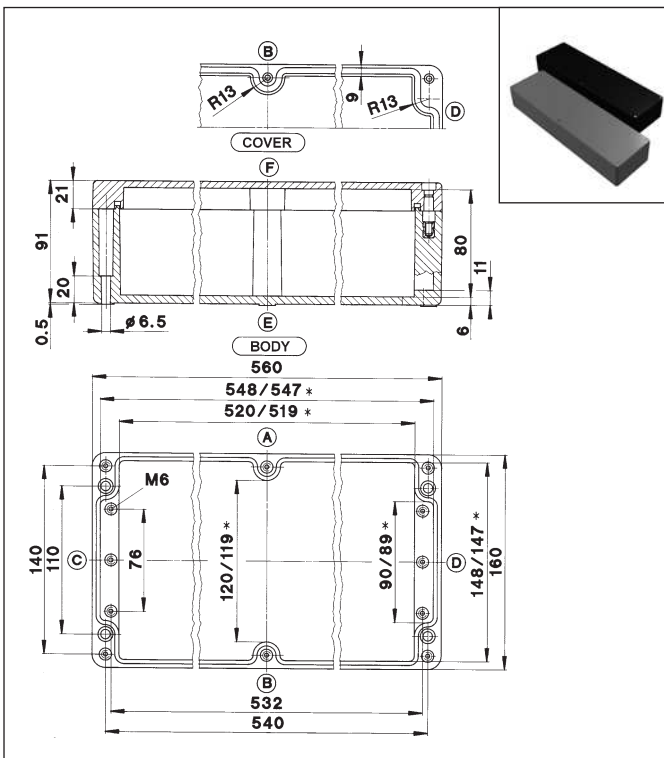
## 360 x 160 x 91 mm

CP-320 RAL 7000 (squirrel grey)  
CPS-320 RAL 9005 (jet black)



## 560 x 160 x 91 mm

CP-330 RAL 7000 (squirrel grey)  
CPS-330 RAL 9005 (jet black)



\* Smaller dimension at mounting plate support

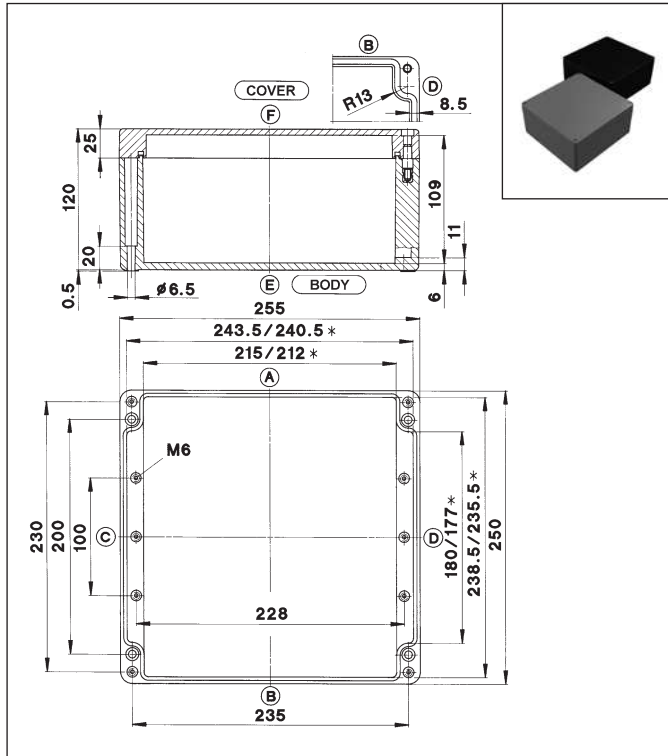
\* Smaller dimension at mounting plate support

Type	CP-320	CPS-320						
Weight (g)	2150	2150						
External dimension (mm)	360 x 160 x 91							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4320000000</b>							
RAL 9005 (jet black), with cover screws	<b>5320000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823008000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821012000</b>							
Mounting rail TS 35	<b>9822015000</b>							
Earthing rail	<b>9810014000</b>							
External mounting brackets	<b>9824004000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	48	23	18	11	7	5	4	0
Side C/D	9	4	3	2	2	1	0	0
** Enclosure preparation required								

Type	CP-330	CPS-330						
Weight (g)	3185	3185						
External dimension (mm)	560 x 160 x 91							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4330000000</b>							
RAL 9005 (jet black), with cover screws	<b>5330000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823085000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821015000</b>							
Mounting rail TS 35	<b>9822018000</b>							
Earthing rail	<b>9810016000</b>							
External mounting brackets	<b>9824004000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	76	40	28	18	10	8	6	0
Side C/D	9	4	3	2	2	1	0	0
** Enclosure preparation required								

## 255 x 250 x 120 mm

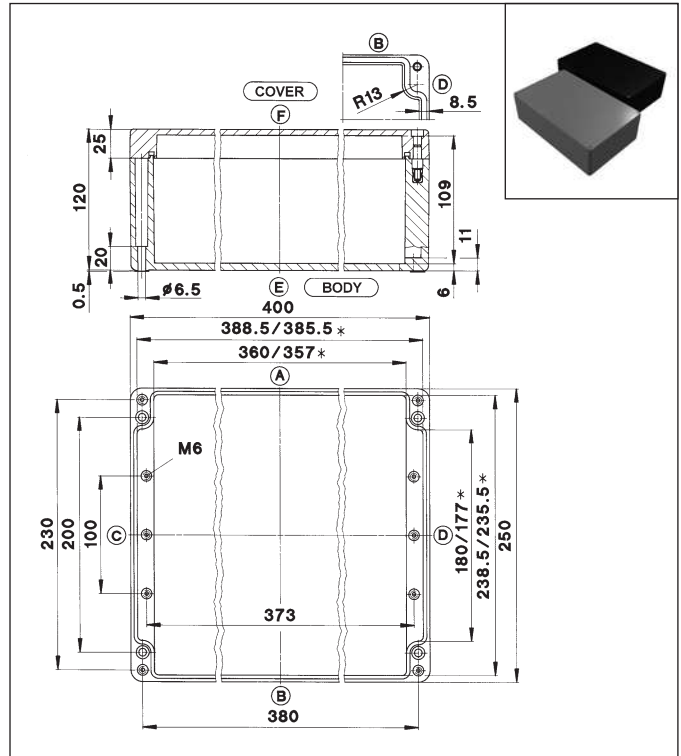
CP-370 RAL 7000 (squirrel grey)  
CPS-370 RAL 9005 (jet black)



## 400 x 250 x 120 mm

CP-400 RAL 7000 (squirrel grey)  
CPS-400 RAL 9005 (jet black)

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



\* Smaller dimension at mounting plate support

Type	CP-370	CPS-370						
Weight (g)	2650	2650						
External dimension (mm)	255 x 250 x 120							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4370000000</b>							
RAL 9005 (jet black), with cover screws	<b>5370000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823009000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821007000</b>							
Mounting rail TS 35	<b>9822010000</b>							
Earthing rail	<b>9810035000</b>							
External mounting brackets	<b>9824011000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	42	23	17	11	7	4	3	3
Side C/D	32	14	10	16	4	3	2	2

\*\* Enclosure preparation required

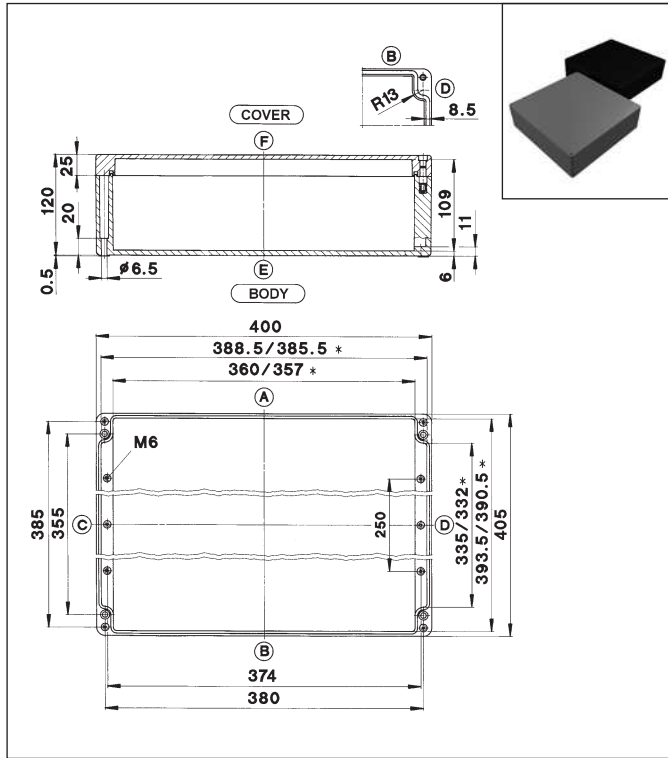
\* Smaller dimension at mounting plate support

Type	CP-400	CPS-400						
Weight (g)	3650	3650						
External dimension (mm)	400 x 250 x 120							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4400000000</b>							
RAL 9005 (jet black), with cover screws	<b>5400000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823010000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821014000</b>							
Mounting rail TS 35	<b>9822017000</b>							
Earthing rail	<b>9810015000</b>							
External mounting brackets	<b>9824011000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	74	38	27	17	13	6	5	4
Side C/D	32	14	10	8	4	3	2	2

\*\* Enclosure preparation required

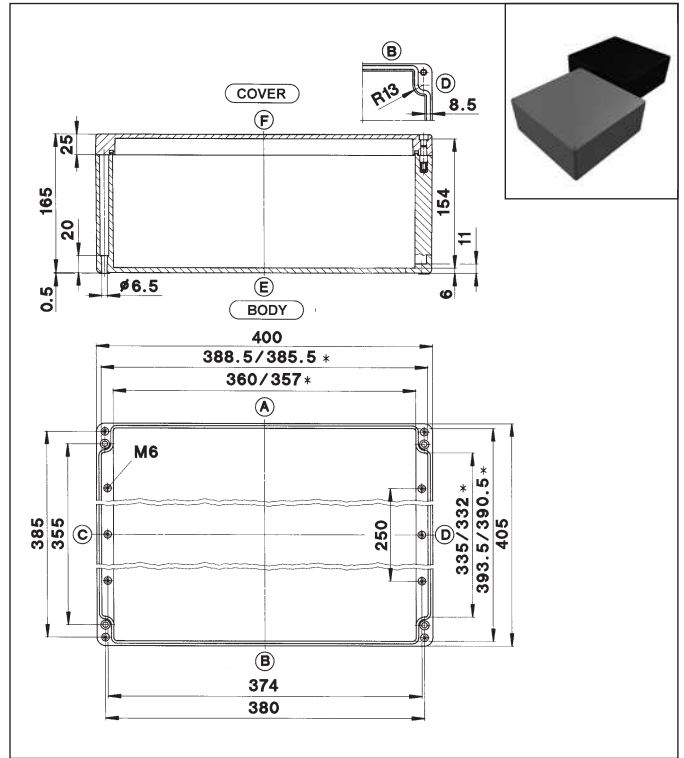
## 400 x 405 x 120 mm

CP-450 RAL 7000 (squirrel grey)  
CPS-450 RAL 9005 (jet black)



## 400 x 405 x 165 mm

CP-460 RAL 7000 (squirrel grey)  
CPS-460 RAL 9005 (jet black)



\* Smaller dimension at mounting plate support



Type	CP-450	CPS-450						
Weight (g)	5580	5580						
External dimension (mm)	400 x 405 x 120							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4450000000</b>							
RAL 9005 (jet black), with cover screws	<b>5450000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823011000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821014000</b>							
Mounting rail TS 35	<b>9822017000</b>							
Earthing rail	<b>9810015000</b>							
External mounting brackets	<b>9824012000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	74	38	27	17	13	6	5	4
Side C/D	57	29	20	15	7	5	4	4



\*\* Enclosure preparation required



\* Smaller dimension at mounting plate support

Type	CP-460	CPS-460						
Weight (g)	7740	7740						
External dimension (mm)	400 x 405 x 165							
<b>Ordering data</b> Enclosure with seal (PUR)	<b>Part number</b>							
RAL 7000 (squirrel grey), with cover screws	<b>4460000000</b>							
RAL 9005 (jet black), with cover screws	<b>5460000000</b>							
<b>Accessories</b> (individual part or installation kit)								
Mounting plate	<b>9823011000</b>							
Mounting rail TS 15	-							
Mounting rail TS 32	<b>9821014000</b>							
Mounting rail TS 35	<b>9822017000</b>							
Earthing rail	<b>9810015000</b>							
External mounting brackets	<b>9824012000</b>							
External articulated hinges for CP** enclosures	<b>9801045000</b>							
External articulated hinges for CPS** enclosures	<b>9801046000</b>							
Internal articulated hinges with cover guide**	<b>9801032000</b>							
Silicone seal for extended temperature range (by the metre)	<b>on request</b>							
<b>Maximum possible number of threads</b>								
ISO M	12	16	20	25	32	40	50	63
Side A/B	105	56	40	27	20	10	9	8
Side C/D	92	45	30	23	12	9	6	5

\*\* Enclosure preparation required

Plastic cable glands in RAL 7001			Thread size	Cable ø (mm)	* 	Article number
<b>General technical data</b>						
Colour	RAL 7001		M12 x 1,5	3-6	15	<b>9432462000</b>
Temperature range	-20°C to +100°C		M16 x 1,5	5-10	20	<b>9432463000</b>
Protection class	IP68		M20 x 1,5	8-13	24	<b>9432464000</b>
Material	Polyamide PAG V-2		M25 x 1,5	11-17	29	<b>9432465000</b>
Sealing element	CR/NBR		M32 x 1,5	15-21	36	<b>9432466000</b>
			M40 x 1,5	19-28	46	<b>9432467000</b>
			M50 x 1,5	27-35	55	<b>9432468000</b>
			M63 x 1,5	32-42	68	<b>9432469000</b>
			PG7	3-6,5	15	<b>9432291000</b>
			PG9	4-8	19	<b>9432292000</b>
			PG11	5-10	22	<b>9432293000</b>
			PG13,5	6-12	24	<b>9432294000</b>
			PG16	10-14	27	<b>9432295000</b>
			PG21	13-18	33	<b>9432296000</b>
			PG29	18-25	42	<b>9432297000</b>
			PG36	22-32	53	<b>9432298000</b>
			PG42	30-38	60	<b>9432299000</b>
			PG48	34-44	65	<b>9432300000</b>

Plastic cable glands in RAL 7035			Thread size	Cable ø (mm)	* 	Article number
<b>General technical data</b>						
Colour	RAL 7035		M12 x 1,5	3-6,5	15	<b>9432549000</b>
Temperature range	-30°C to +80°C		M16 x 1,5	5-10	22	<b>9432455000</b>
Protection class	IP68		M20 x 1,5	6-12	24	<b>9432548000</b>
Material	Polyamide 6		M20 x 1,5	10-14	27	<b>9432456000</b>
Sealing element	Neoprene		M25 x 1,5	13-18	33	<b>9432457000</b>
			M32 x 1,5	18-25	36	<b>9432458000</b>
			M40 x 1,5	22-23	46	<b>9432459000</b>
			M50 x 1,5	30-38	60	<b>9432460000</b>
			M63 x 1,5	34-44	65	<b>9432461000</b>
			PG7	3-6,5	15	<b>9432445000</b>
			PG9	4-8	19	<b>9432446000</b>
			PG11	5-10	22	<b>9432447000</b>
			PG13,5	6-12	24	<b>9432448000</b>
			PG16	10-14	27	<b>9432449000</b>
			PG21	13-18	33	<b>9432450000</b>
			PG29	18-25	42	<b>9432451000</b>

Brass cable glands for standard enclosures type CA			Thread size	Cable ø (mm)	* 	Article number
<b>General technical data</b>						
Temperature range	-20°C to +100°C		M12 x 1,5	3-6	14	<b>9431280000</b>
Protection class	IP68		M16 x 1,5	5-9	17	<b>9431281000</b>
Material	Brass		M20 x 1,5	9-13	22	<b>9431282000</b>
Sealing element	CR/NBR		M25 x 1,5	11-16	27	<b>9431283000</b>
			M32 x 1,5	14-21	34	<b>9431284000</b>
			M40 x 1,5	19-27	43	<b>9431285000</b>
			M50 x 1,5	24-35	55	<b>9431286000</b>
			M63 x 1,5	32-42	65	<b>9431287000</b>
			PG7	3-6,5	14	<b>9431165000</b>
			PG9	4-8	17	<b>9431166000</b>
			PG11	5-10	20	<b>9431167000</b>
			PG13,5	6-12	22	<b>9431168000</b>
			PG16	10-14	24	<b>9431169000</b>
			PG21	13-18	30	<b>9431170000</b>
			PG29	18-25	40	<b>9431171000</b>
			PG36	24-32	50	<b>9431172000</b>
			PG42	30-38	57	<b>9431173000</b>
		PG48	34-44	64	<b>9431174000</b>	

\*  WAF (mm)

# Control Enclosures by BERNSTEIN

Design aspects along with modularity, functionality and ergonomics, are rapidly becoming more and more important for plant and machinery manufacturers, especially when selecting the appropriate control enclosure for their machines and installations. To meet the increasing demand for aesthetically pleasing enclosures, we have developed a new BERNSTEIN Control Enclosure System. See for yourself.

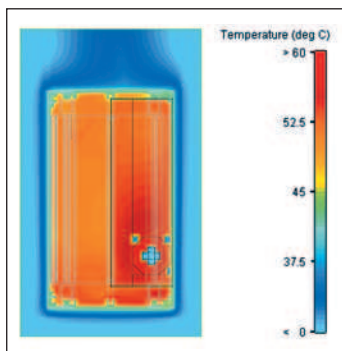


### Optimum heat dissipation due to single-walled sections

Due to the single-walled version of the aluminium sections, a good and passive heat dissipation that complies with the protection class IP 65 is assured. For applications with an increased requirement for heat dissipation, wear resistant and maintenance-free ventilators or air conditioners are available.

### Suspension system attachment

The suspension systems from BERNSTEIN also combine functionality with attractive design. The high quality material is extremely stable, easy to clean, and simple and quick to install. An extremely high load capacity allows individual configurations for different requirements.





## Modular Aluminium Control Enclosure CC-5000 <sup>neXt</sup>

### Protection in its most beautiful form

The aluminium control enclosure CC-5000 neXt offers a unique design with a number of accessories such as the status light. The rounded contours ensure the enclosure is highly recognisable in machinery and mechanical engineering applications. Dimensions up to a maximum 1000 mm in height and width with possible installation depths from 53 to 334 mm.

**NEW**

## Modular Aluminium Control Enclosures CC-4000 and CC-4000 SL

The technical features of the CC-4000 enclosures encapsulate industrial controllers and operator control panels for centralised and decentralised automation in production processes. Thanks to the modular design, the enclosure dimensions can be freely selected (up to 800 x 800) with depths ranging from 52 mm up to maximum 646 mm.

The CC-4000 SL has an elegant and lean profile design, making the complete machine and system appear modern and dynamic.



## Modular Aluminium Light-Duty Control Enclosure CC-3000

The CC-3000 is especially suitable for encapsulating control units, industrial computers and display components. It can be freely selected in height and width up to a maximum dimension of approximately 600 x 600 mm.

Different enclosure depths are possible due to the combination of aluminium sections (120 mm and 200 mm) with the additional door section (55 mm). BERNSTEIN offers sections in standard and handle versions.



## Product features

- Custom versions can be supplied to meet individual customer specifications (see "Checklists" chapter)
- Innovative and modern industrial design
- Rounded edges, no risk of physical injury
- High-quality extruded aluminium sections (naturally anodised)
- Customised colours from RAL range
- Single-walled sections that provide outstanding heat dissipation
- Integrated recessed grips for simple handling
- Protection class IP 65
- Operating temperature -30 °C to +80 °C
- Internally mounted front panel
- Door configurations for direct access to the interior
- Slimline design for configuring flat screen systems

## Material

- Extruded sections Aluminium
- Die-cast corners Aluminium
- Die-cast caps Aluminium
- Sealings between section and corner module PUR
- Sealings for front panel and rear panel EPDM, PUR and PVC
- Hinge (for section combinations) Aluminium
- Articulated hinge (for enclosure with single sections) Aluminium
- Front panel, rear panel Aluminium

## Colour

- Sections naturally anodised (standard)
- Front panel, rear panel naturally anodised (standard)
- Corner modules RAL 9006, white aluminium (standard)
- All components can be optionally powder-coated to a wide variety of RAL colours

## Dimensions

- Width x height maximum: 1000 mm x 1000 mm
- Width x height minimum: 277 mm x 377 mm

## Control Enclosure versions

The dimensions of the new control enclosure CC-5000 neXt (along with our existing series CC-3000, CC-4000 and CC-4000 SL) are freely selectable. Nine possible depths are available. The obtained installation depths range from 53 mm to 334 mm. The width and height dimensions are offered up to 1000 mm in either direction.

Frames can be used in individual or multiple combinations. Innovative console configurations are possible thanks to a connecting element which has been designed in line with the new design.

Checklist CC-5000 neXt on page 94.

## Modular system



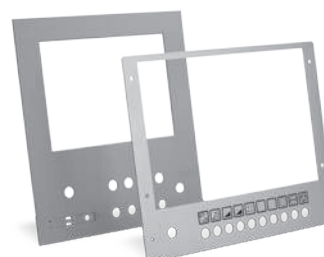
## Approvals

c UL us  
(label on demand)



## Front panel

- Internally-mounted front panel through clamping tie bar
- Machining for integrating IPCs or Panel-PCs, push buttons and interfaces or engravings on demand
- Screen print according to your specifications



## Individual colour combination

You are even able to personalise the colour of the enclosure to your specific corporate identity. Corner modules, front and rear panel, as well as the sections can all be optionally powder-coated to a wide variety of RAL colours. The corner modules are powder coated to RAL 9006 as standard, and the extruded sections are anodised (see CC-5000 neXt on page 74).



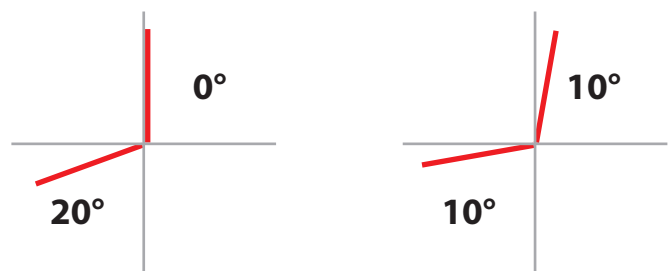
## Console version



### System features

For console versions, the keyboard is located in a separate housing. The coupling head specially aligned to this enclosure series makes the control panel (upper section) and the keyboard console (lower section) a compact unit.

The keyboard console can be inclined downwards by 20 degrees (when the control panel is positioned vertically) or 10 degrees (when the control panel is inclined backwards by 10 degrees).



## Highlights

### Hinge



- New concealed hinge design
- Hinge is unseen when door is closed
- Unique in the market today

### Door centring



- Door centred via alignment feature
- Invisible in closed position
- Secure door closing


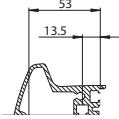
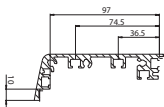
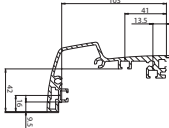
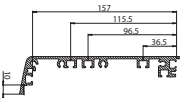
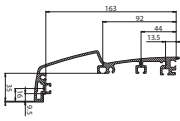
### Optional signal light



- Signal light integrated in the design (RGB-LED)

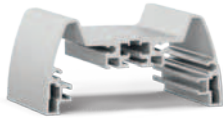





## Individual frames



External dimension	Internal dimension	Horizontal section	Vertical (handle) section
75 mm	53 mm		
125 mm	103 mm		
185 mm	163 mm		

## Double frames (see figure vertical handle sections)



External dimension	Internal dimension	
150 mm (75 + 75)	114 mm	
200 mm (75 + 125 or 125 + 75)	164 mm	
250 mm (125 + 125)	214 mm	
260 mm (75 + 185 or 185 + 75)	224 mm	
310 mm (125 + 185 or 185 + 125)	274 mm	
370 mm (185 + 185)	334 mm	

# Modular Aluminium Control Enclosures CC-4000 and CC-4000 SL

## Product features

- Custom versions can be supplied to meet individual customer specifications (see "Checklists" chapter)
- Simple and modern industrial design
- Freely selectable width and height (max. 800 x 800)
- Depths from 52 mm up to max. 646 mm
- High-quality aluminium casting with surface finish
- Coloured areas that emphasize the design
- Single-walled aluminium sections that provide outstanding heat dissipation
- Integrated handle elements with vertical section
- Protection class IP 65
- Front panels internally-mounted or externally-mounted
- Simple installation of control units, or visualisation devices, thanks to all-round mounting grooves inside the enclosure

## Product features SL (in addition to CC-4000)

- Two enclosure depths (55 and 99 mm)
- Slimline design



Checklist CC-4000 on page 98 onwards.

## Approvals

- c UL us (label on demand)
- TÜV



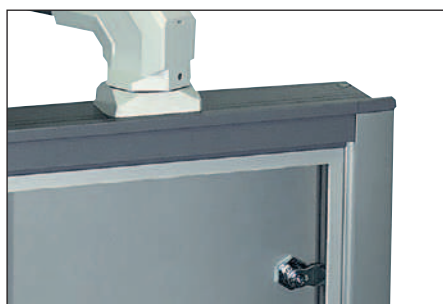
Handle sections left: CC-4000 SL  
Handle sections right: CC-4000



Application with control unit, partition and two-row operator control panel



Application with control unit



CC-4000 SL with suspension system attachment CS-2000 SL and front panel aperture



CC-4000 SL with partition and externally-mounted two-row operator control panel

- Externally mounted front panel:  
Inner depth = Outer depth - 14 mm
- Internally mounted front panel:  
Inner depth = Outer depth - 20 mm

### CC-4000

Thanks to a variant modular system, we are able to offer enclosures according to customer needs. The desired width or height can be achieved by cutting and processing the sections. Based on our aluminium frame sections, depths from 52 mm up to maximum of 646 mm are possible.

#### You determine the type of access

- Hinged rear panel
- Frame section as front door for hinged mounted controller
- Frame section as rear door with articulated hinge (fixed or detachable) for servicing purposes



The single-walled aluminium section offers superior heat dissipation. In double-walled enclosures, the entrapped air acts as an insulator. Rear panel heatsink, internal ventilators or climate devices can be used for challenging applications. You will find further information in our accessory program for control enclosures.

The BERNSTEIN suspension systems are ideal for attaching control enclosures to machines, walls or the floor (see "suspension systems" chapter). Selection of the suitable system depends on the arm length and the total weight of the enclosure. We would be pleased to assist you in selecting the right system for your application.



Opening CC-4000 enclosure from front with hinged frame section



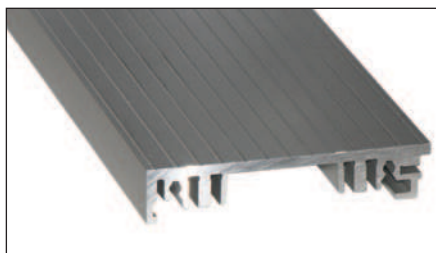
Opening CC-4000 enclosure from rear with flush-closing door



Detaching entire frame section



Ergonomically formed handles make safe handling easy



Generously sized cable channels and all-round mounting grooves to install control units



Different enclosure depths thanks to the combination of frame and extension sections

# Modular Aluminium Control Enclosures CC-4000 and CC-4000 SL

## Dimensions

### Externally mounted front panel:

- Front panel support 3.0 mm deep (sections 140, 200 and 290)
- Front panel support 6.5 mm deep (sections 52 and 80)

### Installation depths

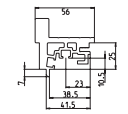

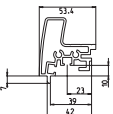

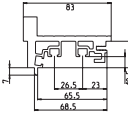

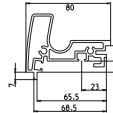

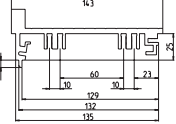

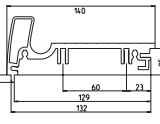

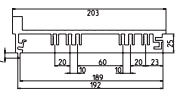

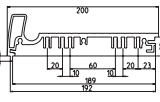

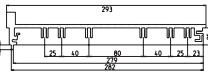

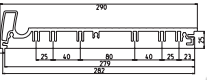

	External dimension (mm)	Installation depth (mm)
<b>Front profile</b>	52	38
	80	66
	140	106
	200	186
	290	276
<b>Front section SL version</b>	55	35
	99	79
<b>Extension section for front section</b>	68	68
	128	128
	228	228

### Example configuration

	External dimension (mm)	Installation depth (mm)
<b>Front profile</b>	52	38
<b>Extensions section</b>	+ 228	+ 228
<b>Dimensions</b>	= 280	= 266

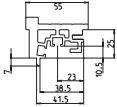

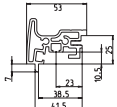

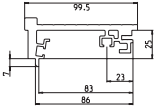

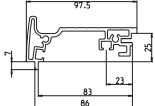

The internal depth increases by 6 mm when the front panel is externally mounted.

## Front profile

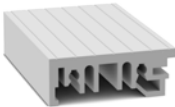
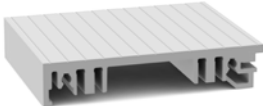
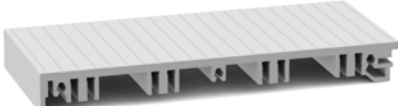
External dimension	Internal dimension	Horizontal section		Vertical (handle) section	
52 mm	38 mm				
80 mm	66 mm				
140 mm	106 mm				
200 mm	186 mm				
290 mm	276 mm				



## Front section SL version

External dimension	Internal dimension	Horizontal section		Vertical (handle) section	
55 mm	35 mm				
99 mm	79 mm				

## Extension section for front section

External dimension	Internal dimension	
68 mm	68 mm	
128 mm	128 mm	
228 mm	228 mm	

## Modular Aluminium Light-Duty Control Enclosure CC-3000

### Product features

- Custom versions can be supplied to meet individual customer specifications (see "Checklists" chapter)
- Monitor-based industrial design
- Freely selectable width and height (max. 600 x 600)
- Customised colours from RAL range
- Five possible enclosure designs
- Optimum heat dissipation due to single-walled sections
- Front panels internally-mounted or externally-mounted
- Protection class IP 65
- Screw-fixed or hinged rear panel
- Rear panel attachments without restricting installation space
- Internal grooves for fixing components
- Extensive range of accessories (see chapter „Accessories“)

### Material

- Extruded aluminium section Al Mg Si 05
- Pressure die-cast aluminium corners Al Si 12
- Seals between section and corner module Plastic
- Seal between front panel and rear panel CR
- Hinge, articulated hinge Al Mg Si 05
- Front panel, rear panel Al Mg

### Colour

- Sections naturally anodised
- Front panel, rear panel naturally anodised
- Corner modules RAL 9006



### Approvals

c UL us  
(label on demand)



Checklist CC-3000 on page 102.



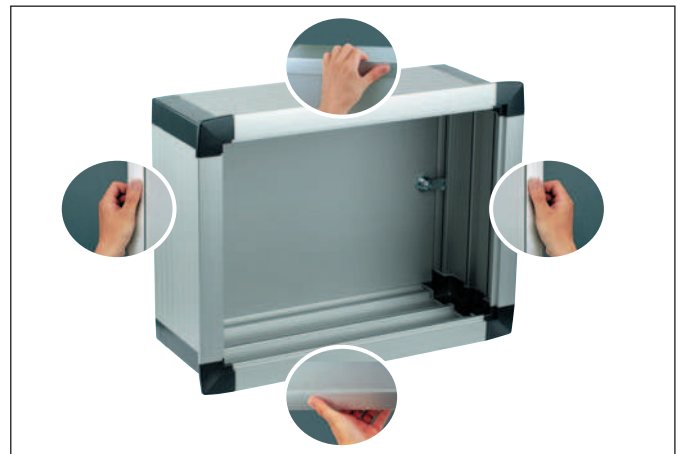
No handles



Handles on left and right



Handles on left, right and bottom (U-shaped)



Handles all round

Besides width, the height and depth can also be freely selected:

- Door hinge mounted on left or right
- Machining of the enclosures for mounting suspension systems
- Colour of corner modules
- Ready-to-use front panels according to customer specifications (incl. screen print or engraving)
- Specific preparation and wiring (see page 12, „System Solutions“)

A checklist will help you to define the required enclosure configuration while also serving as enquiry and order form (see page 102, „Checklists“).

## Modular Aluminium Light-Duty Control Enclosure CC-3000



Fixed rear panel



Hinged rear panel with lock

The rear panel can be screwed down or configured as a door. The door version is used with hinges or articulated hinges and the installation space is not restricted.



Internally-mounted front panel

BERNSTEIN offers a practical assembly system to make installation simple - machining of the front plate is not necessary in this case. The fixing elements can easily be moved inside the enclosure, making it easier for the user to adjust if required.



Externally-mounted front panel

The advantages of an externally mounted front panel are that there is no longer a profile edge, and an additional installation space is created. Elements including threaded studs welded on the back of the front panel enable fixing - the same applies when the door extension is used.


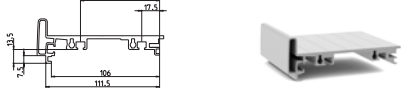
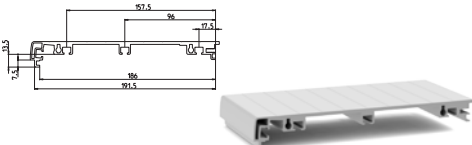
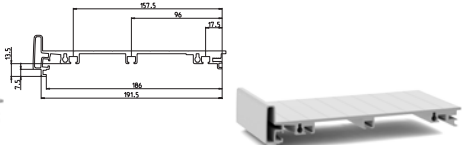
### Built-in components

The extruded aluminium section features all-round grooves, allowing components to be simply secured with spring nuts without the need for mechanical modification to the enclosure.



All-round mounting grooves simplify installation



## Frame section

External dimension	Internal dimension	Horizontal section	Handle section
120 mm	103 mm		
200 mm	183 mm		

## Door section

External dimension	Internal dimension	Horizontal section	Handle section
55 mm	46 mm		

## Double frames (see figure vertical handle sections)

External dimension	Internal dimension	
175 mm (120 + 55)	149 mm	
255 mm (200 + 55)	229 mm	

Front panel / rear panel externally mounted lead to an additional installation depth of 8 mm.

Aluminium section depth comparison: 200 mm (left) and 120 mm (right) Version: hinged door



Example photo Single frame



Example photo Double frame

## BERNSTEIN attachment solutions

### Single coupling head (suspended console version)



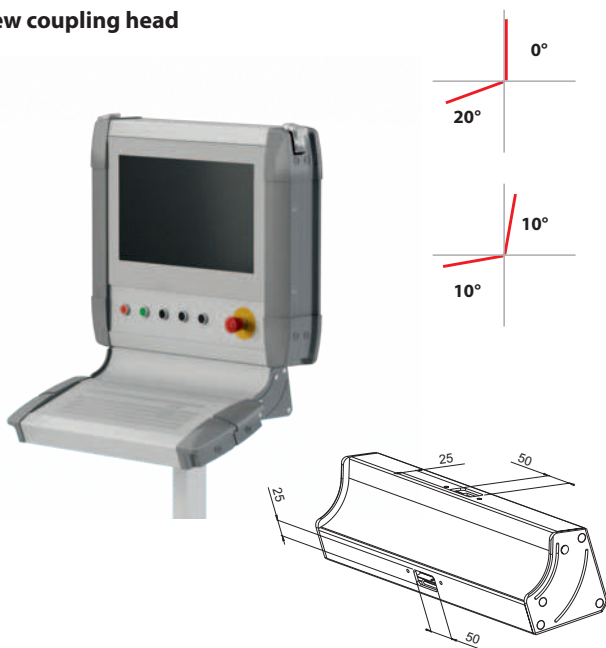
The coupling head (single) combines the upper section of the console that is attached to a suspension system from above with the lower section. The lower section of the console can be seamlessly adjusted between 0 and 30°. Through the installation openings to the sides, cables can easily be positioned. The coupling head is available in RAL 7035 or in RAL 9006. Other colours are available on request.

### Double coupling head (console version with suspension system attachment)



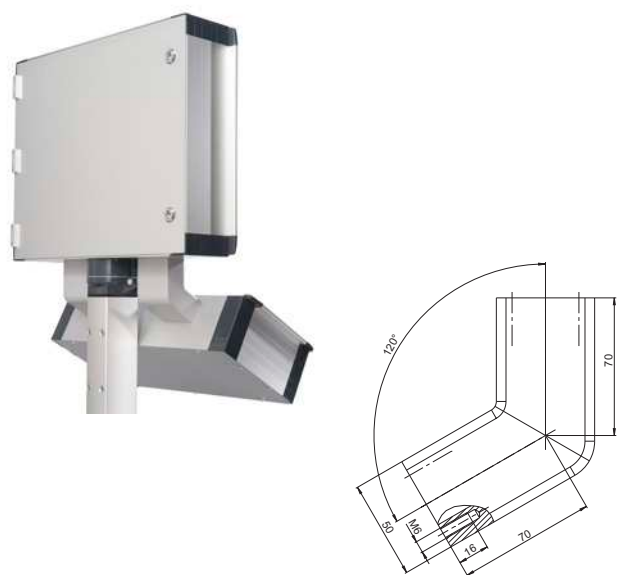
The coupling head (double) combines the upper section of the console with the lower section. The suspension system is attached using a CS-3000 coupling head. An infinitely variable angle adjustment of the upper section (0 - 30°) and of the lower section (0 - 20°) is possible. The coupling head is available as standard in RAL 7016 and in RAL 9006, other colours are available on request.

### New coupling head



The new coupling head section is particularly suitable for applications where the focus is on a design-based solution. The section offers a very solid connection when using heavy and large enclosures thanks to plane support. The rear side has an installation opening for optimal cable leadthrough. The section is anodised and the side caps are offered in RAL 9006 as standard - other colours can be defined when filling out the checklist.

### Rigid coupling head



For the attachment of the console upper section to the lower section. The lower section of the console is fixed and inclined by 30°. The cable channel is realised by the coupling head. The coupling heads are coated similar to RAL 9006.

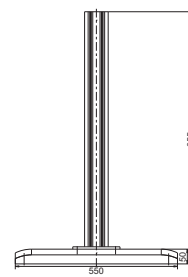
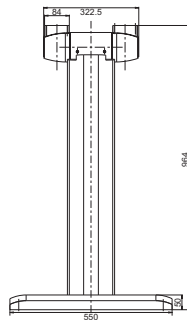
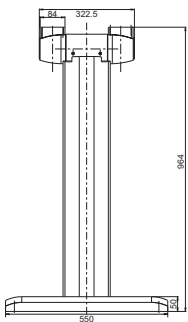
## BERNSTEIN attachment solutions



**Single stand**  
Article number 1016786000

**Console stand**  
Article number 1016787000

**Stand CC-3000**  
Article number 1016509100



Upright stand with integrated coupling head for hinged attachment (infinitely variable adjustment from 0° to 30°) on BERNSTEIN control enclosures.  
Colour RAL 7035  
Complete with installation material and instructions; mechanical machining in control enclosures is necessary.

Upright stand with integrated coupling head for hinged attachment of BERNSTEIN control enclosures (infinitely variable adjustment from 0° to 30°) and keyboard enclosures (infinitely variable adjustment from 0° to 20°).  
Colour RAL 7035  
Complete with installation material and instructions; mechanical machining in control and keyboard enclosures is necessary.

Upright stand with straight column for mounting control enclosures. Coated similar to RAL 7035. Please order castors and coupling components separately.

Tube 80 with cable channel

**Castors**  
Article number 9808012800



**Equipment castors**  
Article number 9808015300



**Support feet**  
Article number 9808012900



Set of castors, consisting of 4 swivel castors.  
Complete with installation material and instructions.  
Load-bearing capacity of each castor 50 kg  
Construction height 100 mm  
Castors Ø 75 mm

Set of castors, consisting of 4 swivel castors.  
2 castors with brake.  
Load-bearing capacity of each castor 70 kg.  
Construction height 90 mm  
Castors Ø 75 mm

Vertically adjustable feet (1 set = 4 pieces).  
Complete with installation material and instructions.

Adjustable construction height approx. 37 - 50 mm

### Accessories for control enclosures CC-3000, CC-4000, CC-4000 SL and CC-5000

BERNSTEIN not only offers innovative control enclosures that can be perfectly configured to suit your specific requirements with our comprehensive range of accessories that you will find on the following pages but our system solution service also realises complete enclosure solutions.

#### The range of accessories covers the following areas:

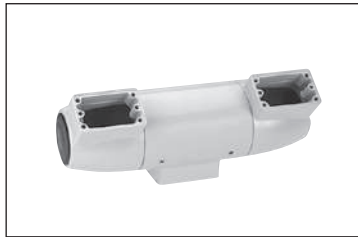
- **Attachment solutions**  
Whether suspended, upright or mobile – we have the right system for any configuration.
- **Interface solutions**  
With the interfaces laptops, programming devices, diagnostic facilities, modems etc. can be easily connected to built-in components for servicing purposes. Simply open the cover and connect. Protection class IP 65 is retained (cover closed).
- **Keyboard solutions**  
Data input devices do not always have to be in the way. We have available excellent solutions for storing such devices and cleverly integrating them in the overall concept while retaining the user-friendly ergonomics of the system.
- **Handle solutions**  
The BERNSTEIN range of accessories also includes practical handles to ensure the enclosures are handled safely.
- **Safety solutions**  
Your safety is our concern – we therefore offer a range of accessories that help and protect.
- **Heat dissipation solutions**  
Heat dissipation is a key problem which we will gladly resolve for you. Take the easy way out and contact us. We have the right enclosures, suitable equipment and the necessary know-how to effectively solve heat dissipation problems.
- **Cable solutions**  
It is often necessary to route cables into the enclosure – whether single core or preassembled cables, we have the right solution.
- **Front panel solutions**  
The front is the most important side of the enclosure. Here everything must be right and should look exactly as you imagined. Take advantage of our service to help you find the appropriate accessories.

**Our comprehensive range of accessories is listed on the following pages.**



<b>Article</b>	<b>Console connector kit</b>	<b>Suspended console coupling head</b>	<b>Thin Client wall mount bracket – enclosure attachment</b>
<b>Article number</b>	<b>9806493000</b>	<b>9808013100</b>	<b>9805332000</b>

## Attachment solutions



<b>Design</b>	Rigid elements for connecting upper section of console to lower section, set of 2 connectors, finish similar to RAL 9006. Lower section of console, 30° inclination.	Suspended coupling head for all CC-4000 control enclosure suspended console versions attached to a CS-2000 suspension system; hinged keyboard console (infinitely variable from 0° to 30°). Colour RAL 7035. Complete with installation material and instructions	Particularly suitable for mounting an enclosure on safety gate posts that can accept 40, 60 and 80 mm post attachments. The plastic mount is silicone-free. Designed for standard M6 attachment. The maximum load for central mounting is 20 kg. The wall / post attachment, Art. No. 9805333000, is additionally required for a complete system.
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<b>Article</b>	<b>Tabletop feet, adjustable</b>	<b>Tabletop feet (StopChoc)</b>	<b>Suspension system covers</b>
<b>Article number</b>	<b>9806014000</b>	<b>9806500000</b>	<b>CS-2000 SL/CS-3000/CS-3000 neXt</b>   <b>CS-2000 System 80</b>
			<b>9806495000</b>   <b>9806499000</b>



<b>Design</b>	Simple plastic tabletop feet for control enclosures; feet can be set upright to adjust enclosure inclination.  Installation altitude 48 mm Set of 4 pieces	Vibration-absorbing tabletop feet for control enclosures, ideal for mobile use in close proximity to machines or sensitive electronic equipment.  Set of 4 pieces	For closing off unused BERNSTEIN suspension system connection points (Couplings). Finish similar to RAL 9006. Other RAL colours available on request.  <b>9806495000</b> Flange size 60 mm <b>9806499000</b> Flange size 80 mm
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<b>Article</b>	<b>Carrying handle</b>		
<b>Article number</b>	<b>9806490000</b>		

## Handle solutions



<b>Design</b>	Black carrying handle especially for small enclosures in mobile applications.		
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## Accessories for control enclosures

Article	CC handle	Corner handle set	Positioning handle
Article number	see specification	9806026000	see specification

### Handle solutions



Design	<p>Straight, anodised aluminium handle.</p> <p><b>9808015000</b> Length 140 mm</p> <p><b>9808014900</b> Length 200 mm</p> <p><b>9808014600</b> Length 350 mm</p>	<p>2x black foam-coated corner handles.</p>	<p>Anodised, ergonomically designed, formed aluminium positioning handle.</p> <p><b>9808015100</b> Length 250 mm</p> <p><b>9808015200</b> Length 350 mm</p>
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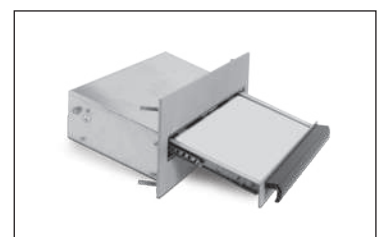
Article	Keyboard shelf	Fold-down keyboard panel	Keyboard drawer 483 x 89 x 155 mm (19"/2HM)
Article number	9806175000	9806488000	9806744000

### Keyboard / support solutions



Design	<p>Sheet metal, finish similar to RAL 9006. 2x M5 holes required in enclosure. Stainless steel version available on request.</p> <p>495 x 255 mm</p>	<p>Made from coated sheet steel, finish similar to RAL 9006. Dimensions: 483x249x50 mm. IP54 rating when open.</p>	<p>With mounting pin, no lock, IP65 rating when closed. Including German USB keyboard with integrated trackball. Other language-version keyboards and drawer with lock available.</p>
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Article	Keyboard drawer 483 x 134 x 155 mm (19"/3HM) 20° inclination	Keyboard drawer 483 x 89 x 155 mm (19"/2HM) without keyboard	Keyboard drawer 483 x 134 x 155 mm (19"/3HM) 20° inclination without keyboard
Article number	9806745000	9286098000	9286112000



Design	<p>With mounting pin, no lock, IP65 rating when closed. Including German USB keyboard. Other language-version keyboards and drawer with lock available. Keyboard is inclined by 20°.</p>	<p>With mounting pin, no lock, IP65 rating when closed.</p>	<p>With mounting pin, no lock, IP65 rating when closed, without keyboard.</p>
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<b>Article</b>	<b>Interface insert</b>	<b>Interface insert</b>	<b>Interface insert</b>
<b>Article number</b>			<b>9421311000</b>

## Interface solutions



<b>Design</b>	<b>9421300000</b> 2x USB 2.0 Type A shielded  <b>9421284000</b> 2x USB 2.0 Type A with 0.7 m cable and connector	<b>9421310000</b> 1x Sub-D9 / 1xSub-D25, female / male  <b>9421308000</b> 1x Sub-D9 / 1xSub-D15, female / female	1x RJ45 / USB BF-A / Sub-D9  Other interface inserts on request
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<b>Article</b>	<b>Interface insert</b>	<b>Interface flap single</b>	<b>double</b>	<b>RJ-45 interface</b>	<b>USB interface</b>
<b>Article number</b>	<b>9421307000</b>	<b>9421283000</b>	<b>9421306000</b>	<b>9806519000</b>	<b>9421319000</b>



<b>Design</b>	Earthed socket outlet 250V	Metal silver-coloured interface cover, various snap-in inserts for modular configurations. Plastic, transparent version and latching on request. 3 mm two-way key or rotary knob.  Dimension: 66 x 120 mm	Dimension: 131 x 120 mm	Interfaces with captive dust cap, protection class IP65. Mounted in a 22.5 mm hole in the enclosure or front panel. With connector and cable
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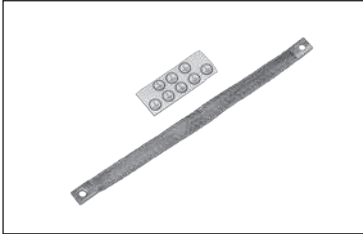


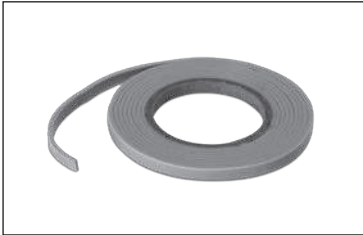
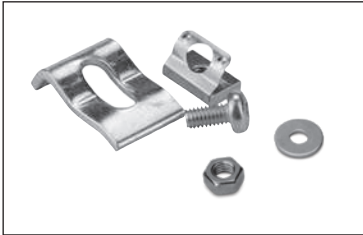

<b>Article</b>	<b>Set of spring nuts M4</b>	<b>M5</b>	<b>Mounting brackets</b>	<b>Mounting rail service</b>
<b>Article number</b>	<b>9806006000</b>	<b>9806007000</b>	<b>9806008000</b>	<b>On request</b>

## Interior accessories



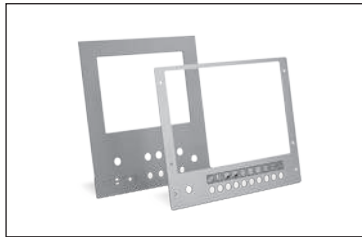
<b>Design</b>	Set of 10	For attaching mounting plates or other built-in components in enclosures.  Dimension: 30 x 20 mm for M5 screws  Set of 4 including installation material	On request we will cut mounting rails to size for your enclosure (TS32 / TS35 for accepting terminal blocks). Please contact us.
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## Accessories for control enclosures

<b>Article</b>	<b>Earthing kit, door and externally mounted front panel</b>	<b>Earthing kit, door and externally mounted front panel</b>	<b>Set of clamping elements (PC477/577/677)</b>
<b>Article number</b>	<b>9806507000</b>	<b>9806506000</b>	<b>9806324000</b>
			
<b>Design</b>	Copper strap	Additional earthing kit for earthing externally mounted front panels or doors (green / yellow).	Set of 6 clamping elements for direct installation of Siemens Simatic Panel PC 477/577/677
<b>Article</b>	<b>Front panel seal</b>	<b>Front panel mounting kit CC-3000 / CC-4000</b>	<b>Front panel mounting kit CC-5000 neXt</b>
<b>Article number</b>	<b>9806373000</b>	<b>9806508000</b>	<b>9806893000</b>
			
<b>Design</b>	2 m front panel flat seal, 6 x 2 mm, grey	For internal / external mounting of the front panel 10 mounting elements	For internal fixing of the front panel 10 mounting elements
<b>Article</b>	<b>Door arrester</b>		
<b>Article number</b>	<b>9806503000</b>		
			
<b>Design</b>	For locking door in open position and for limiting opening range (approx.100°) for CC-3000 / CC-4000.		

<b>Article</b>	<b>Front panel preparation service</b>	<b>Crystal clear makrolon front cover</b>	<b>TFT monitor mounting bracket</b>
<b>Article number</b>	<b>on request</b>	<b>on request</b>	<b>9806679000</b>

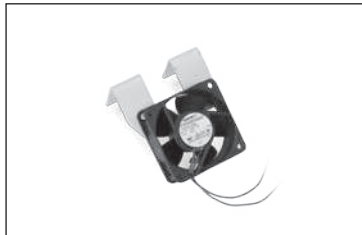
### Machining service / special solutions



<b>Design</b>	We machine aluminium front and rear panels individually to suit your specific requirements. Engraving or various printing processes also possible on request. Simply provide us with a drawing with your requirements.	Please contact us regarding the protection of a commercially available monitor that is secured in the enclosure by means of a TFT monitor mounting bracket.	Commercially available displays can be easily secured in modern control enclosures, thus encapsulating them in a way that meets industrial standards.  For display, pivotable with Vesa adapters 75 or 100 (15" to 20").
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<b>Article</b>	<b>Fan mounting bracket set</b>	<b>Filter fan set PF1000</b>	<b>Air conditioner</b>
<b>Article number</b>	<b>9806491000</b>	<b>9806492000</b>	<b>230 V, 320 W, L35L35</b> <b>230 V, 400 W, L35L35</b> <b>9421279000</b> <b>9421276000</b>

### Heat dissipation solutions



<b>Design</b>	Set of 2 brackets for axial or radial fan, RAL 7035.	230 V filter fan + outlet filter 24 m <sup>3</sup> /h, IP54  Dimension: 109 x 109 x 49/19 mm  1 pc per unit 12 V / 24 V / 48 V on request	<b>9421279000</b> 270 x 520 x 110 mm, 13.3 kg  <b>9421276000</b> 520 x 340 x 110 mm, 14.8 kg  further cooling capacities on request
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## BERNSTEIN Services

### New system integration approaches such as the installation and preassembly of:

- Power supply systems
- Operating and control elements
- Membrane keypads
- Displays, power supply and data cables
- I/O assemblies
- Ethernet components
- PLC/IPC solutions of all renowned manufacturers

### Services:

- Wiring
- Worked-out circuit diagram
- Installation of components
- Acceptance test

# Checklist Enclosure CC-5000 neXt

Customer:	Customer No.: *	Article No.: *
Address:		
Telephone:	E-mail:	
Contact person:	Department:	
<input type="checkbox"/> Pricing enquiry	Target price:	Quantity:
<input type="checkbox"/> Enquiry	Enquiry No.: *	Annual requirement:
<input type="checkbox"/> Order	KPA: *	Delivery date:

## 1 Checklist for:

- Standard
- Console encl., upper part
- Console encl., lower part

▶ please fill in checklist for console versions

Adjustment

Anticipated installation weight: \_\_\_\_\_ kg

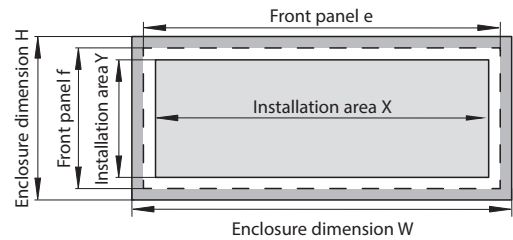
## 2 Dimensions (mm)

Installation area (X x Y) \_\_\_\_\_ x \_\_\_\_\_

Enclosure dimensions (W x H) \_\_\_\_\_ x \_\_\_\_\_  
 = X + 152 = Y + 91

Front panel dimensions (e x f) \_\_\_\_\_ x \_\_\_\_\_  
 with airflow humidity of 0.5 mm  
 = X + 20 = Y + 21

Rear panel dimensions b x h \_\_\_\_\_ x \_\_\_\_\_  
 with airflow humidity of 1 mm  
 = X + 107 = Y + 78

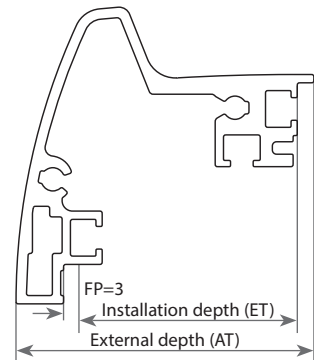


External dimensions min. 277 x 392 mm, max. 1000 x 1000 mm (W x H)

## 3 Profile selection

Select 1 enclosure section (optional, add up to a maximum of 1 door section!)

External depth 0 mm	Front door	Enclosure section (fixed area!)			Rear door
Choice of desired external depth AT	<input type="checkbox"/> 75	<input type="checkbox"/> 75	<input type="checkbox"/> 125	<input type="checkbox"/> 185	<input type="checkbox"/> 75
	<input type="checkbox"/> 125	<input type="checkbox"/> 75	<input type="checkbox"/> 125	<input type="checkbox"/> 185	<input type="checkbox"/> 125
	<input type="checkbox"/> 185	<input type="checkbox"/> 75	<input type="checkbox"/> 125	<input type="checkbox"/> 185	<input type="checkbox"/> 185



Information about section depth dimensions									
Installation depth ET (mm)	53	103	114	163	164	214	224	274	334
External depth AT (mm)	75	125	150	185	200	250	260	310	370
Basis section	75	75	75+75		75+125				
	125		125			125+125			
	185			185			185+75	185+125	185+185

Section combination: Hinges with BERNSTEIN logo (Ø 20 mm)

## 4 Door mounting

left or  right

## 5 Lock

Square (mm):  6  7  8  T-handle without lock\*\*

Triangle (mm):  7  8  6,5 (CNOMO)  T-handle with lock\*\*

Two-way bit (mm):  3 Standard  5  E1 (without key)

Daimler Benz:   T-handle E1 (without key)\*\*

Special lock \_\_\_\_\_ (\*\* = not for 75 section)

**6 Front panel** *Internally mounted*

- none
- mounted
- Front panel mounting kit

**Rear panel**

Enclosure with door section

- none
- mounted

**Rear panel**

Enclosure without door section

- Standard hinge (with BERNSTEIN logo)
- screw-mounted (externally)
- VESA attachment to the rear

*(screw-fixed rear panel); (rear panel thickness of 4 mm, possible at an installation area height of Y > 500 mm)*
**7 Partition**

- not mounted
- vertical Qty: \_\_\_\_\_ Partition height 28 mm. Leave 1 mm space between front panel and partition. Partition protrudes 3.7 mm beyond the front panel.
- horizontal Qty: \_\_\_\_\_

**Operator panel**

- 1<sup>st</sup> Operator panel (w x h) \_\_\_\_\_ x \_\_\_\_\_  not mounted
- 2<sup>nd</sup> Operator panel (w x h) \_\_\_\_\_ x \_\_\_\_\_  mounted
- 3<sup>rd</sup> Operator panel (w x h) \_\_\_\_\_ x \_\_\_\_\_

**8 Keyboard drawer** (at 155 mm installation depth)  
(interlock via magnetic lock)

- without keyboard, 0°, Height 89 mm
- without keyboard, 20°, Height 134 mm
- with keyboard, 0°, USB, Height 89 mm
- with keyboard, 20°, USB, Height 134 mm
- to customer specification (description under 11)
- secured via lock (optional)

- none

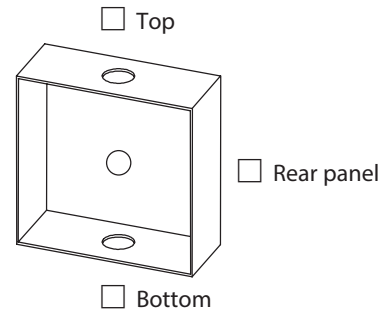
**Keyboard configuration**

- German (Standard)**
- English (GB)
- English (USA)
- Other language: \_\_\_\_\_

**9 Preparation for susp. system**

	Com- ponent selection	75	125	185
CS-3000 neXt adapter small	<input type="checkbox"/>			
Flange coupling standard*	<input type="checkbox"/>			
Flange coupling system 80	<input type="checkbox"/>			
Turn/tilt coupling	<input type="checkbox"/>			
Tilt adapter	<input type="checkbox"/>			
CS-2000 SL base coupling	<input type="checkbox"/>			
Coupling head	<input type="checkbox"/>			
Coupling head, single	<input type="checkbox"/>			
Automotive adapter	<input type="checkbox"/>			
WS coupling	<input type="checkbox"/>			
CS-3000/48	<input type="checkbox"/>			
VESA-100 (Rear panel attachment)	<input type="checkbox"/>			
Preparation on customer request (see below)	<input type="checkbox"/>			

Entry/support position



- no preparation
- SS cover, top
- SS cover, bottom

 = Component not possible

\* CS-3000 neXt / CS-3000 / CS-2000 SL/50/60

\*\* CS-3000 neXt/ CS-3000 with adapter (narrow sect. 1015300011)

**10 Surface finish**
**Standard**

- Horizontal sections  anodised, natural
- Vertical sections  anodised, natural
- Corner modules  RAL 9006 Standard
- Front panel  anodised, natural
- Rear panel  anodised, natural
- Partition  anodised, natural

**Special colour RAL**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

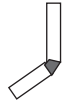
**11 Accessories, Remarks**

<input type="checkbox"/> Annexes number of _____	VKF*	TA*	AV*	
<input type="checkbox"/> No Annexes				

\* Completed by BERNSTEIN

# Checklist Console Version CC-5000 neXt

## 1 Checklist for:



Console attachment

Article No. Console Enclosure, upper part \* \_\_\_\_\_

Article No. Console Enclosure, lower part \* \_\_\_\_\_

## 2 Type of console connection Only one choice is possible

Console connector section	Console connector	Console coupling
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		

## 3 Preparation for suspension system in the console connector section \*

Only one choice is possible

- preparation
- no preparation
- = Component not possible

	CS-2000 SL45/60, CS-3000, CS-3000 neXt	CS-2000 Sys80
Coupling or Elbow coupling	<input type="checkbox"/>	
New adapter flange (Automotive)		

## 4 Surface finish

	Standard	Special colour RAL
Console connector section NEW (section)	<input type="checkbox"/> anodised, natural	<input type="checkbox"/> _____
Console connector section NEW (end caps)	<input type="checkbox"/> RAL 9006 Standard	<input type="checkbox"/> _____
Console connector	<input type="checkbox"/> RAL 9006 Standard	<input type="checkbox"/> _____
Console coupling	<input type="checkbox"/> RAL 9006 Standard	<input type="checkbox"/> _____

## 5 Accessories, Remarks

<input type="checkbox"/> Annexes number of _____	VKF*	TA*	AV*	
<input type="checkbox"/> No Annexes				





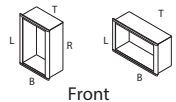
# Checklist Enclosure CC-4000

Customer	*Product group	*Code	*Article number
Address		Customer No.	
Telephone	Telefax	Industry	
Contact person		Department	
<input type="checkbox"/> Pricing enquiry			
		Target price	Quantity
<input type="checkbox"/> Enquiry			
		*Enquiry No.	Annual requirement
<input type="checkbox"/> Order			

Delivery date

**1 Enclosure**

- Standard
- Console encl., upper section
- Console encl., lower section



Anticipated installation weight  
\_\_\_\_\_ kg

**2 Dimensions (mm)**

**External encl. dimensions**

Width x height (W x H) \_\_\_\_\_ X \_\_\_\_\_

**19" Enclosure** W x H \_\_\_\_\_ X \_\_\_\_\_

H = (n x HM) + 97 - 1 HM = 44,45 HM = \_\_\_\_\_

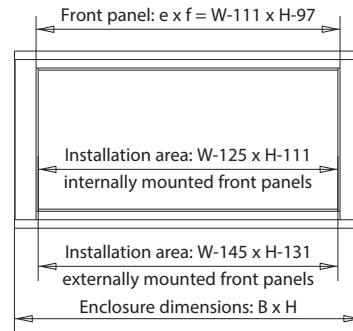
\***Front panel dim.** (e x f) \_\_\_\_\_ X \_\_\_\_\_

e x f = W - 111 x H - 97

\*\***Rear panel dim.** (w x h) \_\_\_\_\_ X \_\_\_\_\_

W x H = W - 61 x H - 47

W x H = W - 63 x H - 47 (hinged rear panel)



**3 Type of section**

- Section without ribbing

**4 Enclosure depth, ext.**

**Frame section**

\_\_\_\_\_ → with 3 mm deep FP support  
 140  200  290

**Extension**

68  128  228  128  68

or \_\_\_\_\_ → with 6.5 mm deep FP support  
 52  80

68  128  228  128  68

Internal depth for internally mounted FP with 3 mm deep FP support

When using 6,5 mm FP support, the internal depth is reduced by 3,5 mm

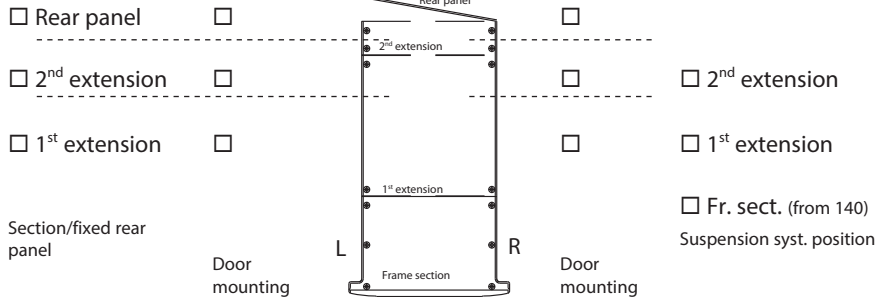
Section	52	80	120	140	148	180	188	200	208	216	248	268	276	280	290	308	328	336	348	358	368	376	396	408	418	426	428	436	456	486	496	518	A**			
	38	66	106	126	134	166	174	186	194	202	234	254	262	266	276	294	314	322	334	344	354	362	382	394	404	412	414	422	442	472	482	504	I**			
52	•		•			•	•				•			•		•			•					•												
80		•			•				◆	•			◆			◆		■				•							◆							
140				•					•			•	•								•			•					•					•		
200								•				◆					•	◆						◆				•							◆	
290														•							•					•	•								•	
68			•		•				•	•	•	◆	◆					◆	•	•			•	◆			•		•					•		
68								•		•			•					◆								•										
128									◆		•	•	◆				•	•	■					◆	•	•			◆	•					•	
128																•		■						•												
228														•			◆			•		•	•		•			•	◆	◆					•	

\*\* A = External depth, I = Internal depth      Internal depth is increased by 6 mm for external mounting.      ◆■ = Alternative combination

\* Completed by BERNSTEIN AG

### 5 Door mount. (susp. syst.)

Automotive version



### 6 Partition

- not mount.
- vertical**     mount.on right     **horizontal**     bottom mount.
- Qty \_\_\_\_     mount. on left    Qty \_\_\_\_     top mounted
- Operator panel, anodis., int. mount. Dim.: g x h (g = Width, h = Height)
- 1<sup>st</sup> operator panel \_\_\_\_ x \_\_\_\_
- 2<sup>nd</sup> operator panel \_\_\_\_ x \_\_\_\_
- 3<sup>rd</sup> operator panel \_\_\_\_ x \_\_\_\_

(Important! Partition height for frame section with 3 mm FP support = 20 mm/front panel support 6.5 mm = 25 mm)

### 7 Front panel

- none
- with  3 mm, int. mount.
- 3 mm, ext. mount.

### Rear panel

- none
- ext. screw-mounted
- heat sink rear panel

- standard hinge
- screw-moun. rear pan. art hinge

### Access., front panel

- for INTERNALLY mounted panels: seal strip and mounting material
- for EXTERNALLY mounted panels: seal strip/washers/nuts M5
- 19" installation kit (9806232000): screws and captive nuts M6
- set of clamping elements for SIMATIC Panel PC

### Keyboarddrawer from 180 mm depth

- (2HM = 89 mm, 3HM = 134 mm)
- without keyboard, 0°, without lock, 2HM
- without keyboard, 20°, without lock, 3HM
- with keyboard, 0°, without lock, Germ., PS2, 2HM
- with keyboard, 20°, without lock, Germ., PS2, 3HM
- to customer specification (description under 13)

### 8 Lock

- Square (mm):     6     7     **8 (Standard)**    Triangle (mm):     7     8
- Two-way bit (mm):     3     5
- Daimler Benz     T-handle without lock     T-handle with lock     Customer specification

### 9 Preparation for susp. syst.

#### Type of coupling

- Turn/tilt coupling (from section 128)
- Flange (see System)
- Tilt adapter (from section 200)
- Coupling head CC-4000
- Console connector
- Automotive adapter
- KDL 16/4

only with automotive adapter without SS preparation (KDL = cable gland strip)

- Grommet 3–4 mm
- \_\_\_\_ Qty

No

- WS coupling
- CS-3000/48
- Special preparation to customer specificat.

KDL 24/5

- Grommet 6–7 mm
- \_\_\_\_ Qty

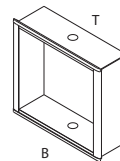
#### System

- SL (only section 80)
- CS-3000 (fr. sect. 128)
- 80 (from section 128)
- SS cover, top
- SS cover, bottom
- SS in section \_\_\_\_

- Dummy grommet
- \_\_\_\_ Qty

Top

Bottom



### 10 Surface finish

Horizontal sections:

Vertical sections:

Partition:

Front panels:

Rear panels:

#### Standard

- RAL 9006, powder-coated
- anodised, natural
- RAL 9006, powder-coated
- anodised, natural
- anodised, natural

#### Customer specification

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

11  Automotive version: double GK seal, braided earthing strap, front door arrester

12  Climate control data for checking heat dissipation over enclosure surface

\_\_\_\_ (Pv) total installed power loss    \_\_\_\_ (°C) ambient temperature at enclosure location

\_\_\_\_ (°C) max. temperature, installation (e.g. PC)    \_\_\_\_ (V) power supply for active cooling

### 13 Accessories, Remarks

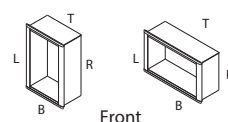
- annexes
- no annexes

# Checklist Enclosure CC-4000 SL

Customer	*Product group	*Code	*Article number
Address			Customer No.
Telephone	Telefax	Industry	
Contact person			Department
<input type="checkbox"/> Pricing enquiry			
		Target price	Quantity
<input type="checkbox"/> Enquiry			
		*Enquiry No.	Annual requirement
<input type="checkbox"/> Order			
Delivery date			

## 1 Enclosure

- Standard
- Console enclosure, upper section
- Console enclosure, lower section



Anticipated installation weight \_\_\_\_\_ kg

## 2 Dimensions (mm)

### External enclosure dimensions

Width x height (w x h) \_\_\_\_\_ x \_\_\_\_\_

### 19" Enclosure

\_\_\_\_\_ x \_\_\_\_\_

$H = (n \times HM) + 73 - 1 \text{ HM} = 44,45$        $HM \cong$  \_\_\_\_\_

### Front panel dim. (e x f)

\_\_\_\_\_ x \_\_\_\_\_

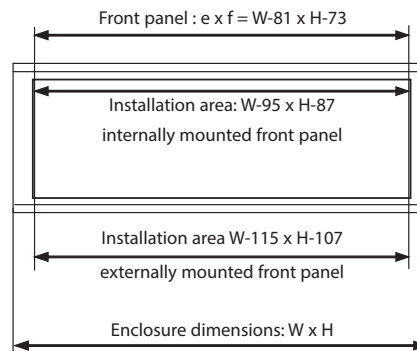
$e \times f = B - 81 \times H - 73$

### Rear panel dim. (w x h)

\_\_\_\_\_ x \_\_\_\_\_

$w \times h = W - 31 \times H - 23$

$w \times h = W - 33 \times H - 23$  (hinged rear panel)



## 3 Type of section

- Section without ribbing

## 4 Enclosure depth, ext. (frame section with 6.5 mm deep FP support)

- 55
- 99

Section	55	99	External depth (mm)
	35	79	Internal depth (mm)

(Internal depth increased by 6 mm for external mounting)

## 5 Door mounting



- Fixed rear panel



Door mounting, **left**

- Standard hinge
- Screw-mount. rear pan. articul. hinge



Door mounting, **right**

- Standard hinge
- Screw-mounted rear panel articulated hinge

\* Completed by BERNSTEIN AG

**6 Partition** (Important! Partition height for frame section = 25 mm)

 not mounted(Standard)

 vertical

\_\_\_\_\_ Qty.

 waagerecht

\_\_\_\_\_ Qty.

 mounted on right

 mounted on left

 bottom mounted

 top mounted

 operator panel anodised, natural  
(not mounted for inside) s = 3 mm

 Dimension: g x h  
(g = Width, h = Height)

 1<sup>st</sup> operator control pan. \_\_\_\_\_ X \_\_\_\_\_

 2<sup>nd</sup> operator control pan. \_\_\_\_\_ X \_\_\_\_\_

**7 Front panel**
 none

**with:**  3 mm, int. mounted

 3 mm, ext. mounted

**Accessories, front panel**
 for INTERNALLY mounted panels: seal strip and mounting material

 for EXTERNALLY mounted panels: seal strip/washers/nuts M5

 19" installation kit (9806232000): screws and captive nuts M6

 set of clamping elements for SIMATIC Panel PC 670/870

**Rear panel**
 none

**with:**  3 mm, externally screw-mount.

 3 mm, hinged

**8 Lock**

 Square (mm):  6

 7

 **8 (Standard)**
 T-handle without lock

 Triangle (mm):  7

 8

 E1

 Two-way bit (mm):  3

 5

 Special lock/customer specification

 Daimler Benz: 
**9 Preparation for suspension syst.**  No

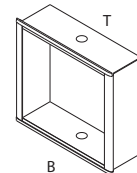
**Type of coupling/system**
 SL flange / turn/tilt coupling (only section 99)

 Coupling head CC-4000

 Special preparation to customer specification

 Top

Side:

 Bottom

**10 Surface finish**

Horizontal sections:

Vertical sections:

Partition:

Front panels:

Rear panels:

**Standard**
 RAL 7043, powder-coated

 anodised, natural

 RAL 7043, powder-coated

 anodised, natural

 anodised, natural

**Customer specification**
 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

**11 EMV Version** (electromagnetic compatibility)

 Conductive connection between enclosure body, door, FP and RP

 Automotive version; braided earthing strap

 Climate control data for checking heat dissipation over enclosure surface

\_\_\_\_\_ (PV) total installed power loss

\_\_\_\_\_ (°C) ambient temperature at enclosure location

\_\_\_\_\_ (°C) max. temperature of installation (e.g. PC)

\_\_\_\_\_ (V) power supply for active cooling

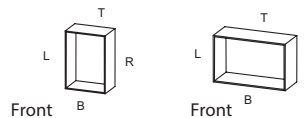
**14 Accessories, Remarks**  annexes  no annexes

# Checklist Enclosure CC-3000

Customer	*Product group	*Code	*Article number
Address		Customer No.	
Telephone	Telefax	Industry	
Contact person		Department	
<input type="checkbox"/> Pricing enquiry		Target price	Quantity
<input type="checkbox"/> Enquiry		*Enquiry No.	Annual requirement
<input type="checkbox"/> Order		Delivery date	

## 1 Enclosure

- Standard
- Console enclosure, upper section
- Console enclosure, lower section



Anticipated installation weight \_\_\_\_\_ kg

## 2 Dimensions (mm) (always referred to the standard section)

### External enclosure dimensions

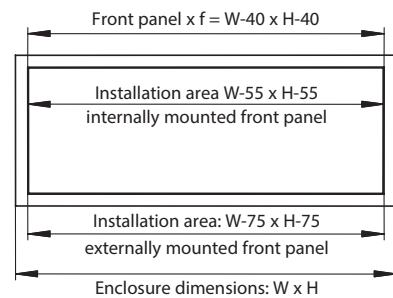
Width x height (W x H) \_\_\_\_\_ x \_\_\_\_\_

### Front panel dimensions (e x f)

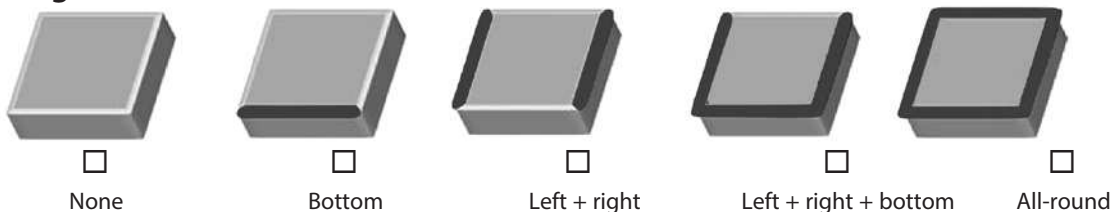
e x f = W - 40 x H - 40 \_\_\_\_\_ x \_\_\_\_\_

### Rear panel dimensions W x H

Screw-fixed rear panel: W x H = W - 7 x H - 7      Hinged rear panel: W x H = W - 9 x H - 9



## 3 Front design (handle selection)



(Important! The external enclosure dimensions increase by 16.5 mm on the side where a handle strip is selected)

## 4 Enclosure without door section

### Enclosure depth

External depth

120 mm

200 mm

### Front panel position

Installation depth

Internal  103 mm

External  111 mm

Internal  183 mm

External  191 mm

### Rear panel position

Screw-fixed or hinged

Screw-fixed

With standard hinge

With screw-mounted rear panel hinge

## 5 Enclosure with door section 55 (FP = Front panel, RP = Rear panel)

Front door or

Rear door

55 + 120

120 + 55

FP and RP internal

Installation depth 149 mm

FP internal and RP external

Installation depth 157 mm

FP external and RP internal

Installation depth 157 mm

FP and RP external

Installation depth 166 mm

55 + 200

200 + 55

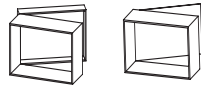
Installation depth 229 mm

Installation depth 237 mm

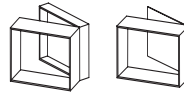
Installation depth 237 mm

Installation depth 246 mm

\* Completed by BERNSTEIN AG

**6 Door mounting**
 Left


or



or

 Right

**7 Lock**

 Square (mm):  6

 7

 **8 (Standard)**
 T-handle without lock

 Triangle (mm):  7

 8

 6,5 (CNOMO)

 T-handle with lock

 Two-way bit (mm):  3

 5

 E1 (without key)

 Daimler Benz: 
 Special lock/customer specification

 T-handle E1 (without key)

**8 Front panel**
 None

 With

 Without keyboard, 0°, without lock, 2HM

(2HE = 89 mm, 3HE = 134 mm)

19" Installation kit \_\_\_\_\_ Qty.

**9 Rear panel**
 None

 With

 Without keyboard, 20°, without lock, 3HM

 Clamping element for Simatic

 With keyboard, 0°, without lock, German, PS2, 2HM

 With keyboard, 20°, without lock, German, PS2, 3HM

 To customer specification (description under Point 14)

**10 Partition** (partition height 13 mm)

 Vertical

\_\_\_\_\_ Qty.

 Not mounted (standard)

 Mounted on right

 Mounted on left

 Horizontal

\_\_\_\_\_ Qty.

 unmounted (standard)

 Bottom mounted

 Top mounted

**11 Partial front panels**
 none

 1<sup>st</sup> operator panel: \_\_\_\_\_ Width x \_\_\_\_\_ Height

 Not mounted

 INTERNALLY mounted

 EXTERNALLY mounted

\_\_\_\_\_ (Art. No. BP)

 2<sup>nd</sup> operator panel: \_\_\_\_\_ Width x \_\_\_\_\_ Height

 Not mounted

 INTERNALLY mounted

 EXTERNALLY mounted

\_\_\_\_\_ (Art. No. BP)

**12 Preparation for suspension system**  None

 Standard preparation (flange SL/CS-3000)

 Turn/tilt coupling

 Tilt adapter (only section 200)

 Flange coupling 80 (only section 200)

 Console connector

 Automotive adapter

 WS coupling

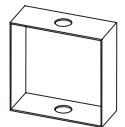
 CS-3000/48

 Special preparation to

customer specification (see below)

 Top

Side

 Bottom

 SS cover, top

 SS cover, bottom

**13 Surface finish**

Basic sections:

Door sections:

Corner modules/end caps:

Partition:

Front panels:

Rear panels:

**Standard**
 Anodised, natural

 Anodised, natural

 RAL 9006, powder-coated

 Anodised, natural

 Anodised, natural

 Anodised, natural

**Customer specification**
 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

Article number FP: \_\_\_\_\_

Article number RW: \_\_\_\_\_

**14 Accessories, Remarks** (included in delivery specification: key (except E1 lock) and earthing kit)

 KDL 16/4

 KDL 24/5

 Grommet 3–4 mm

 Grommet 6–7 mm

 Dummy grommet

Only with automotive adapter or without SS preparation (KDL = cable gland strip)

\_\_\_\_\_ Qty.

\_\_\_\_\_ Qty.

\_\_\_\_\_ Qty.

Additionally: \_\_\_\_\_

 Annexes

Slsmn. \_\_\_\_\_ TAV \_\_\_\_\_ TAV \_\_\_\_\_

 No Annexes

# Selection criteria for suspension systems

## Mechanical load

Different types of suspension systems can support different loads. The most important parameter when determining the right type of suspension system is the mechanical load in the respective application, which consists of the suspended enclosure with its built in components and the length of the extension arm.

After determining the suspended weight and the length of the extension arm in the suspension system, the overview opposite will help you select the right system.

Please note that when using a turn / tilt coupling for mounting the enclosure at the end of the suspension system, the enclosure itself should not exceed a load of 300 N.

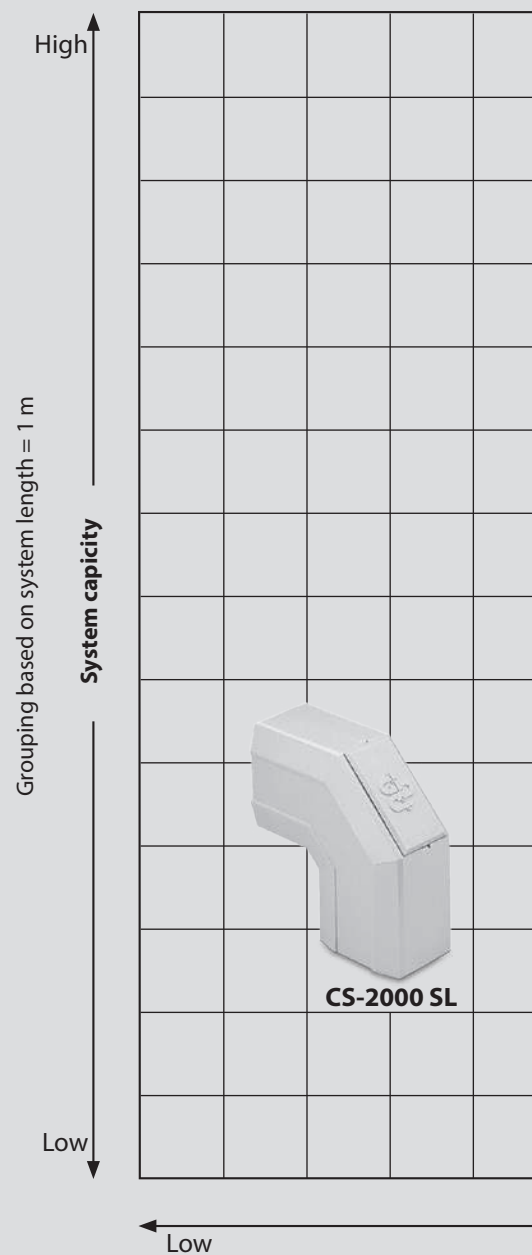
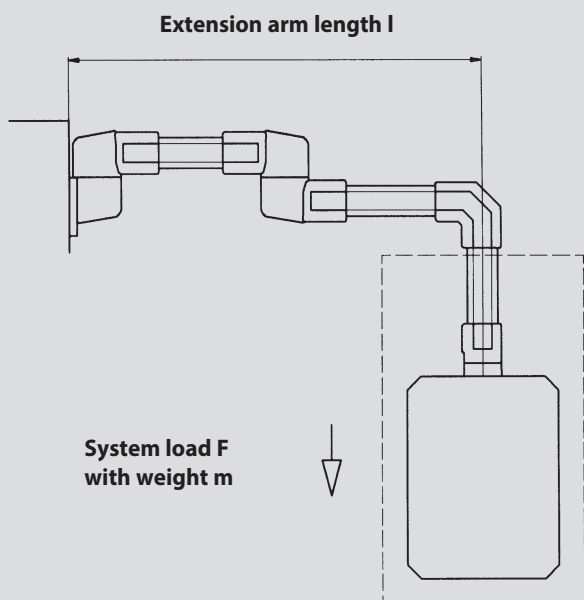
### Calculation of force F (system load) as a function of enclosure weight m:

$$F (N) = m (kg) \times g (ms^{-2})$$

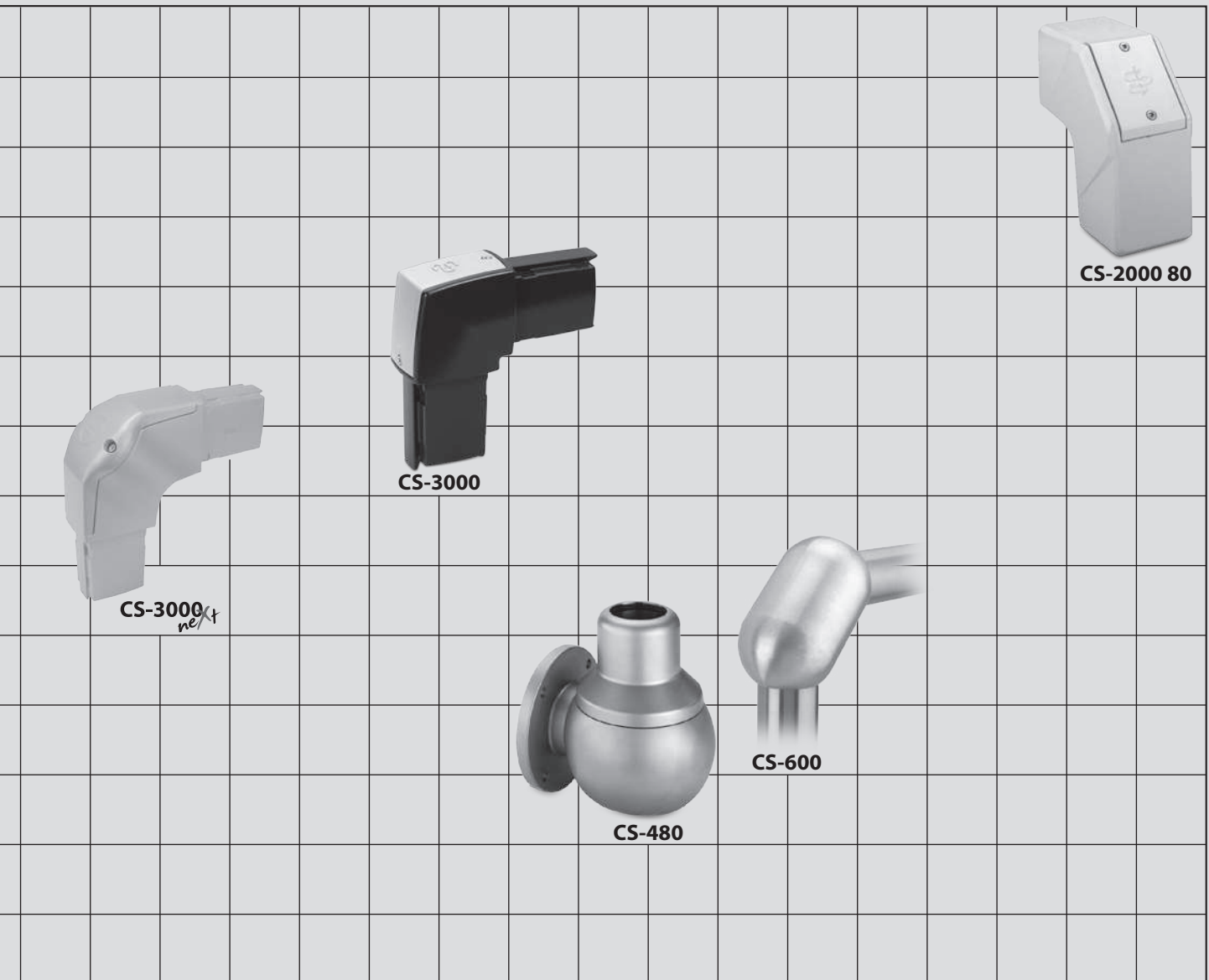
### System load F = enclosure weight m multiplied by acceleration due to gravity

$$F (N) = m (kg) \times 9,81 (ms^{-2})$$

The illustration opposite shows an overview of the various suspension systems. You will find more detailed information on the exact loads of the individual systems in the following sections.







**Performance** →

- Configuration options
- Mechanical stability
- Resistance

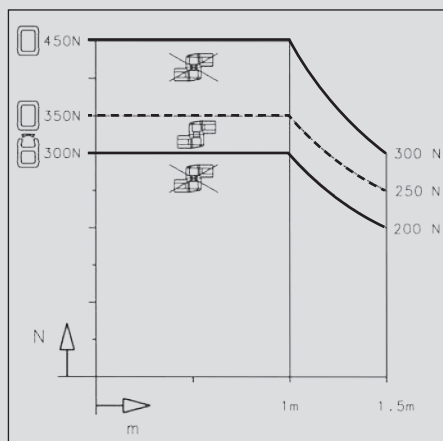
High

# Light-Duty Suspension System CS-2000 SL 45 / 60

The CS-2000 SL light-duty suspension system is specially designed for accepting small, lightweight control enclosures and features short extension arms. In addition to the components in light grey RAL 7035, a new version in white aluminium RAL 9006 is now available that elegantly complements our CC-3000, CC-4000 / CC-4000 SL and CC-5000 neXt control enclosures (see page 72 onwards).

## System structure

Individual components of the suspension system are combined with an optionally closed or partially open aluminium connection section to achieve the required configuration in accordance with the load diagram (with the exception of panel couplings).



## Load diagram

The above diagram shows the load bearing capacity of the CS-2000 SL range of suspension systems (with the exception of panel couplings).

The load bearing capacity of the system changes depending on the type of connecting section used (partially open or closed) or whether an intermediate joint is used.

The following safety factor generally applies:

With an additional load of 75 kg, the suspension system can be subjected to load for 5 seconds without plastic deformation occurring.

The overview on pages 104 / 105 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.



CS-2000 SL Standard  
RAL 7035 light grey or  
RAL 9006 white aluminium

## Materials

- Components: cast aluminium
- Installation opening: POM
- Bearing: POM
- Seals: CR
- Extruded aluminium connecting section
- Connecting section covers on open section: EPDM

## Colours

- Suspension system components:  
light grey RAL 7035  
alternatively: white aluminium RAL 9006
- Connecting section:  
silver (natural) anodised

## System features

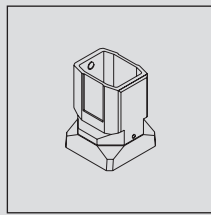
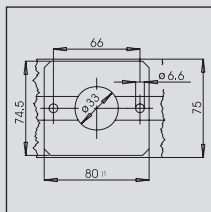
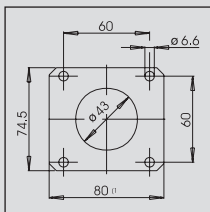
Installation opening at all joints

- Optionally closed or open connecting section can be used
- Clear passage opening in closed system:  
 $\varnothing 40 \text{ mm} = 12.5 \text{ cm}^2$  at narrowest point (bearing opening)
- Clear passage opening in partially open system:  
–  $2.76 \text{ cm}^2$  at narrowest point (entry of section in components)  
–  $7.40 \text{ cm}^2$  in closed tube
- Easily retrofittable swivel angle limitation on couplings and joints
- Couplings have a small narrow flange for mounting on very narrow enclosures
- Overhead installation of all components possible
- Protection class IP 65 (closed aluminium connection section)

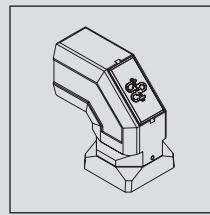
### Enclosure preparation for mounting couplings

The geometry of the flange on the straight coupling and on the elbow coupling makes it possible to mount even extremely narrow enclosures. Two centrally arranged threads, with which the coupling is secured to narrow enclosures, are additionally provided for this purpose.

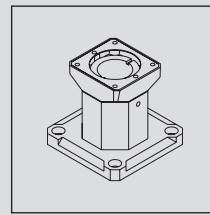
However, the coupling is mounted as standard by means of the four outer flange mounting threads, compatible and interchangeable with the flange mounting pattern of the CS-3000 suspension system. With a diameter of 43 mm, the hole for the cable leadthrough is adapted to the narrowest point in the suspension system (a minimum diameter of 40 mm is available in the bearing opening in the components).



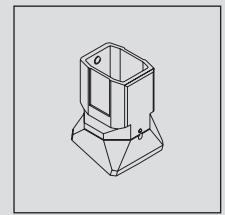
**Straight coupling**  
**Article number**  
**1015163000**  
**1015328000**



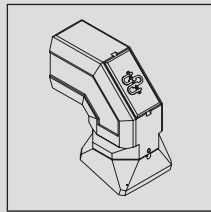
**Elbow coupling**  
**Article number**  
**1015165000**  
**1015329000**



**Base coupling**  
**Article number**  
**1015167000**  
**1015343000**

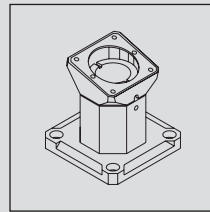


**Tilt coupling**  
**Article number**  
**1015164000**  
**1015330000**



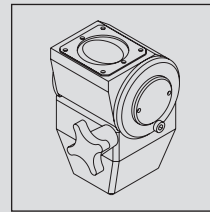
**Tilt elbow coupling**

**Article number**  
**1015166000**  
**1015331000**



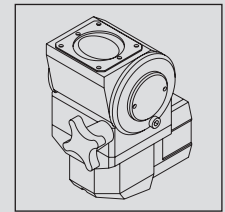
**Tilt base coupling**

**Article number**  
**1015168000**  
**1015344000**



**Turn / tilt coupling**

**Article number**  
**1015169000**  
**1015332000**

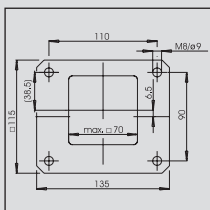


**Turn / tilt elbow couplin**

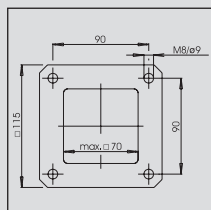
**Article number**  
**1015170000**  
**1015333000**

### Machining mounting surfaces for suspension systems

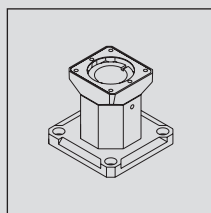
The various elements of the suspension systems can be mounted on walls or floors as well as on or at machines and systems. The corresponding machining drawings for the individual components of the suspension system are shown here.



**Wall joints**

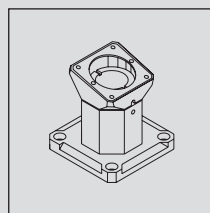


**Base and top joint components**



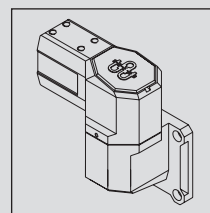
**Base coupling**

**Article number**  
**1015167000**  
**1015343000**



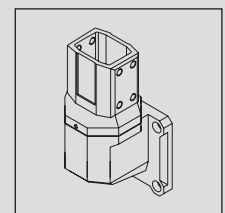
**Tilt base coupling**

**Article number**  
**1015168000**  
**1015344000**



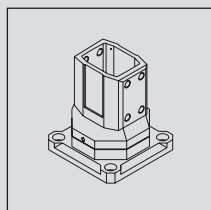
**Wall joint, horizontal outlet**

**Article number**  
**1015176000**  
**1015339000**



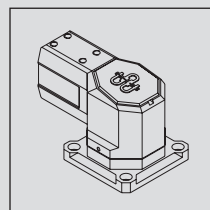
**Wall joint, vertical outlet**

**Article number**  
**1015177000**  
**1015338000**



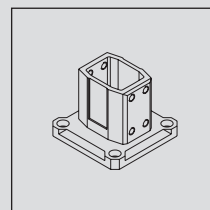
**Rotary base**

**Article number**  
**1015178000**  
**1015341000**



**Top joint**

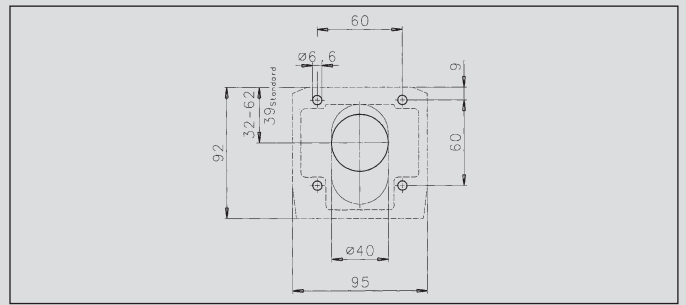
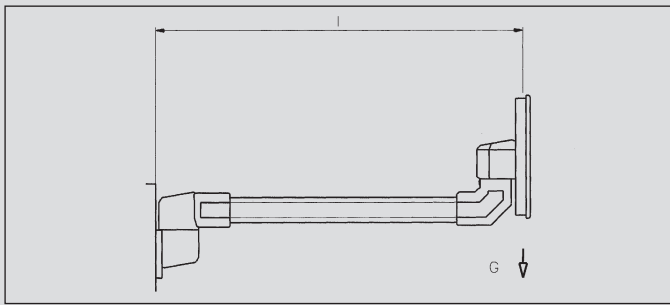
**Article number**  
**1015175000**  
**1015340000**



**Base / wall flange**

**Article number**  
**1015179000**  
**1015342000**

# Light-Duty Suspension System CS-2000 SL 45 / 60



## Load, panel components

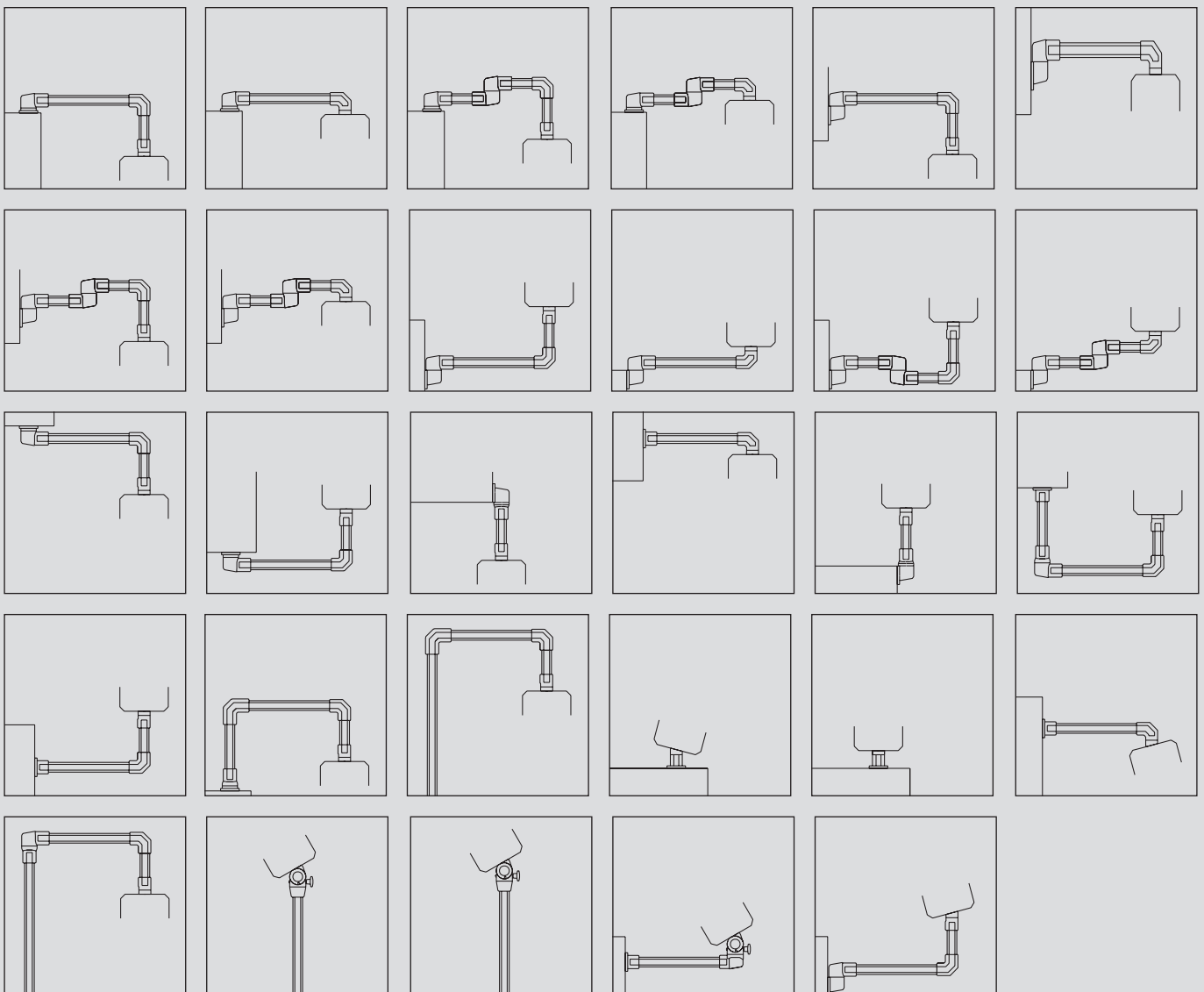
### Mechanical properties

Max. load G	250 N
Max. System length L	1500 mm

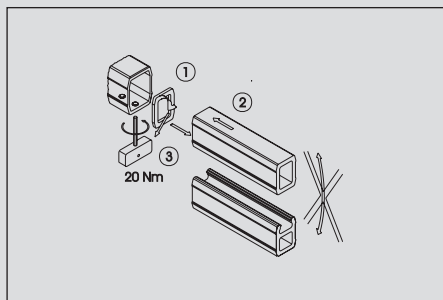
Drawing for preparing enclosure rear panel for attaching panel couplings

## System combinations

The large number of components and different versions of the connecting sections enable many different combinations. A selection of the possible configuration is shown below

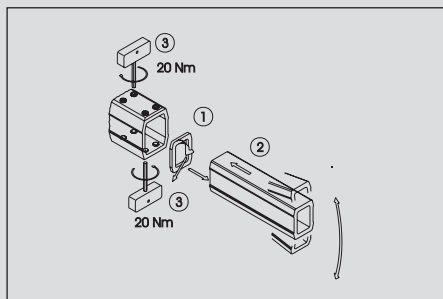


## Assembling the connecting sections



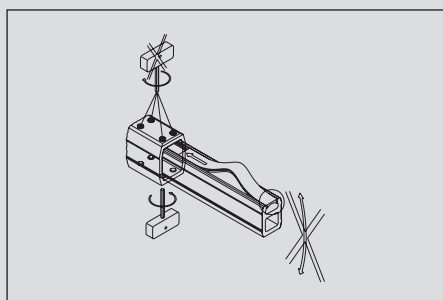
[A] Open or closed section in straight coupling and elbow coupling:

Adhere seal to connecting section (1), fit connecting section in suspension system component (2, 3).



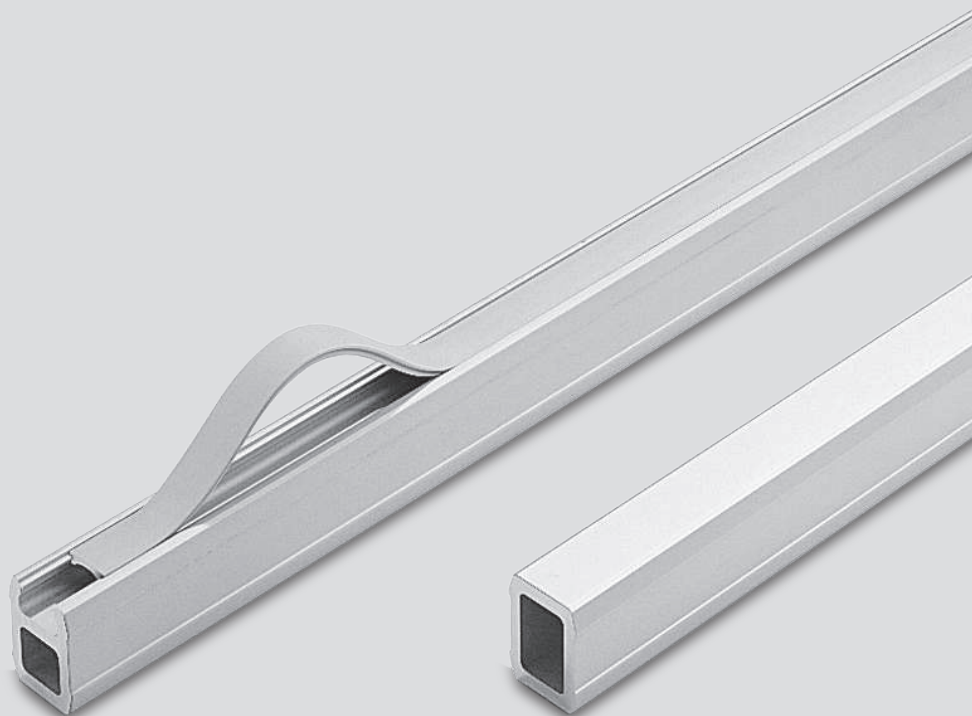
[B] Closed section in suspension system components with eight mounting screws:

Adhere seal to connecting section (1), fit connecting section in suspension system component (2, 3) while adjusting the section.



[C] Open section in suspension system components with eight mounting screws:

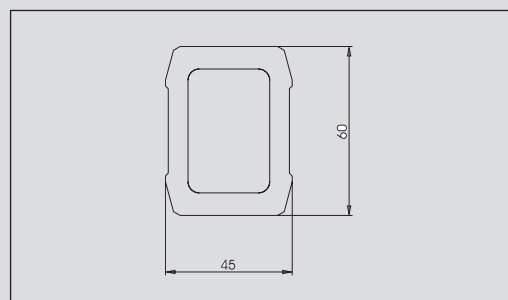
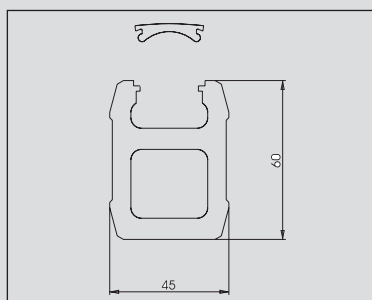
Adhere seal to connecting section, fit connecting section in suspension system component, only fit the four mounting screws on the closed part of the tubing, install cover seal.



## Connecting sections

The connecting section is a drawn aluminium AlMgSi 0.5 bar. The surface is anodised and therefore corresponds to a colour similar to RAL 9006. The connecting section can be used both in open as well as in completely closed cable ducts. The partly open section has an EPDM cover, coloured similar to RAL 7042. This flexible plastic cover can be easily withdrawn and reinserted.

Open section		Closed section	
Dimensions (mm)	Article number	Dimensions (mm)	Weights in kg
45 x 60 x 250	9524001000	45 x 60 x 250	0.90
45 x 60 x 500	9524002000	45 x 60 x 500	1.80
45 x 60 x 750	9524003000	45 x 60 x 750	2.60
45 x 60 x 1000	9524004000	45 x 60 x 1000	3.50
45 x 60 x 1250	9524005000	45 x 60 x 1250	4.40
45 x 60 x 1500	9524006000	45 x 60 x 1500	5.20
45 x 60 x 2000	9524008000	45 x 60 x 2000	6.90



You will find an aid for selecting the load bearing capacity on pages 104 / 105.

# Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Straight coupling CS-2000 SL	Elbow coupling CS-2000 SL
Article number	(colour)	1015163000 RAL 7035 light grey 1015369000 RAL 9006 white aluminium	1015165000 RAL 7035 light grey 1015370000 RAL 9006 white aluminium



Details	Angle of rotation 300° with stop. Complete with installation material and seals	Installation opening with snap-on plastic cover. Angle of rotation 300° with stop. Complete with installation material and seals
Weight in g	740	960
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 154 / 155	Swivel angle limiter 9805129000	Swivel angle limiter 9805129000

Application example		

Dimensions in mm		

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Turn / tilt coupling CS-2000 SL**

**1015169000** RAL 7035 light grey  
**1015371000** RAL 9006 white aluminium


**Turn / tilt elbow coupling CS-2000 SL**

**1015170000** RAL 7035 light grey  
**1015372000** RAL 9006 white aluminium


**Tilt coupling CS-2000 SL**

**1015164000** RAL 7035 light grey  
**1015373000** RAL 9006 white aluminium



Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with installation material and seals. Enclosure max. 300 N

3000  
 Aluminium

Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with installation material and seals. Enclosure max. 300 N

3300  
 Aluminium

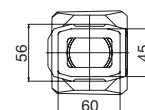
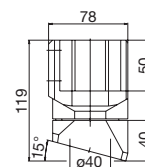
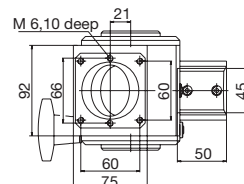
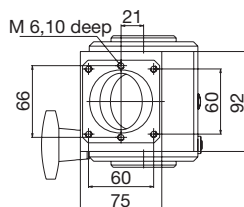
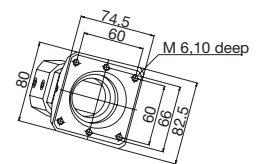
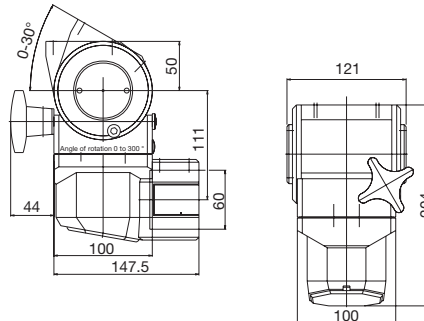
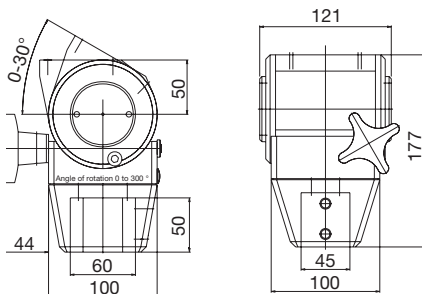
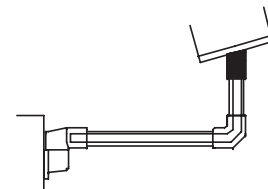
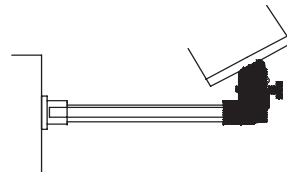
Tilt angle 15°. Angle of rotation 300° with stop. Complete with installation material and seals

1100  
 Aluminium

**Swivel angle limiter 9805130000**

**Swivel angle limiter 9805130000**

**Swivel angle limiter 9805129000**

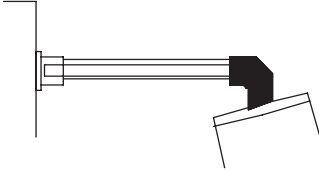
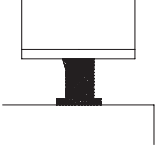


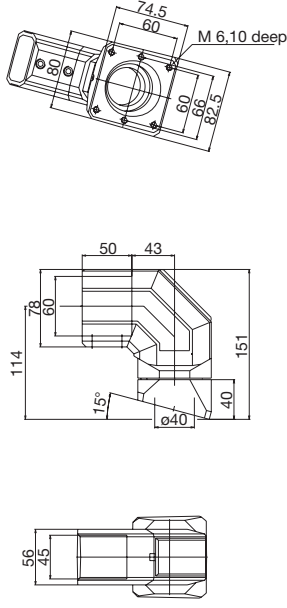
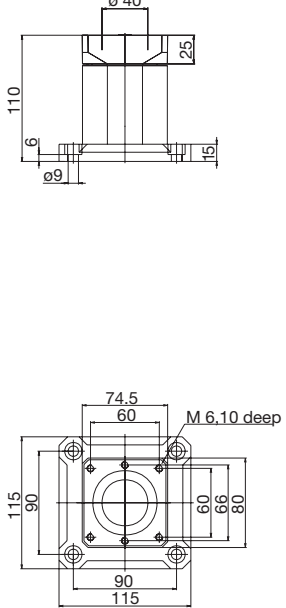
# Light-Duty Suspension System CS-2000 SL 45 / 60

Article	Tilt elbow coupling CS-2000 SL	Base coupling CS-2000 SL
Article number (colour)	1015166000 RAL 7035 light grey 1015374000 RAL 9006 white aluminium	1015167000 RAL 7035 light grey 1015375000 RAL 9006 white aluminium



Details	Tilt angle 15°. Installation opening with snap-on plastic cover. Angle of rotation 300° with stop. Complete with installation material and seals	Angle of rotation 300° with stop. Complete with installation material for enclosure and seals
Weight in g	1400	1180
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 154 / 155	Swivel angle limiter 9805129000	Swivel angle limiter 9805129000

Application example		
		

Dimensions in mm		
		

CAD files available at [www.bernstein.eu](http://www.bernstein.eu)



**Tilt base coupling CS-2000 SL**

**1015168000** RAL 7035 light grey  
**1015376000** RAL 9006 white aluminium


**Panel coupling**

**1015232000** RAL 7035 light grey  
**1015377000** RAL 9006 white aluminium


**Panel turn / tilt coupling S**

**1015235000** RAL 7035 light grey  
**1015378000** RAL 9006 white aluminium



Angle of rotation 300° with stop.  
 Fixed inclination of 15°.  
 Complete with installation material for enclosure  
 and seals

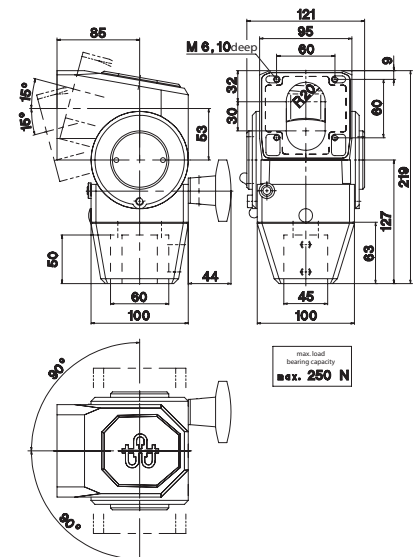
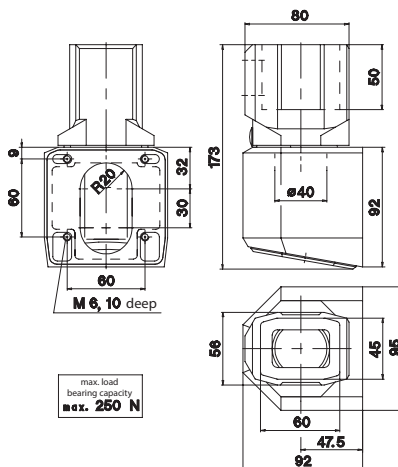
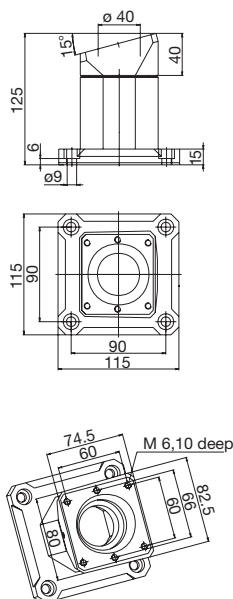
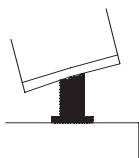
1200  
 Aluminium

For rear connection of narrow and lightweight  
 controller panels to the CS-2000 SL light-duty  
 suspension system; the maximum load of this  
 component is 250 N at a maximum system length  
 of 1500 mm

3000  
 Aluminium

For rear connection of narrow and lightweight  
 controller panels to the CS-2000 SL light-duty  
 suspension system; the maximum load of this  
 component is 250 N at a maximum system length  
 of 1500 mm

3400  
 Aluminium

**Swivel angle limiter 9805129000**


# Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Panel elbow coupling	Panel tilt / turn elbow coupling W
Article number	(colour)	1015233000 RAL 7035 light grey 1015379000 RAL 9006 white aluminium	1015236000 RAL 7035 light grey 1015380000 RAL 9006 white aluminium



Details	For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm	For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm
Weight in g	3000	3460
Material	Aluminium	Aluminium
Accessories (retrofitable)		
see pages 154 / 155		

Application example		
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Dimensions in mm		
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CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**Elbow CS-2000 SL**
**1015171000**  
**1015381000**

 RAL 7035 light grey  
 RAL 9006 white aluminium

**Elbow for torque load CS-2000 SL**
**1015172000**  
**1015382000**

 RAL 7035 light grey  
 RAL 9006 white aluminium

**Plug-on joint CS-2000 SL**
**1015173000**  
**1015383000**

 RAL 7035 light grey  
 RAL 9006 white aluminium

 Installation opening with snap-on plastic cover.  
 Complete with seals

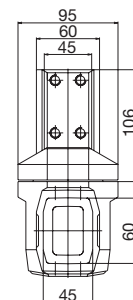
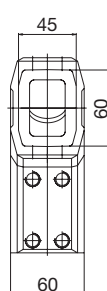
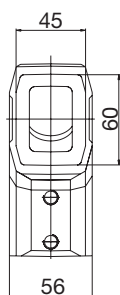
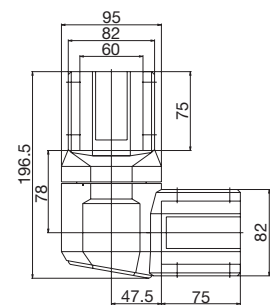
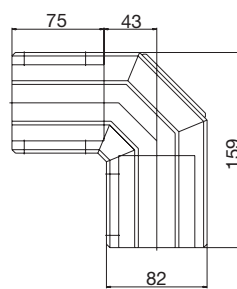
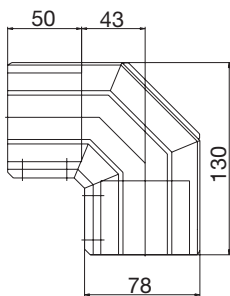
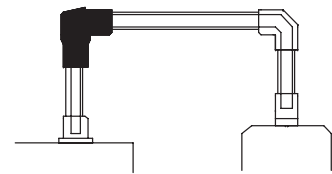
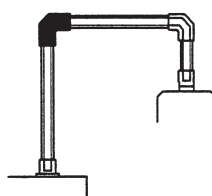
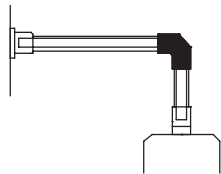
 Increased wall strength. Adjustment facility.  
 Installation opening with snap-on plastic cover.  
 Complete with seals

 Swivel angle 300° with stop.  
 Installation opening with snap-on plastic cover.  
 Complete with seals

 590  
 Aluminium

 1000  
 Aluminium

 1850  
 Aluminium

**Swivel angle limiter 9805132000**


# Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Intermediate joint CS-2000 SL		Top joint CS-2000 SL	
Article number	(colour)	1015174000	RAL 7035 light grey	1015175000	RAL 7035 light grey
		1015384000	RAL 9006 white aluminium	1015385000	RAL 9006 white aluminium



Details	Swivel angle 360° with limit stop. Installation openings both ends. Adjustment facility. Complete with seals	Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals
Weight in g	2130	1720
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 154 / 155	Swivel angle limiter <b>9805132000</b>	Swivel angle limiter <b>9805132000</b>

Application example		

Dimensions in mm		

CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Wall joint, vertical outlet CS-2000 SL**

1015177000 RAL 7035 light grey  
1015386000 RAL 9006 white aluminium


**Wall joint, horizontal outlet CS-2000 SL**

1015176000 RAL 7035 light grey  
1015387000 RAL 9006 white aluminium


**Base, rotary CS-2000 SL**

1015178000 RAL 7035 light grey  
1015388000 RAL 9006 white aluminium



Swivel angle 300° with stop. Adjustment facility.  
Installation opening with snap-on plastic cover.  
Complete with seals

1840  
Aluminium

Swivel angle 300° with stop. Adjustment facility.  
Installation opening with snap-on plastic cover.  
Complete with seals

2090  
Aluminium

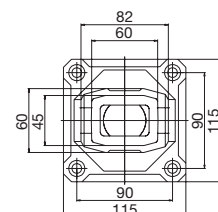
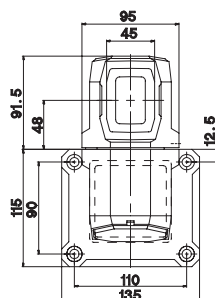
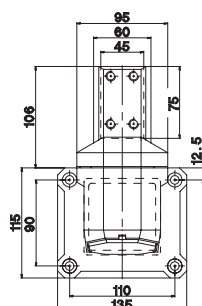
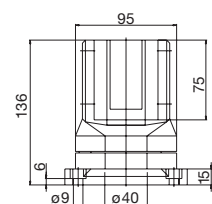
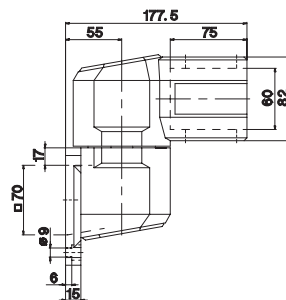
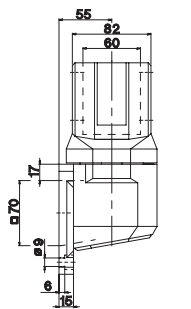
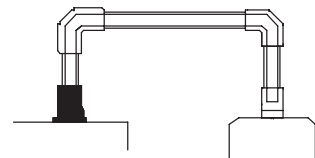
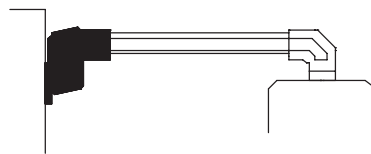
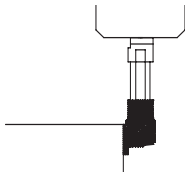
Angle of rotation 300° with stop Adjustment facility.  
Complete with seals

1460  
Aluminium

Swivel angle limiter 9805132000

Swivel angle limiter 9805132000

Swivel angle limiter 9805132000

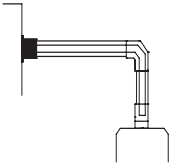



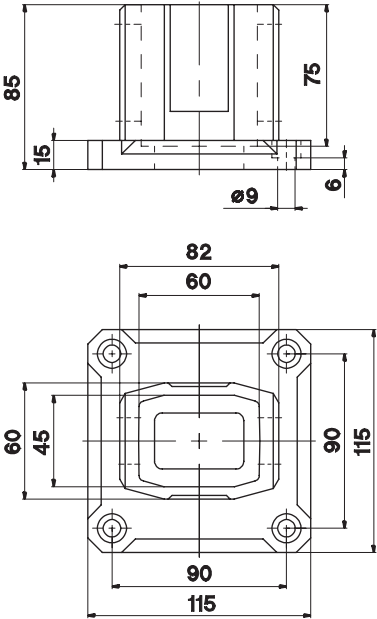
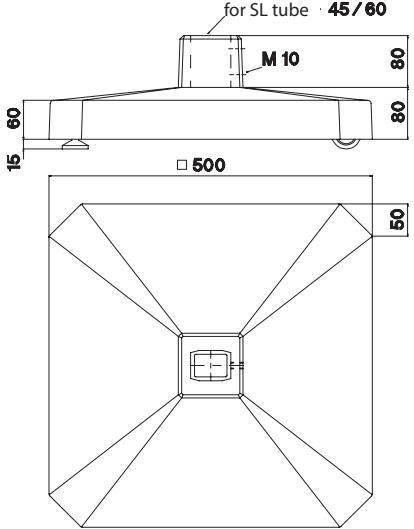
# Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Base, wall flange CS-2000 SL		Free-standing base CS-2000 SL	
Article number	(colour)	1015179000	RAL 7035 light grey	1015180000	RAL 7035 light grey
		1015389000	RAL 9006 white aluminium	1015390000	RAL 9006 white aluminium



Details	Adjustment facility. Complete with seals	Base for free-standing applications
Weight in g	690	11820
Material	Aluminium	Aluminium
Accessories (retrofitable)		
see pages 154 / 155		

Application example		
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Dimensions in mm		
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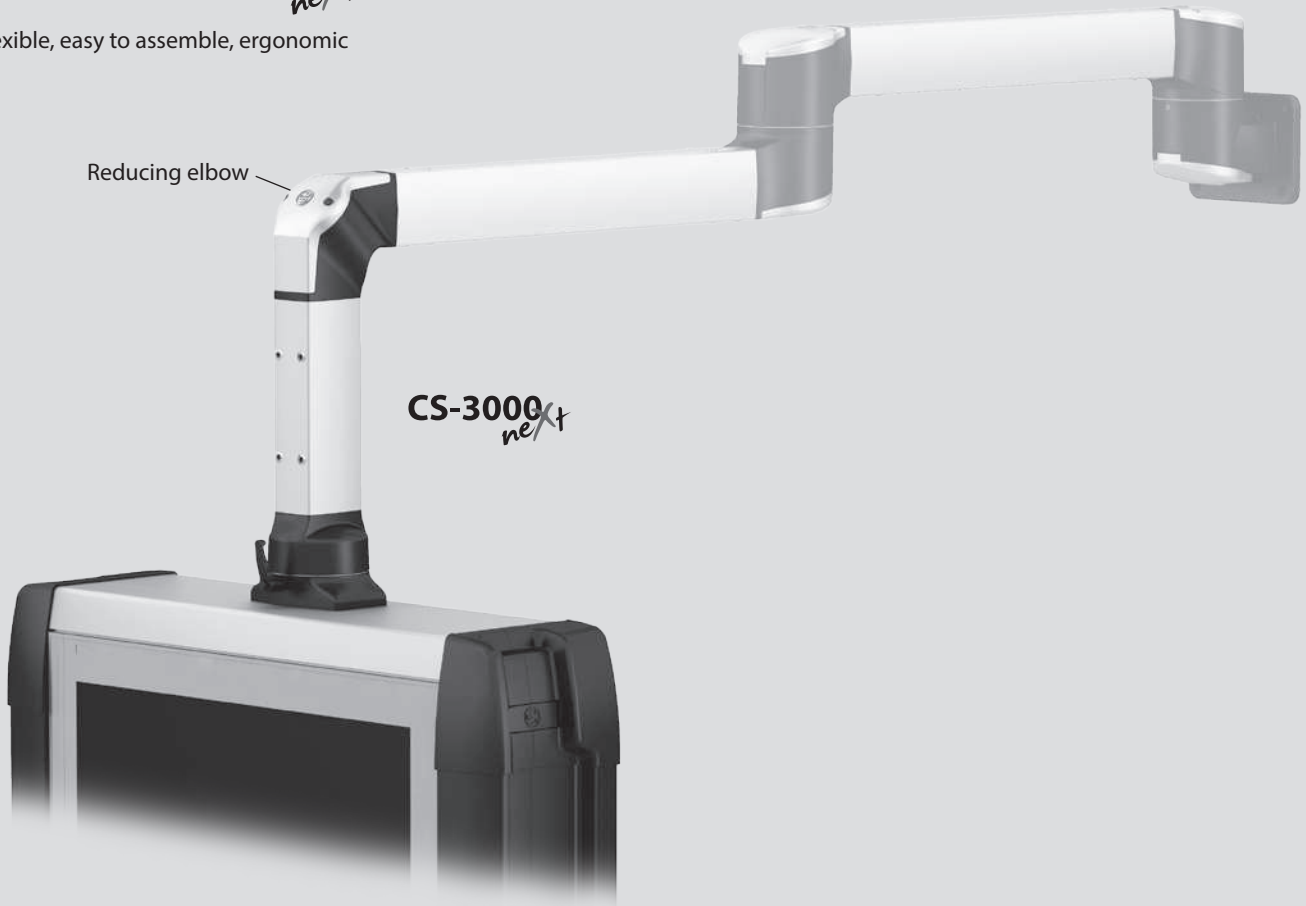
CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**BERNSTEIN Aluminium Suspension Systems**

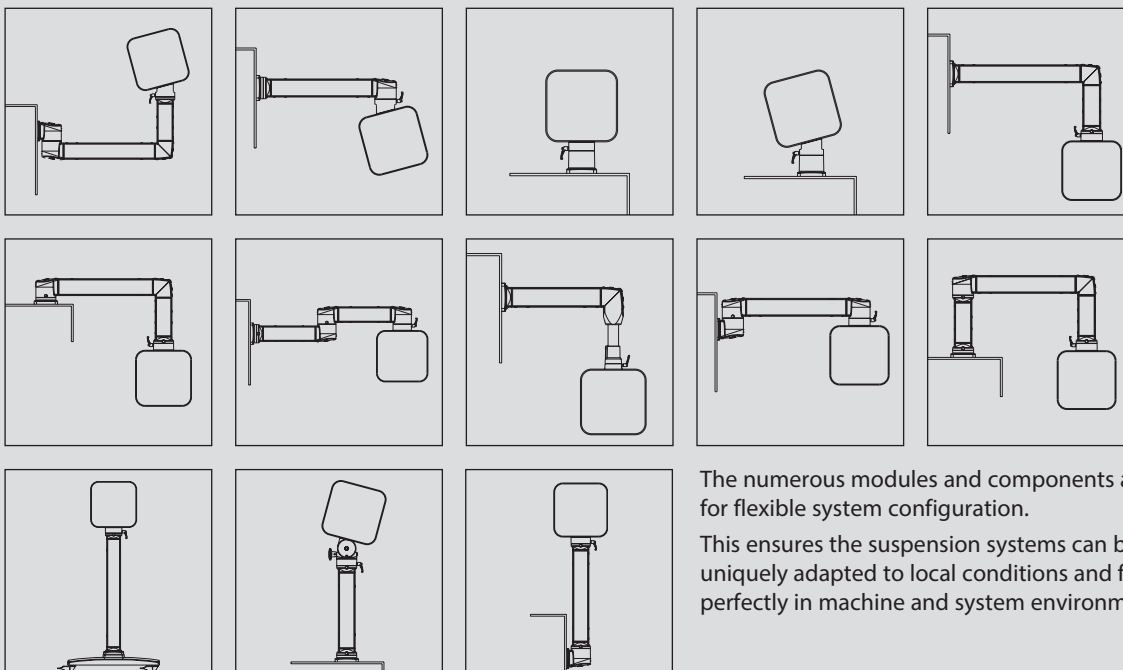
**CS-3000 and CS-3000<sub>next</sub>**

flexible, easy to assemble, ergonomic

CS-3000



**Application examples for CS-3000 / CS-3000<sub>next</sub> suspension system – Versatile configuration options**



The numerous modules and components allow for flexible system configuration. This ensures the suspension systems can be uniquely adapted to local conditions and fit perfectly in machine and system environments.

# Suspension System CS-3000 Family

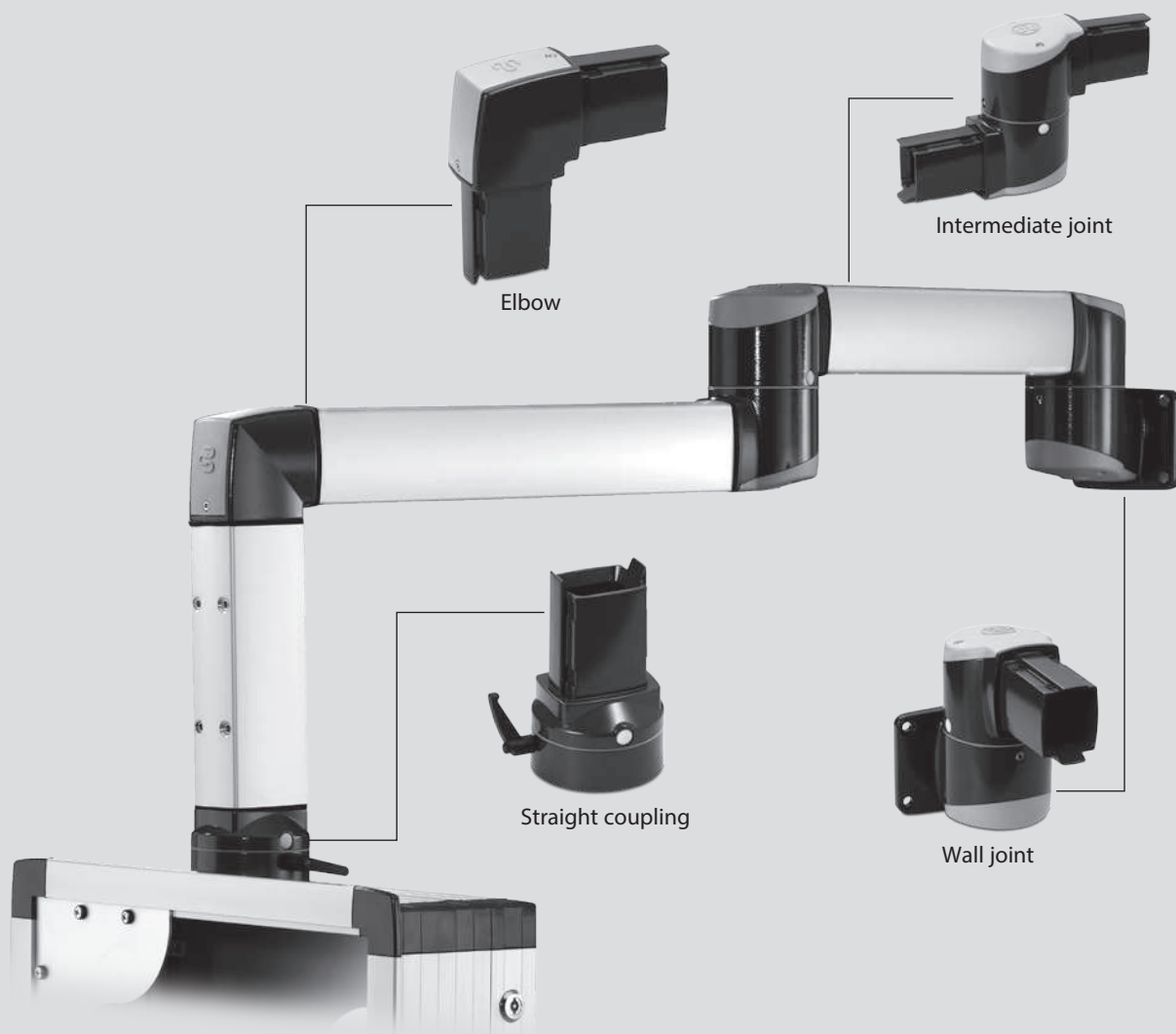
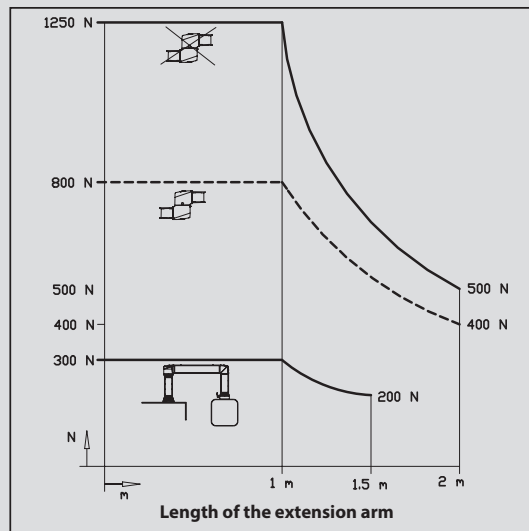
## Flexible and efficient: The BERNSTEIN CS-3000

In the main, system constructors expect modern suspension systems to feature variable configuration, progressive design and complete ease installation.

BERNSTEIN sets standards with the CS-3000: Modern industrial design, well-conceived ergonomics! The combinable components create an innovative system solution based on modular principles for attaching enclosures, especially the BERNSTEIN CC-3000, CC-4000, CC-4000 SL and CC-5000 neXt enclosures (see page 72 onwards), to machines and systems.

The particular ease of assembly and installation of the CS-3000 is reflected in substantial time savings and cost efficiency.

## Load diagram for static load capacity CS-3000



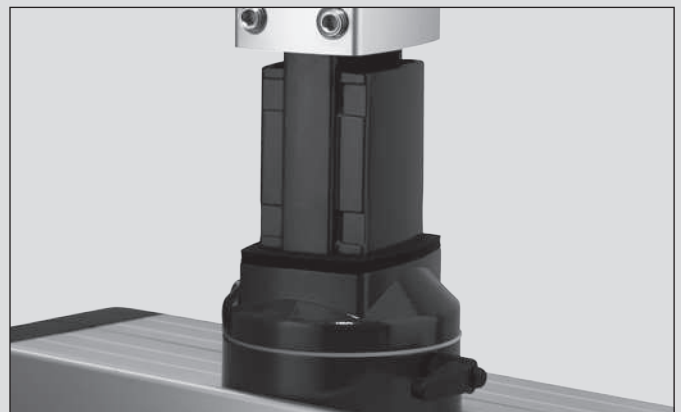


**In addition to the positively locking tube mounting screws other features include:**

- **Six-fold form-fit** thanks to component contour in tube attachment area (the otherwise optional safety hole additionally required for overhead installation is rendered unnecessary)
- **One-man installation** of the complete system
- **Infinitely variable system alignment** by means of tube mounting screws
- **Subsequent alignment** at any time without dismantling the complete system
- Cable and installation openings at all joints in the system
- Different tube lengths for variable configuration
- Tube machined at one end can be cut to required length (machining templates supplied)
- **Adjustable torque**  
Fine adjustment of firmness by means of clamping lever or screw



Intelligent design with smooth flowing transition lines for ease of cleaning



Six-fold form-fit thanks to component contour in tube attachment area



Effortless readjustment possible at any time without the need to dismantle the complete system

**Other system features:**

- Anodises aluminium tubes for long service life and reliable operation
- Smooth flowing transition lines from the tube to other components prevent dirt built-up (easy to clean)
- Coated tube mounting screws for sealing threaded holes and secure screw connections
- Elegant appearance with narrow sections connected by adapting the cross section from square to round tube
- Modular coupling configurations possible (also subsequently), e.g. with adapter for narrow enclosures or tilt adapter
- Well-conceived ergonomics for easy and virtually fatigue-free operation
- An ideal single-source solution for BERNSTEIN control enclosures
- Protection class IP 65

# Suspension System CS-3000 neXt

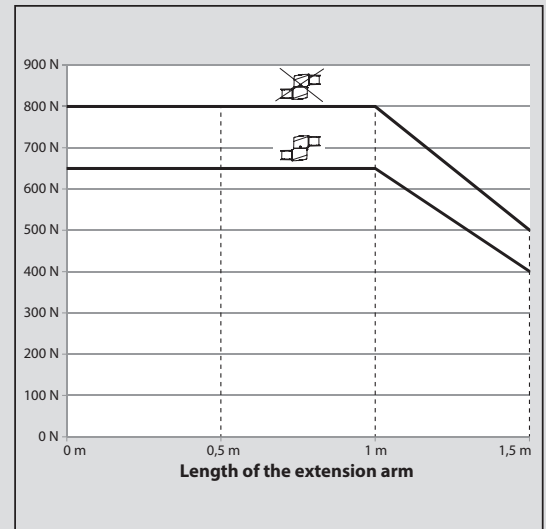
## The new BERNSTEIN Aluminium Suspension System

The CS-3000 neXt combines functionality with an appealing design. The new system is an important addition to the CS-3000 series, it is easy to clean and benefits from simplified installation, outstanding visual characteristics such as smooth transitions between tube and component and the high quality which BERNSTEIN is known for. The wide range of components, the high strength of the system and the load capacity provide individual solutions.

Standard colouring:  
Components finished to RAL 9006 white aluminium or  
RAL 7016 anthracite grey  
Connection section: Natural anodised finish

Components (incl. caps) and connection sections can be optionally special-coated to a wide variety of RAL colours.

## Load diagram for static load capacity CS-3000 neXt



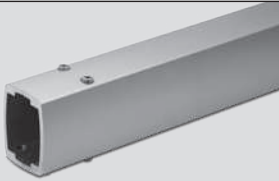
## Highlights

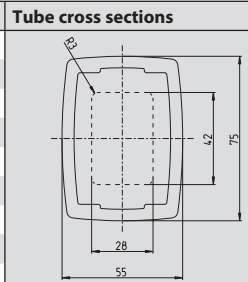



Reducing elbow

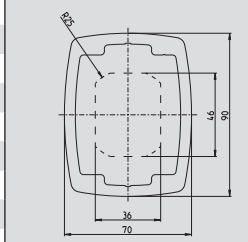



Panel coupling

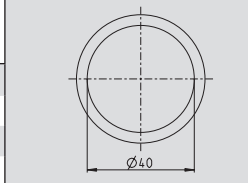
CS-3000 neXt Aluminium connection section			
	Standard lengths (available from stock)	Article number	Weights in kg
	Length 55 x 75 x 250 mm	<b>9524700001</b>	0.90
	Length 55 x 75 x 500 mm	<b>9524700002</b>	1.70
	Length 55 x 75 x 750 mm	<b>9524700003</b>	2.60
	Length 55 x 75 x 1000 mm	<b>9524700004</b>	3.40
	Length 55 x 75 x 1250 mm	<b>9524700005</b>	4.30
	Length 55 x 75 x 1500 mm	<b>9524700006</b>	5.20



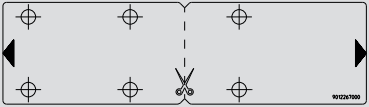
CS-3000 Aluminium connection section			
	Standard lengths (available from stock)	Article number	Weights in kg
	Length 70 x 90 x 250 mm	<b>9524500001</b>	1.30
	Length 70 x 90 x 500 mm	<b>9524500002</b>	2.50
	Length 70 x 90 x 750 mm	<b>9524500003</b>	3.70
	Length 70 x 90 x 1000 mm	<b>9524500004</b>	5.00
	Length 70 x 90 x 1250 mm	<b>9524500005</b>	6.20
	Length 70 x 90 x 1500 mm	<b>9524500006</b>	7.50
	Length 70 x 90 x 1750 mm	<b>9524500007</b>	8.70
	Length 70 x 90 x 2000 mm	<b>9524500008</b>	10.00





CS-3000 neXt			
Round aluminium tubing			
Round aluminium tubes are available in different lengths. We can also supply completely machined tubes to the length you require. (prices and delivery time on request)			
	Length 48 x 4 x 250 mm	<b>9521400000</b>	0.40
	Length 48 x 4 x 500 mm	<b>9521401000</b>	0.80
	Length 48 x 4 x 750 mm	<b>9521402000</b>	1.10
	Length 48 x 4 x 1000 mm	<b>9521403000</b>	1,50

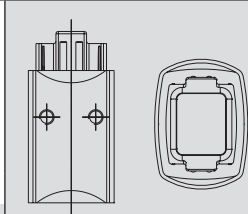


<b>Special tube lengths</b>	<p><b>Machined tubes to required lengths</b> We can also supply completely machined tubes to the length you require (price and delivery time on request). Or use our Express Service.</p>	<b>Express Service</b>
-----------------------------	---	------------------------

Drilling label for special tube lengths					
	<p>Using the template, bore the holes in the exact positions. Choose the appropriate connection section and order the number of drilling templates required.</p> <table border="1"> <tr> <td><b>CS-3000</b></td> <td><b>9012267000</b></td> </tr> <tr> <td><b>CS-3000 neXt</b></td> <td><b>9012328000</b></td> </tr> </table>	<b>CS-3000</b>	<b>9012267000</b>	<b>CS-3000 neXt</b>	<b>9012328000</b>
<b>CS-3000</b>	<b>9012267000</b>				
<b>CS-3000 neXt</b>	<b>9012328000</b>				

Drilling jigs for special tube lengths					
	<p>Once the tube has been cut to its desired length, drilling jigs can be fitted. The jigs ensure a stable base and help prevent tube damaged. The integrated drill bushes specify the location of the threaded holes and guide the drill.</p> <table border="1"> <tr> <td><b>CS-3000 (Four-part set)</b></td> <td><b>9806935000</b></td> </tr> <tr> <td><b>CS-3000 neXt (Three-part set)</b></td> <td><b>9806936000</b></td> </tr> </table>	<b>CS-3000 (Four-part set)</b>	<b>9806935000</b>	<b>CS-3000 neXt (Three-part set)</b>	<b>9806936000</b>
<b>CS-3000 (Four-part set)</b>	<b>9806935000</b>				
<b>CS-3000 neXt (Three-part set)</b>	<b>9806936000</b>				

Tube adapter for CS-3000 for special lengths without tube preparation							
	<p>Once the tube had been shortened, the adapter can be screwed to the tube. The tube adapter can then be fixed to the component and the system can be adjusted as required. Attention: Install the tube adapter only onto the housing side, see application example on page 140! Additional information is also available on page 140.</p> <table border="1"> <tr> <td>RAL 9006 white aluminium</td> <td><b>1015300208</b></td> <td>0.70</td> </tr> <tr> <td>RAL 7016 anthracite grey</td> <td><b>1015300039</b></td> <td>0.70</td> </tr> </table>	RAL 9006 white aluminium	<b>1015300208</b>	0.70	RAL 7016 anthracite grey	<b>1015300039</b>	0.70
RAL 9006 white aluminium	<b>1015300208</b>	0.70					
RAL 7016 anthracite grey	<b>1015300039</b>	0.70					

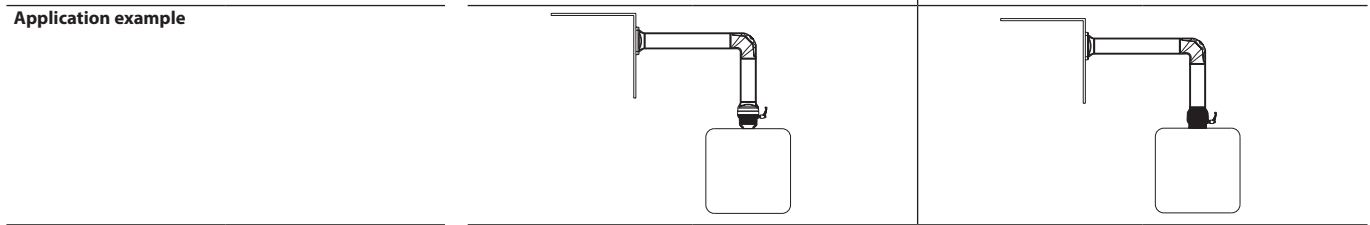


# Suspension System CS-3000 next

Article		Adapter (narrow section)	Straight coupling
Article number	(colour)	1017300001 RAL 9006 white aluminium 1017300016 RAL 7016 anthracite grey	1017300002 RAL 9006 white aluminium 1017300017 RAL 7016 anthracite grey



Details	Only to be used together with couplings. (for attachment to narrow enclosures with depths < 83 mm)	Angle of rotation 300° with stop. <b>Adapter (narrow section)</b> is required for attachment to enclosures < 83 mm
Weight in g	300	1630
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 143		<b>Swivel angle limiter</b> 9806906000



**Dimensions in mm**

	<p>Machining drawing for mounting surfaces</p>

CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**Elbow coupling**

**1017300003** RAL 9006 white aluminium  
**1017300018** RAL 7016 anthracite grey


**Panel coupling S**

**1017300004** RAL 9006 white aluminium  
**1017300019** RAL 7016 anthracite grey


**Panel coupling W**

**1017300005** RAL 9006 white aluminium  
**1017300020** RAL 7016 anthracite grey



Angle of rotation 300° with stop,  
 screw-fit installation opening

For attachments to the rear of panels / displays or  
 control enclosures with screw-fit rear panel.  
 Standard hole pattern VESA 75/100  
 Angle of rotation 300° with stop,  
 screw-fit installation opening

For attachments to the rear of panels / displays or  
 control enclosures with screw-fit rear panel.  
 Standard hole pattern VESA 75/100  
 Angle of rotation 300° with stop,  
 screw-fit installation opening

2070

Aluminium

2530

Aluminium

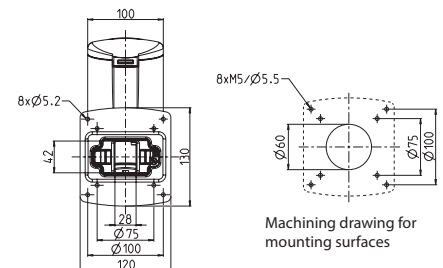
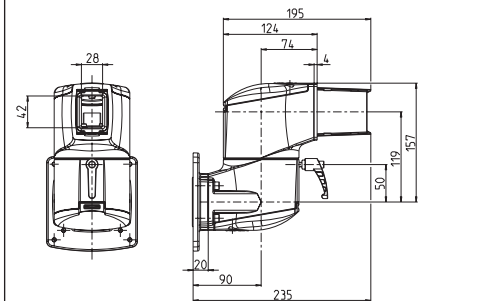
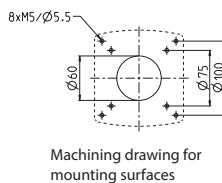
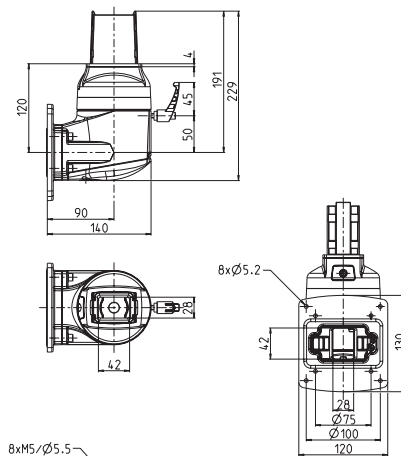
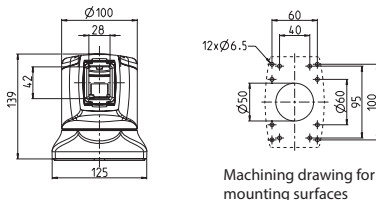
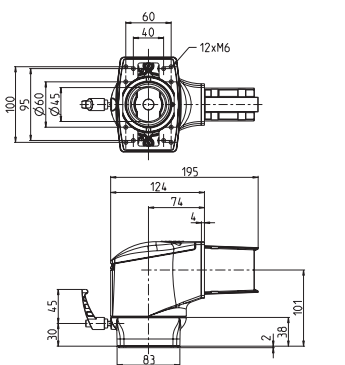
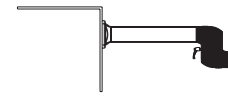
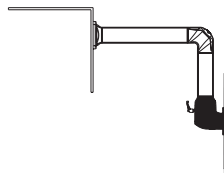
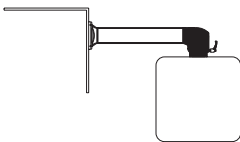
2970

Aluminium

**Swivel angle limiter** **9806906000**  
**Signal lamp adapter** **9805400000**

**Swivel angle limiter** **9806906000**

**Swivel angle limiter** **9806906000**  
**Signal lamp adapter** **9805400000**



# Suspension System CS-3000 next

Article		Elbow	Elbow, rotary
Article number	(colour)	1017300007 1017300022	1017300008 1017300023
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey



Details	Screw-fit installation opening	Angle of rotation 300° with stop, screw-fit installation opening
Weight in g	1250	2320
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 143	Signal lamp adapter <b>9805401000</b>	Swivel angle limiter <b>9806906000</b> Signal lamp adapter <b>9805400000</b>

Application example		

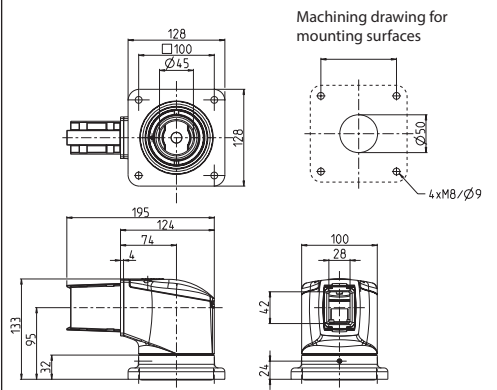
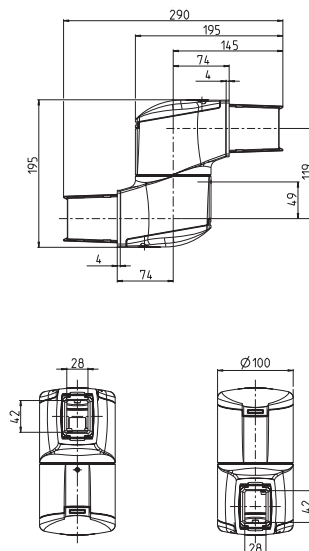
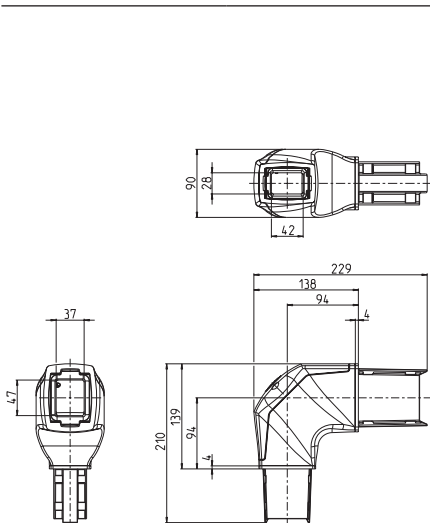
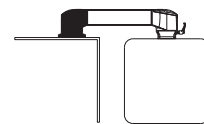
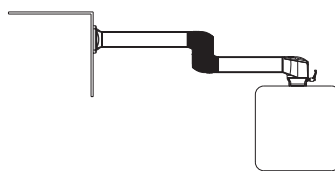
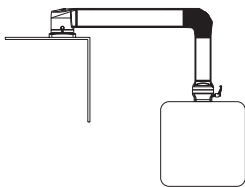
Dimensions in mm		

**CAD files available at [www.bernstein.eu](http://www.bernstein.eu)**

Reducing elbow		Intermediate joint		Top joint	
<b>1017300009</b>	RAL 9006 white aluminium	<b>1017300010</b>	RAL 9006 white aluminium	<b>1017300014</b>	RAL 9006 white aluminium
<b>1017300024</b>	RAL 7016 anthracite grey	<b>1017300025</b>	RAL 7016 anthracite grey	<b>1017300029</b>	RAL 7016 anthracite grey

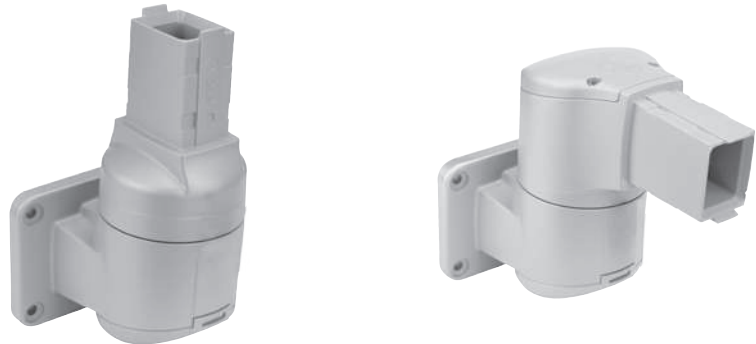


Elbow coupling for combining CS-3000 neXt with the CS-3000 suspension systems, screw-fit installation opening	Angle of rotation 300° with stop, 2 screw-fit installation openings	Angle of rotation 300° with stop, screw-fit installation opening
1770	2740	2200
Aluminium	Aluminium	Aluminium
<b>Signal lamp adapter</b> <b>9805402000</b>	<b>Swivel angle limiter</b> <b>9806906000</b>	<b>Swivel angle limiter</b> <b>9806906000</b>
	<b>Signal lamp adapter</b> <b>9805400000</b>	<b>Signal lamp adapter</b> <b>9805400000</b>



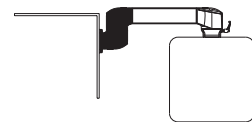
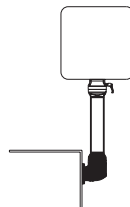
# Suspension System CS-3000 next

Article		Wall joint S	Wall joint W
Article number	(colour)	1017300011 1017300026	1017300012 1017300027
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey

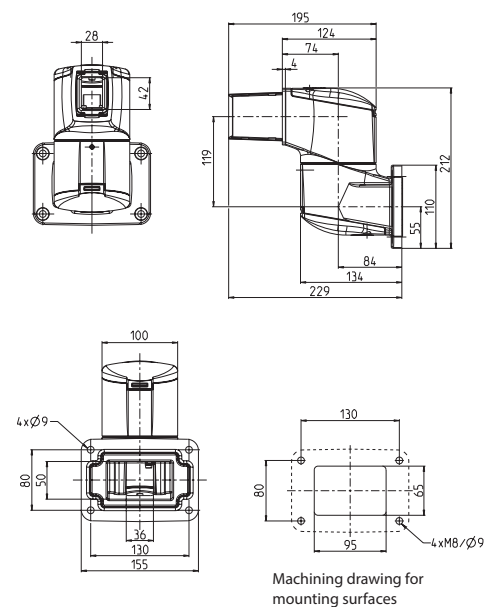
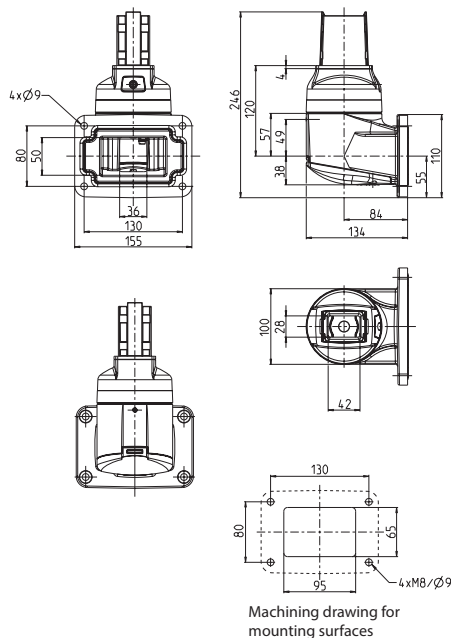


Details	Angle of rotation 300° with stop, screw-fit installation opening	Angle of rotation 300° with stop, 2 screw-fit installation openings
Weight in g	2490	2930
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 143	Swivel angle limiter 9806906000 Signal lamp adapter 9805400000	Swivel angle limiter 9806906000 Signal lamp adapter 9805400000

## Application example



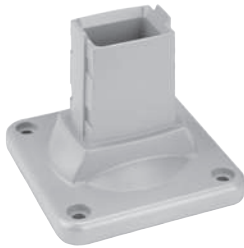
## Dimensions in mm



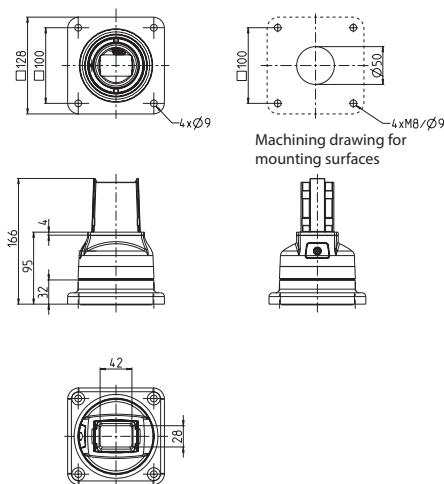
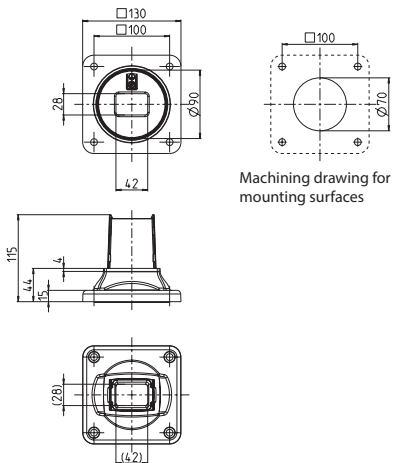
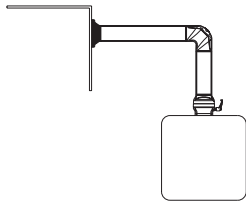
CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



Base / wall flange		Base, rotary	
1017300015	RAL 9006 white aluminium	1017300013	RAL 9006 white aluminium
1017300030	RAL 7016 anthracite grey	1017300028	RAL 7016 anthracite grey



	Angle of rotation 300° with stop	
830	1770	
Aluminium	Aluminium	
	<b>Swivel angle limiter</b>	<b>9806906000</b>



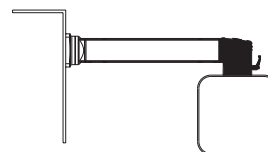
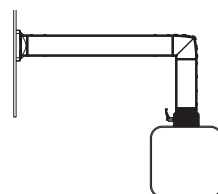
# Suspension System CS-3000

Article		Straight coupling	Elbow coupling
Article number	(colour)	1015300177 RAL 9006 white aluminium 1015300001 RAL 7016 anthracite grey	1015300178 RAL 9006 white aluminium 1015300002 RAL 7016 anthracite grey

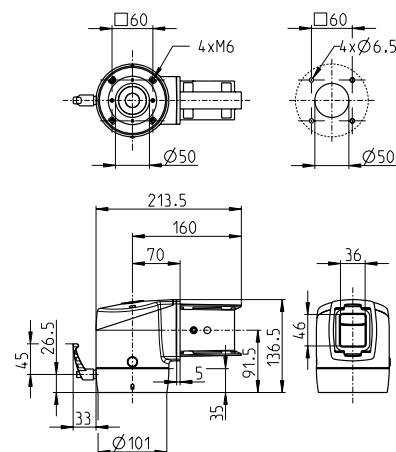
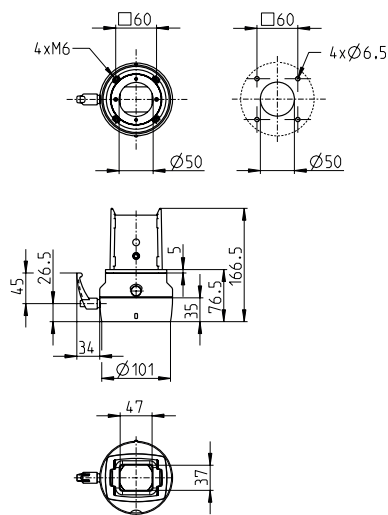


Details	Angle of rotation 300° with stop Adaptation on narrow enclosures < 101 mm, see page 140	Angle of rotation 300° with stop, installation opening including screw-fit plastic cover																				
Weight in g	1450	2070																				
Material	Aluminium	Aluminium																				
Accessories (retrofitable) see pages 139, 143	<table border="1"> <tbody> <tr> <td>Swivel angle limiter</td> <td>9805296000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 9006</td> <td>9806942000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 7016</td> <td>9806941000</td> </tr> <tr> <td>Tilt adapter 30° RAL 9006</td> <td>1015300193</td> </tr> <tr> <td>Tilt adapter 30° RAL 7016</td> <td>1015300012</td> </tr> </tbody> </table>	Swivel angle limiter	9805296000	SIMATIC Pro® adapter RAL 9006	9806942000	SIMATIC Pro® adapter RAL 7016	9806941000	Tilt adapter 30° RAL 9006	1015300193	Tilt adapter 30° RAL 7016	1015300012	<table border="1"> <tbody> <tr> <td>Swivel angle limiter</td> <td>9805296000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 9006</td> <td>9806942000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 7016</td> <td>9806941000</td> </tr> <tr> <td>Tilt adapter 30° RAL 9006</td> <td>1015300193</td> </tr> <tr> <td>Tilt adapter 30° RAL 7016</td> <td>1015300012</td> </tr> </tbody> </table>	Swivel angle limiter	9805296000	SIMATIC Pro® adapter RAL 9006	9806942000	SIMATIC Pro® adapter RAL 7016	9806941000	Tilt adapter 30° RAL 9006	1015300193	Tilt adapter 30° RAL 7016	1015300012
Swivel angle limiter	9805296000																					
SIMATIC Pro® adapter RAL 9006	9806942000																					
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Tilt adapter 30° RAL 9006	1015300193																					
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Swivel angle limiter	9805296000																					
SIMATIC Pro® adapter RAL 9006	9806942000																					
SIMATIC Pro® adapter RAL 7016	9806941000																					
Tilt adapter 30° RAL 9006	1015300193																					
Tilt adapter 30° RAL 7016	1015300012																					

## Application example



## Dimensions in mm



CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Tilt coupling 15° A**

**1015300179** RAL 9006 white aluminium  
**1015300013** RAL 7016 anthracite grey


**Tilt coupling 15° B**

**1015300180** RAL 9006 white aluminium  
**1015300014** RAL 7016 anthracite grey


**Tilt elbow coupling 15° A**

**1015300181** RAL 9006 white aluminium  
**1015300015** RAL 7016 anthracite grey



Angle of rotation 300° with stop,  
 fixed tilt of 15° (variant A tilted back)

Angle of rotation 300° with stop,  
 fixed tilt of 15° (variant B tilted forward)

Angle of rotation 300° with stop, fixed tilt of 15°,  
 installation opening including screw-fit plastic cover  
 (variant A tilted back)

1680

Aluminium

1680

Aluminium

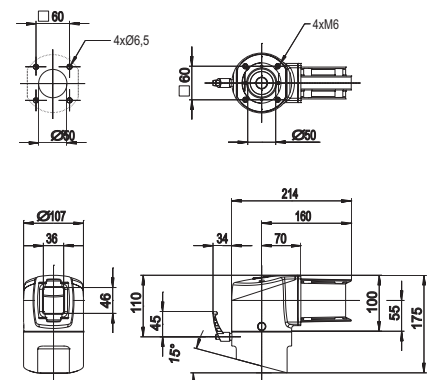
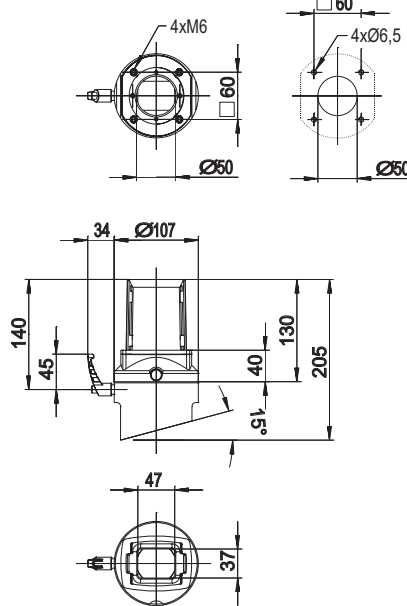
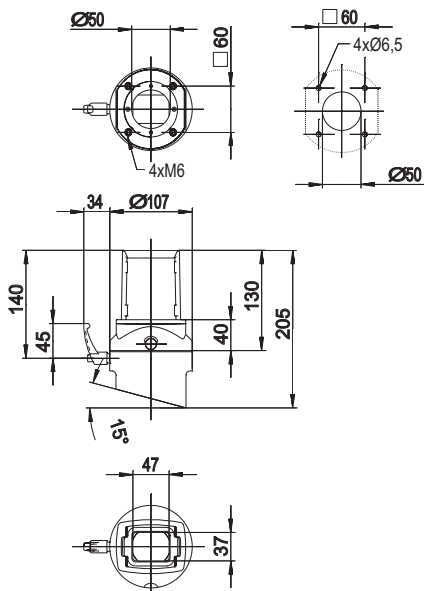
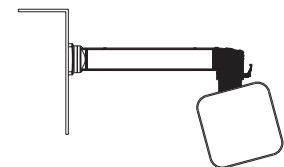
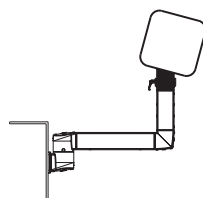
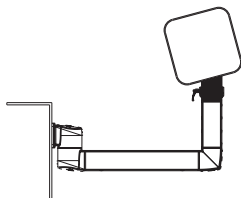
2160

Aluminium

**Swivel angle limiter** 9805296000  
**SIMATIC Pro® adapter RAL 9006** 9806940000  
**SIMATIC Pro® adapter RAL 7016** 9806939000

**Swivel angle limiter** 9805296000  
**SIMATIC Pro® adapter RAL 9006** 9806940000  
**SIMATIC Pro® adapter RAL 7016** 9806939000

**Swivel angle limiter** 9805296000  
**SIMATIC Pro® adapter RAL 9006** 9806940000  
**SIMATIC Pro® adapter RAL 7016** 9806939000  
**Signal lamp adapter** 9805317000



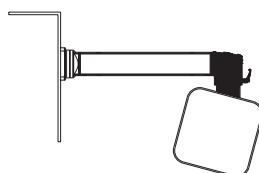
# Suspension System CS-3000

Article		Tilt elbow coupling 15° B	Base coupling
Article number	(colour)	1015300182 RAL 9006 white aluminium 1015300016 RAL 7016 anthracite grey	1015300183 RAL 9006 white aluminium 1015300017 RAL 7016 anthracite grey

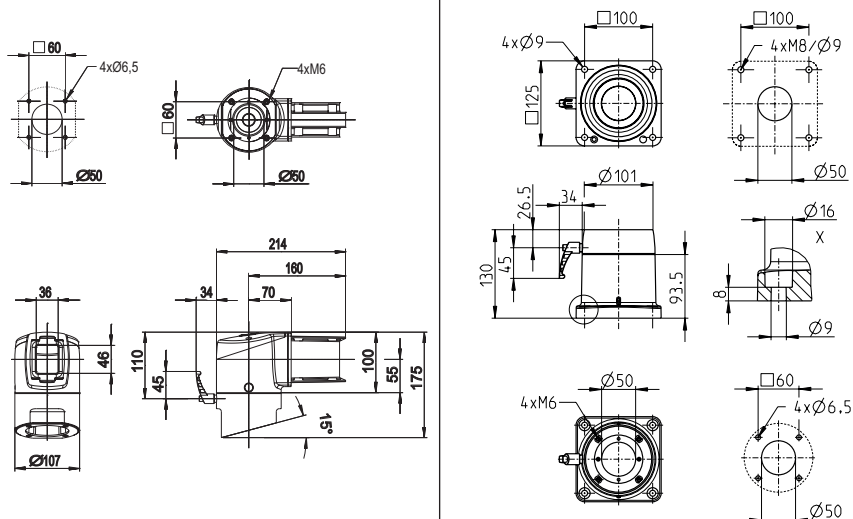


Details	Angle of rotation 300° with stop, fixed tilt of 15°, installation opening including screw-fit plastic cover (variant B tilted forward)	Angle of rotation 300° with stop																		
Weight in g	2160	2120																		
Material	Aluminium	Aluminium																		
Accessories (retrofitable) see pages 139, 143	<table border="1"> <tbody> <tr> <td>Swivel angle limiter</td> <td>9805296000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 9006</td> <td>9806940000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 7016</td> <td>9806939000</td> </tr> <tr> <td>Signal lamp adapter</td> <td>9805317000</td> </tr> </tbody> </table>	Swivel angle limiter	9805296000	SIMATIC Pro® adapter RAL 9006	9806940000	SIMATIC Pro® adapter RAL 7016	9806939000	Signal lamp adapter	9805317000	<table border="1"> <tbody> <tr> <td>Swivel angle limiter</td> <td>9805296000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 9006</td> <td>9806942000</td> </tr> <tr> <td>SIMATIC Pro® adapter RAL 7016</td> <td>9806941000</td> </tr> <tr> <td>Tilt adapter 30° RAL 9006</td> <td>1015300193</td> </tr> <tr> <td>Tilt adapter 30° RAL 7016</td> <td>1015300012</td> </tr> </tbody> </table>	Swivel angle limiter	9805296000	SIMATIC Pro® adapter RAL 9006	9806942000	SIMATIC Pro® adapter RAL 7016	9806941000	Tilt adapter 30° RAL 9006	1015300193	Tilt adapter 30° RAL 7016	1015300012
Swivel angle limiter	9805296000																			
SIMATIC Pro® adapter RAL 9006	9806940000																			
SIMATIC Pro® adapter RAL 7016	9806939000																			
Signal lamp adapter	9805317000																			
Swivel angle limiter	9805296000																			
SIMATIC Pro® adapter RAL 9006	9806942000																			
SIMATIC Pro® adapter RAL 7016	9806941000																			
Tilt adapter 30° RAL 9006	1015300193																			
Tilt adapter 30° RAL 7016	1015300012																			

## Application example



## Dimensions in mm



CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Tilt base coupling 15° A**

**1015300184** RAL 9006 white aluminium  
**1015300018** RAL 7016 anthracite grey


**Tilt base coupling 15° B**

**1015300185** RAL 9006 white aluminium  
**1015300019** RAL 7016 anthracite grey


**Straight coupling 48**

**1013056000** RAL 9006 white aluminium  
**1013050000** RAL 7016 anthracite grey



Angle of rotation 300° with stop,  
 fixed tilt of 15° (variant A tilted back)

Angle of rotation 300° with stop,  
 fixed tilt of 15° (variant B tilted forward)

Angle of rotation 300° with stop, only compatible  
 with 48 mm round tube, **adapter 9806520000** is  
 required for attachment to 80 mm section

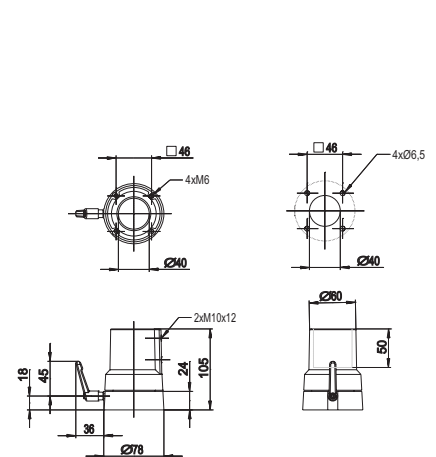
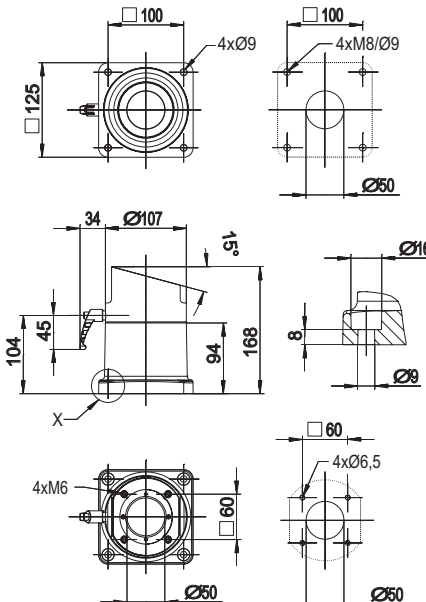
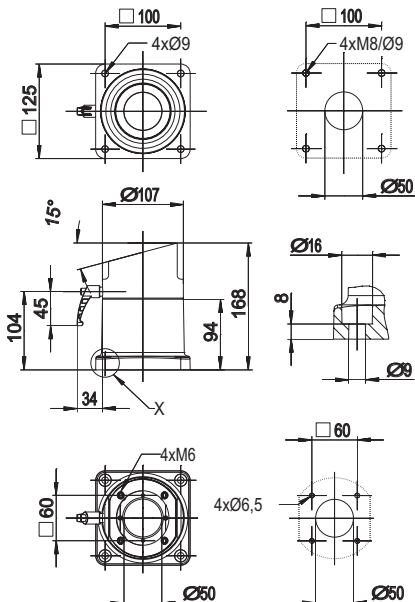
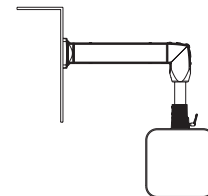
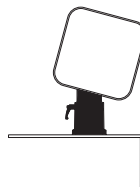
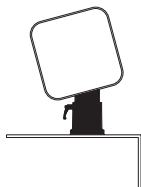
2340  
 Aluminium

2340  
 Aluminium

1760  
 Aluminium

**Swivel angle limiter** 9805296000  
**SIMATIC Pro® adapter RAL 9006** 9806940000  
**SIMATIC Pro® adapter RAL 7016** 9806939000

**Swivel angle limiter** 9805296000  
**SIMATIC Pro® adapter RAL 9006** 9806940000  
**SIMATIC Pro® adapter RAL 7016** 9806939000



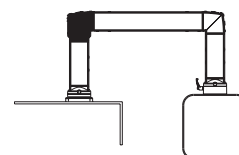
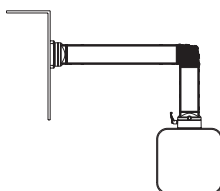
# Suspension System CS-3000

Article		Elbow	Elbow, rotary
Article number	(colour)	1015300195 1015300008	1015300196 1015300009
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey

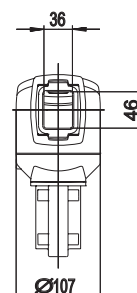
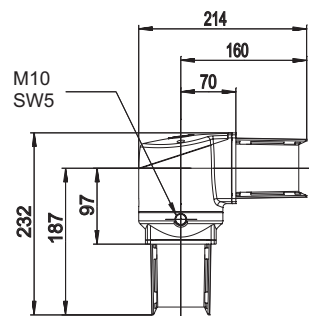
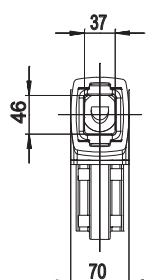
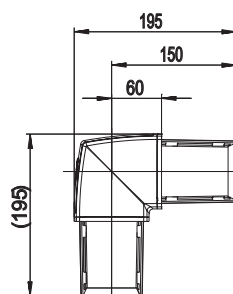


Details	With installation opening including screw-fit plastic cover	Angle of rotation 300° with stop, installation opening including screw-fit plastic cover
Weight in g	1680	2460
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 143	Signal lamp adapter 9805318000	Swivel angle limiter 9805296000 Signal lamp adapter 9805317000

## Application example



## Dimensions in mm



CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Elbow, reduced RD 48**

**1015300197** RAL 9006 white aluminium  
**1015300020** RAL 7016 anthracite grey


**Top joint**

**1015300198** RAL 9006 white aluminium  
**1015300003** RAL 7016 anthracite grey


**Wall joint S**

**1015300199** RAL 9006 white aluminium  
**1015300006** RAL 7016 anthracite grey



Reducer elbow from the square tube to 48 mm round tube

Angle of rotation 300° with stop, installation opening including screw-fit plastic cover

Angle of rotation 300° with stop, installation opening including screw-fit plastic cover

1920  
Aluminium

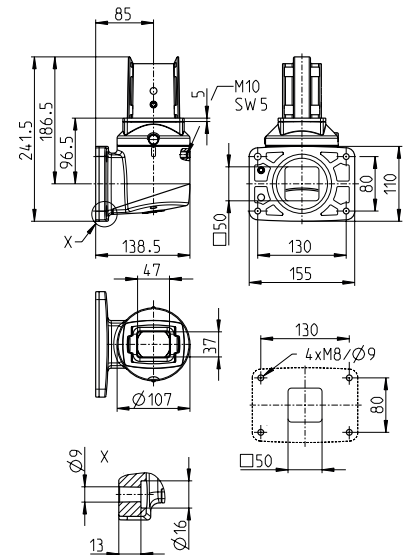
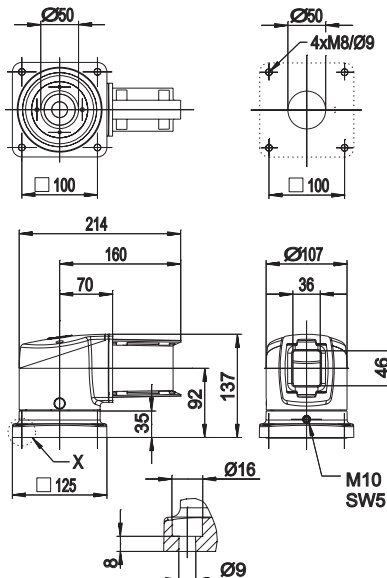
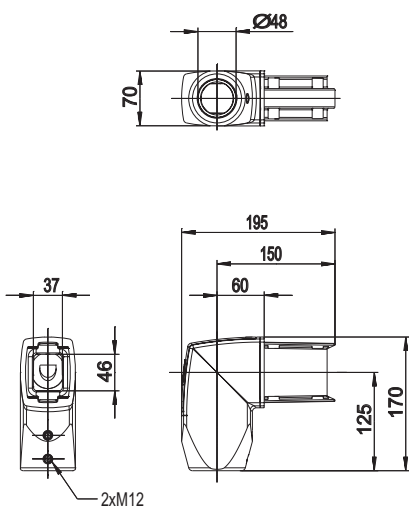
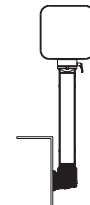
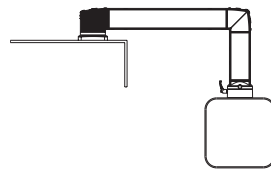
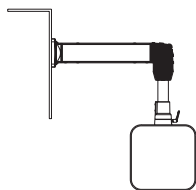
2250  
Aluminium

2450  
Aluminium

**Signal lamp adapter** **9805318000**

**Swivel angle limiter** **9805296000**  
**Signal lamp adapter** **9805317000**

**Swivel angle limiter** **9805296000**  
**Signal lamp adapter** **9805317000**



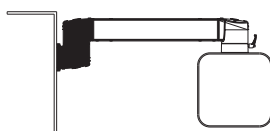
# Suspension System CS-3000

Article		Wall joint W	Intermediate joint
Article number	(colour)	1015300200 1015300007	1015300201 1015300004
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey

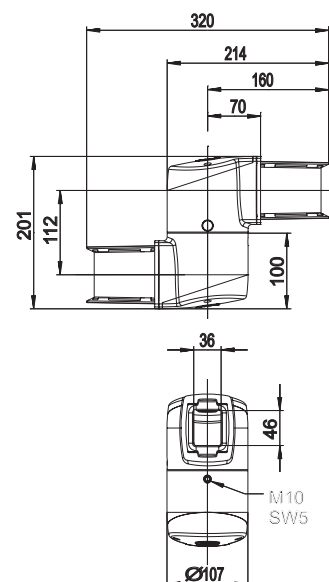
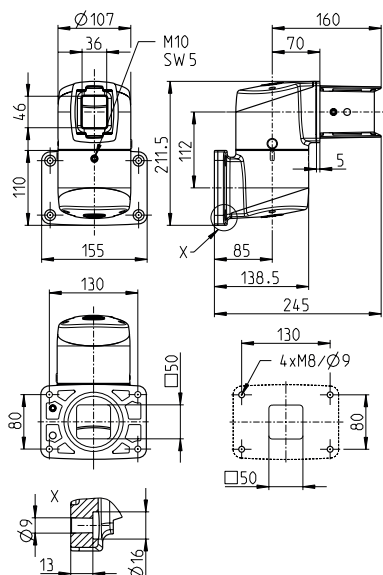


Details	Angle of rotation 300° with stop, 2 installation openings including screw-fit plastic covers	Angle of rotation 300° with stop, 2 installation openings including screw-fit plastic covers
Weight in g	2930	2940
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 143	Swivel angle limiter 9805296000 Signal lamp adapter 9805317000	Swivel angle limiter 9805296000 Signal lamp adapter 9805317000

## Application example



## Dimensions in mm



CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)



**CS-3000 HV module, vertically adjustable**
**see details**  
**see details**

 RAL 9006 white aluminium  
 RAL 7016 / anodised aluminium

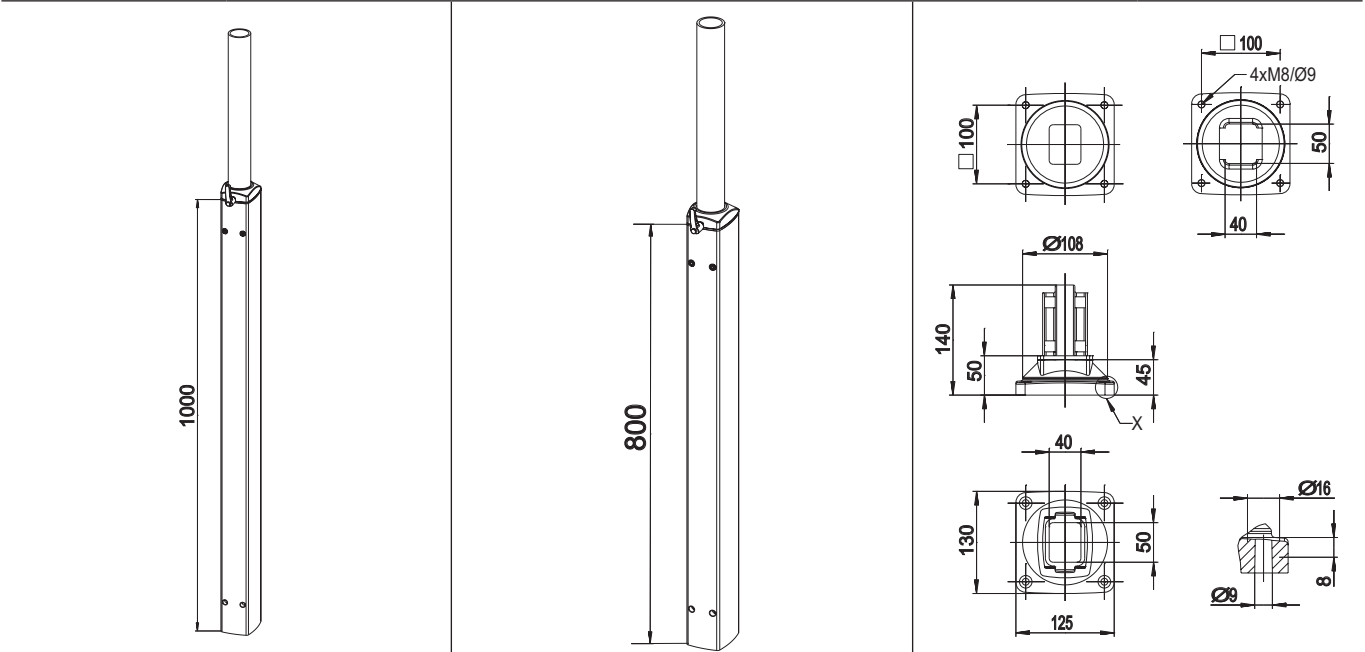
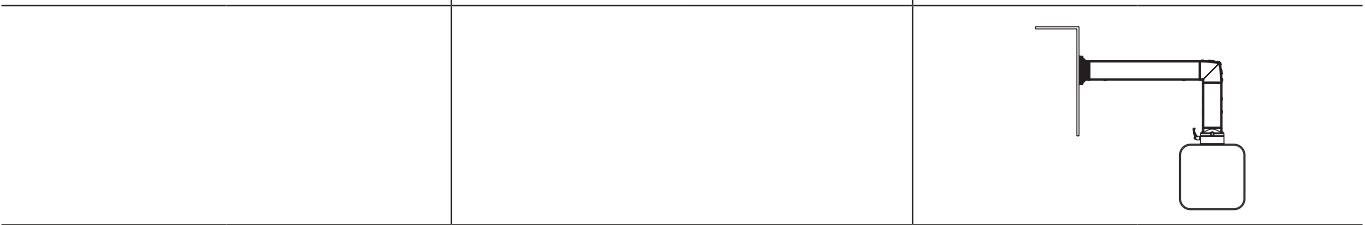
**CS-3000 HV module, vertically adjustable**
**see details**  
**see details**

 RAL 9006 white aluminium  
 RAL 7016 / anodised aluminium

**Base / wall flange**
**1015300204**  
**1015300010**

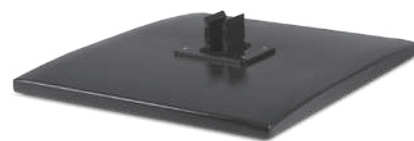
 RAL 9006 white aluminium  
 RAL 7016 anthracite grey


	RAL 9006	RAL 7016		RAL 9006	RAL 7016	
<b>Module 1000/100</b>	<b>1015300202</b>	<b>1015300022</b>	<b>Modul 800/100</b>	<b>1015300203</b>	<b>1015300023</b>	
<b>Module 1000/150</b>	<b>1015300212</b>	<b>1015300029</b>	<b>Modul 800/150</b>	<b>1015300215</b>	<b>1015300030</b>	
<b>Module 1000/200</b>	<b>1015300213</b>	<b>1015300031</b>	<b>Modul 800/200</b>	<b>1015300216</b>	<b>1015300032</b>	
<b>Module 1000/300</b>	<b>1015300214</b>	<b>1015300033</b>	<b>Modul 800/300</b>	<b>1015300217</b>	<b>1015300034</b>	
Modular height 1000 mm; see page 142 for detailed information on selection of suitable damper force.			Modular height 800 mm; see page 142 for detailed information on selection of suitable damper force.			
7030			6020			1300
Aluminium			Aluminium			Aluminium

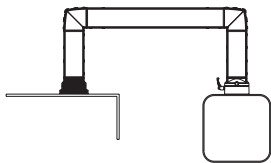
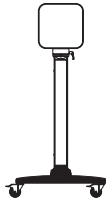


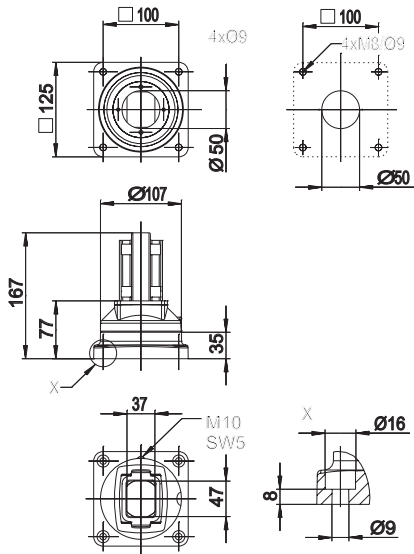
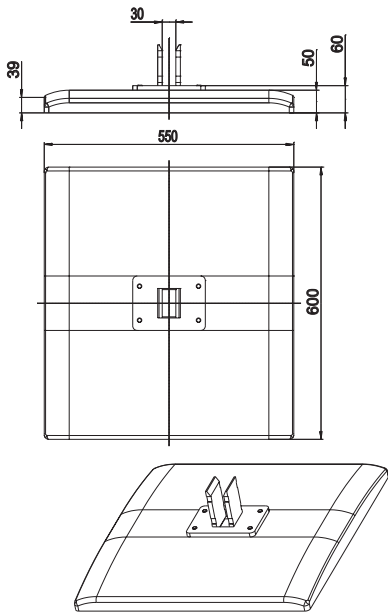
# Suspension System CS-3000

Article		Base, rotary	Large free-standing base
Article number	(colour)	1015300205 1015300005	1015300206 1015300027
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey



Details	Angle of rotation 300° with stop	
Weight in g	1780	11660
Material	Aluminium	Steel / Aluminium
Accessories (retrofitable) see page 143	Swivel angle limiter 9805296000	Castors and support feet see page 143

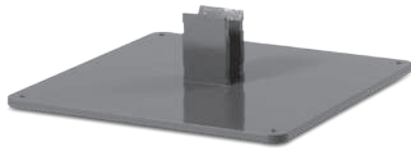
Application example		
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Dimensions in mm		
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CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Small free-standing base**

1015300207 RAL 9006 white aluminium  
 1015300028 RAL 7016 anthracite grey


**SIMATIC Pro® Adapter**

Article numbers see couplings page 130 onwards


**Tilt adapter (30° infinitely variable)**

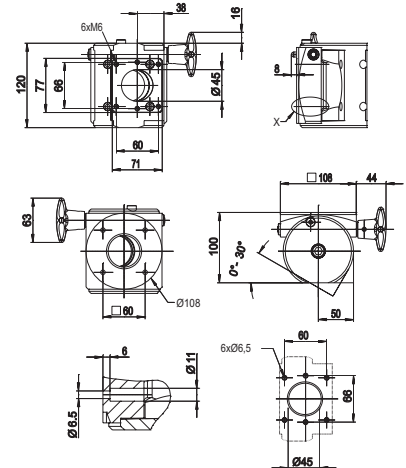
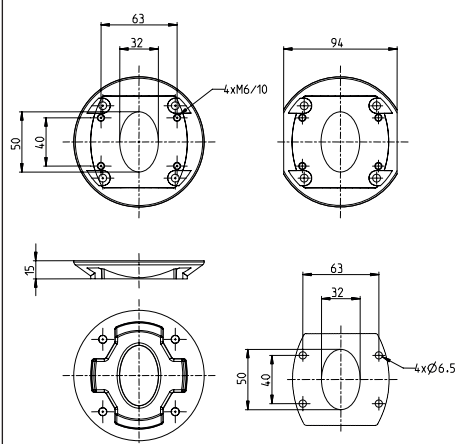
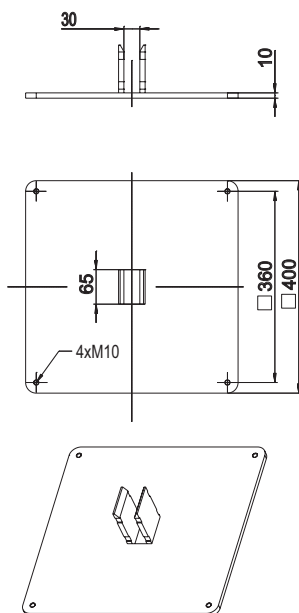
1015300193 RAL 9006 white aluminium  
 1015300012 RAL 7016 anthracite grey



	The SIMATIC Pro® Adapter is used for the direct connection between Siemens SIMATIC Pro® Displays and CS-3000 couplings and tilt couplings	Used only together with couplings; infinitely variable tilt up to 30°, maximum load max. 300 N, <b>not compatible</b> with 1013050000, as well as Siemens SIMATIC Pro® couplings
13220	140	1840
Steel	Aluminium	Aluminium

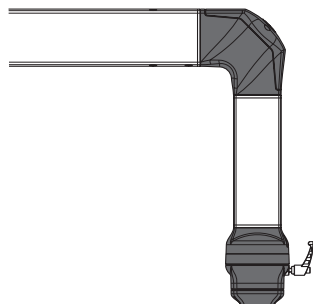
**Castors and support feet**

see page 143

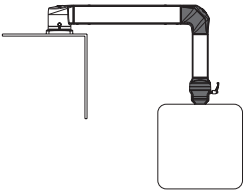
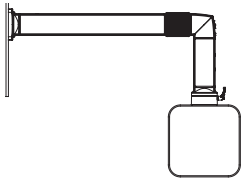


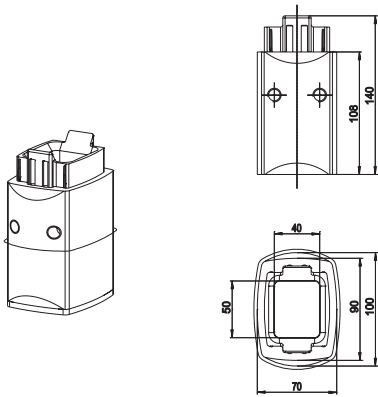
# Suspension System CS-3000

<b>Article</b>	<b>Adaptation on narrow sections</b>	<b>Tube adapter for CS-3000</b>	
<b>Article number</b> (colour)		<b>1015300208</b>	RAL 9006 white aluminium
		<b>1015300039</b>	RAL 7016 anthracite grey



<b>Details</b>	Connection to enclosures with widths < 101 mm in combination with the CS-3000 neXt suspension system; Required components: Reducing elbow, coupling, adapter for narrow sections see page 124 onwards	Once the tube had been shortened, the adapter can be screwed to the tube. The tube adapter can then be fixed to the component and the system can be adjusted as required  Attention: Install the tube adapter only onto the housing side, see application example!	
Weight in g	Depending on version	720	
Material	Aluminium	Aluminium	
<b>Accessories</b> (retrofitable) see page 143			

<b>Application example</b>		
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<b>Dimensions in mm</b>		
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**CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)**

## BERNSTEIN CS-3000 Bent Tube

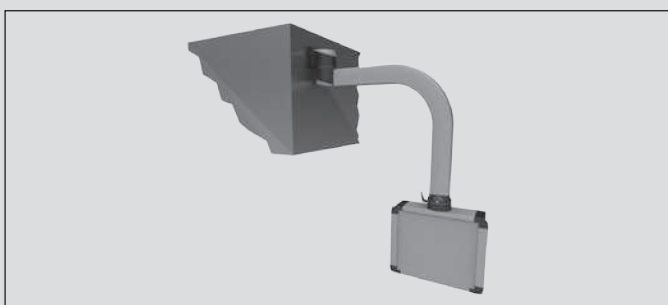
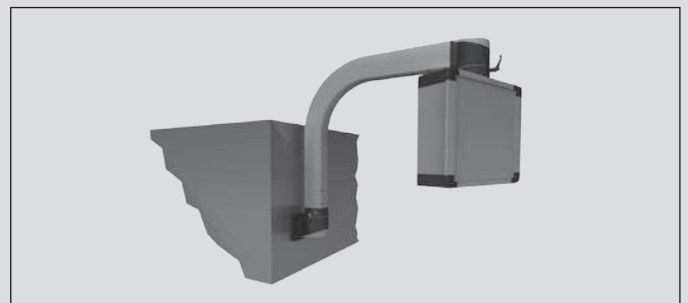
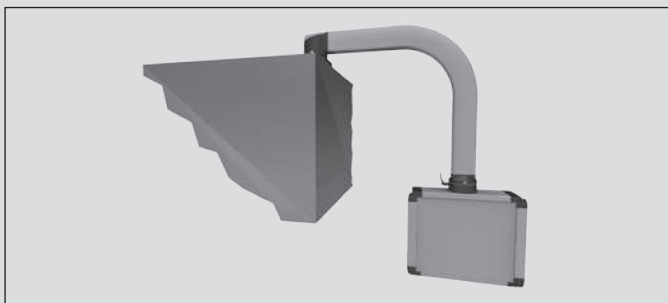
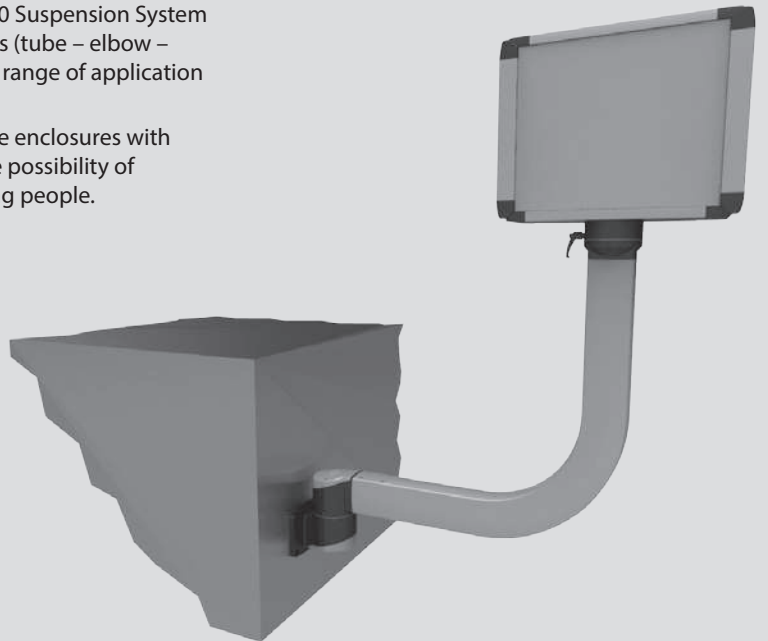
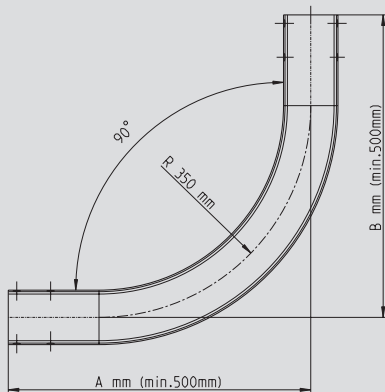
Attractive sleek design, simple assembly and ease of cleaning as well as variety of components, load bearing capacity and quality are important criteria for the choice of a suitable suspension system.

All of these characteristics are offered by BERNSTEIN's CS-3000 Suspension System including Bent Tube. Unlike traditional types of configurations (tube – elbow – tube), the exceptional single piece construction offers a wide range of application opportunities within an outstanding design.

It is particularly suitable for operator control panels or console enclosures with suspension arm attachments on the bottom, as it reduces the possibility of projection impact injury to machine operator and surrounding people.

### Product features:

Bent tubes are manufactured to individual specifications (dimensions min. 500 mm, max. 1.000 mm);  
 reduced assembly time due to its elbow free design,  
 snag free cable routing,  
 increased load bearing capacity compared to traditional systems with straight tubes and fittings.



# Suspension System CS-3000

## CS-3000 HV – Vertically adjustable modules for optimum ergonomics

With the vertically adjustable CS-3000 HV, BERNSTEIN offers an innovative expansion to the CS-3000 suspension system. Flexible height adjustment and internal cable routing make the HV version even easier to install and operate.

With a variable lift range of 250 mm, the support system can be adjusted infinitely variable to the required working height. The integrated gas-filled damper system ensures the enclosure can be raised with minimum effort while preventing it from dropping suddenly after the clamping lever is released. This means added convenience but above all greater safety.

The CS-3000 HV is available as an optionally mobile stand base or wall-mounted version and can be easily integrated in an existing CS-3000 system.



### Overview of advantages:

- Thanks to the 250 mm variable lift, the ideal viewing height can be adjusted for each operator
- Gas-filled damper system provides effective support during lifting and prevents the supported enclosure dropping suddenly after the clamping lever is released
- Internal cable routing
- Straightforward integration in CS-3000 suspension system

### Selection criteria

- Selection of the size of gas-pressurised damper depends on the total weight and the ambient temperature
- The total weight is calculated from:  
Enclosure + installed equipment + coupling components

Article numbers see page 137 onwards

Ambient temperature	Damper force / total weight			
	100 N (6–11 kg)	150 N (11–19 kg)	200 N (19–29 kg)	300 N (29–39 kg)
40°C	100 N (6–11 kg)	150 N (11–19 kg)	200 N (19–29 kg)	300 N (29–39 kg)
30°C	100 N (5.5–10.5 kg)	150 N (10.5–18 kg)	200 N (18–27.5 kg)	300 N (27.5–37 kg)
20°C	100 N (5–10 kg)	150 N (10–17 kg)	200 N (17–26 kg)	300 N (26–35 kg)

### Materials

- Anodised aluminium tubing
- Pressure die-cast aluminium components
- Polyamide covers for installation openings
- POM bearing
- Neoprene seals

### Colours

- Suspension system components:  
RAL 7016 anthracite grey / RAL 9006 white aluminium
- Connecting tubes: silver (natural) anodised

<b>Article</b>  <b>Article number</b>	<b>Adapter flange</b>  	<b>Adapter plates</b>  	<b>Signal lamp adapter</b>  
<b>Design</b>	For large enclosures with door section and / or keyboard  <b>1016896000 RAL 9006</b> <b>1016897000 RAL 7016</b>	<b>9806678000 RAL 7016</b> For connecting adapter flange to coupling 48  <b>9806520000 RAL 7016</b> Required together with coupling RD 48 for attachment to CC-4000 section 80	For connecting commercially available 25 mm diameter signal lamps <b>CS-3000</b> <b>9805317000 for joint components</b> <b>9805318000 for elbow components</b> <b>CS-3000 neXt</b> <b>9805400000 for joint components</b> <b>9805401000 for elbow components</b> <b>9805402000 Reducing elbow</b>
<b>Article</b>  <b>Article number</b>	<b>Swivel angle limiter CS-3000</b> <b>CS-3000 neXt</b>  <b>9805296000</b> <b>9806906000</b>	<b>Set of caps</b>  <b>9806590000</b>	<b>Castors</b>  <b>9808012800</b>
<b>Design</b>	 <p><b>CS-3000</b> Swivel angle limiter for coupling and joint components. Adjustable in steps of 13.7°. Contains ten ø 10 mm steel balls.</p> <p><b>CS-3000 neXt</b> Adjustable in steps of 30°. Contains 6 swivel angle limiter.</p>	 <p>Plastic caps similar to RAL 9006 for closing off the hexagon sockets on tube mounting screws. Set of 50</p>	 <p>Set of castors, consisting of 4 swivel castors. Complete with installation material and instructions. Load-bearing capacity of each castor 50 kg</p> <p>Construction height 100 mm Castors ø 75 mm</p>
<b>Article</b>  <b>Article number</b>	<b>Equipment castors</b>  <b>9808015300</b>	<b>Support feet</b>  <b>9808012900</b>	<b>Floor anchoring brackets</b>  <b>9808014100</b>
<b>Design</b>	 <p>Set of castors, consisting of 4 swivel castors. 2 castors with brake. Load-bearing capacity of each castor 70 kg.</p> <p>Construction height 90 mm Castors ø 75 mm</p>	 <p>Vertically adjustable feet (1 set = 4 pieces). Complete with installation material and instructions.</p> <p>Adjustable construction height approx. 37 - 50 mm</p>	 <p>Set of floor anchoring brackets for large base</p>

# Heavy-Duty Suspension System CS-2000 System 80

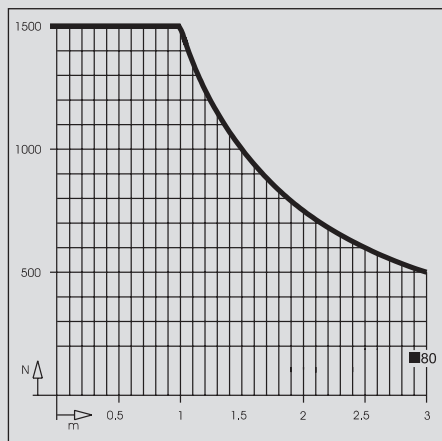
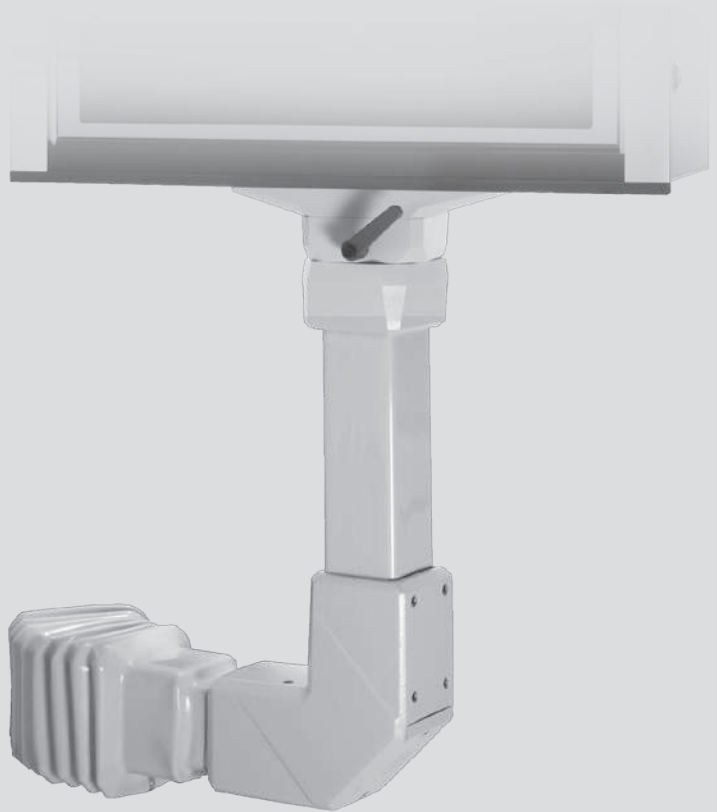
With its large number of components, the BERNSTEIN CS-2000 System 80 suspension system offers technically perfected solutions for a wide range of applications.

## System structure

The following conditions are decisive for selecting the right system:

- Load of overall system
- Clear cable leadthrough if necessary
- System constellation

After determining the correct size of suspension system, the corresponding components and tubes are selected to build up the required system constellation.



## Load diagram

The overview on Pages 104 / 105 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.

## Materials

- Aluminium components: cast aluminium
- Cast steel components: GGG 40
- Welded steel structures: St 37
- Support tubes: St 37
- Bearings: St/PTFE or POM
- Seals: CR
- Installation openings: cast aluminium
- Gaiters: PVC

## Colours

- Suspension system components: light grey, RAL 7035
- Gaiters: light grey, RAL 7035
- Tubing: light grey, RAL 7035

## System features

- Installation openings at all joints for easy cable installation
- Integrated strain relief for gripping cables
- Maintenance-free no-play bearings in all joints and couplings
- Adjustment facilities for precisely aligning support tubes
- Wall and intermediate joints with adjustable torque and retrofitable swivel angle limiter (available as accessory)
- Flange couplings with adjustable firmness and retrofitable rotation angle limiter
- Overhead installation of all components possible





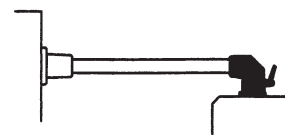
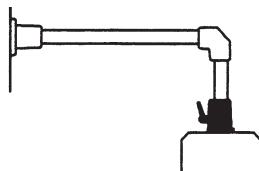
# Heavy-Duty Suspension System CS-2000 System 80

Article		Standard coupling, flange CS-2000	Elbow coupling, flange CS-2000
Article number	(colour)	1016702000 RAL 7035 light grey 1016876000 RAL 9006 white aluminium	1016705000 RAL 7035 light grey 1016877000 RAL 9006 white aluminium

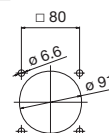
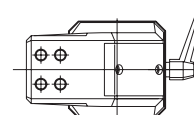
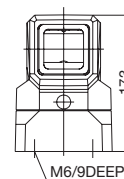
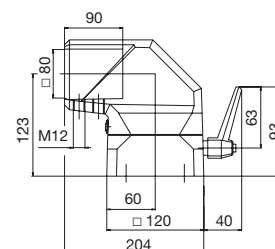
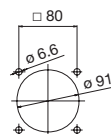
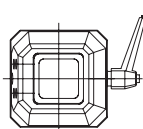
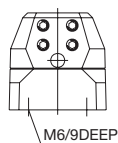
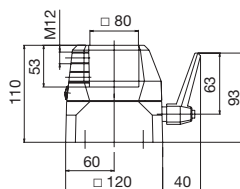


Details	Angle of rotation 300° with stop. Complete with seals and mounting screws. Adjustable torque	Angle of rotation 300° with stop. Complete with seals and mounting screws. Adjustable torque. Installation opening
Weight in g	3270	4100
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 154 / 155	Swivel angle limiter 9805176000	Swivel angle limiter 9805176000 Signal lamp adapter 9805189000

## Application example



## Dimensions in mm



CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Turn / tilt coupling CS-2000**

**1016321000** RAL 7035 light grey  
**1016878000** RAL 9006 white aluminium


**Elbow CS-2000**

**1016708000** RAL 7035 light grey  
**1016879000** RAL 9006 white aluminium


**Elbow for torque load CS-2000**

**1016711000** RAL 7035 light grey  
**1016880000** RAL 9006 white aluminium



Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with seals and mounting screws

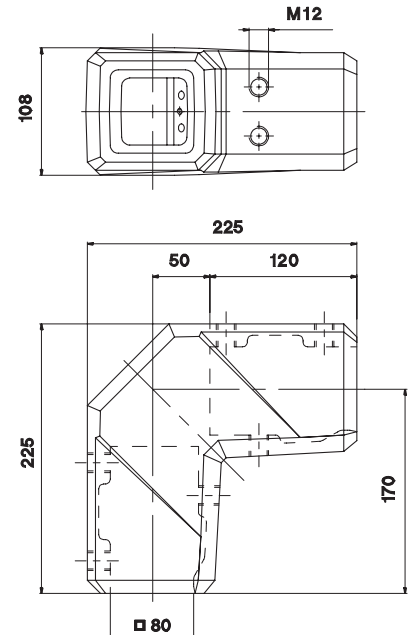
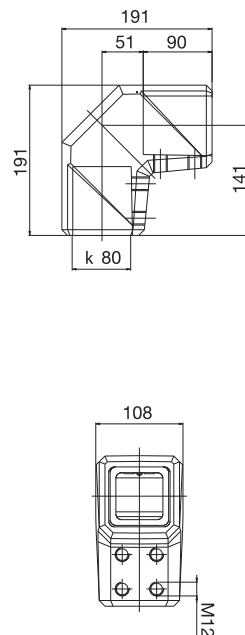
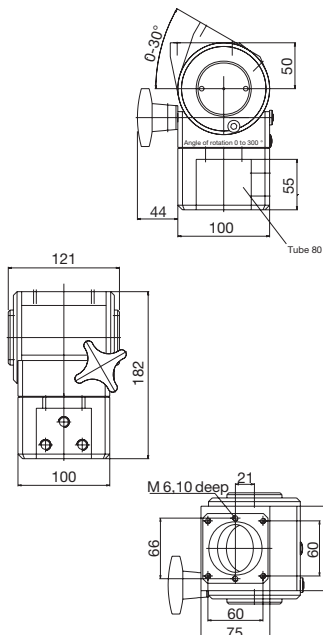
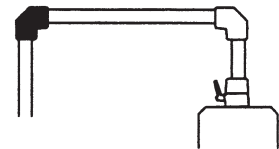
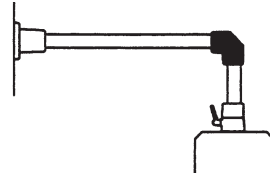
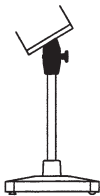
2900  
 Aluminium and PA

Installation opening. Complete with seals

2900  
 Aluminium

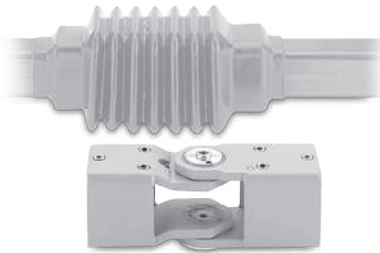
Increased load bearing capacity. Complete with seals. Installation opening

8500  
 GGG

**Swivel angle limiter 9805130000**
**Signal lamp adapter 9805189000**
**Signal lamp adapter 9805189000**


# Heavy-Duty Suspension System CS-2000 System 80

Article		Intermediate joint CS-2000	Top joint CS-2000
Article number	(colour)	1016471000 RAL 7035 light grey 1016881000 RAL 9006 white aluminium	1016714000 RAL 7035 light grey 1016882000 RAL 9006 white aluminium



Details	With gaiter attached with zip fastener. Swivel angle 180° with stop on both sides. Torque adjustment	Angle of rotation 306° with stop. Complete with seals and mounting screws.
Weight in g	9700	20620
Material	Steel	GGG
Accessories (retrofitable) see pages 154 / 155	Swivel angle limiter 9805062000	Swivel angle limiter 9805177000 Signal lamp adapter 9805188000

Application example		

Dimensions in mm		

CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**Wall joint CS-2000**

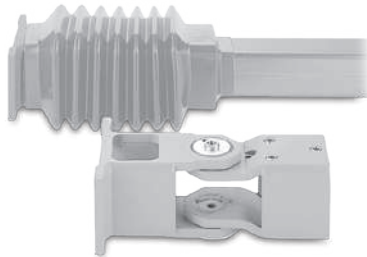
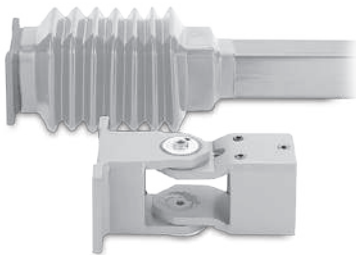
**1016473000** RAL 7035 light grey  
**1016883000** RAL 9006 white aluminium

**Wall joint for cable leadthrough CS-2000**

**1016474000** RAL 7035 light grey  
**1016884000** RAL 9006 white aluminium

**Wall flange CS-2000**

**1016472000** RAL 7035 light grey  
**1016885000** RAL 9006 white aluminium



With garter attached with zip fastener.  
 Swivel angle 180° with stop on both sides.  
 Torque adjustment

With garter attached with zip fastener.  
 Swivel angle 180° with stop on both sides.  
 Torque adjustment

Complete with seals

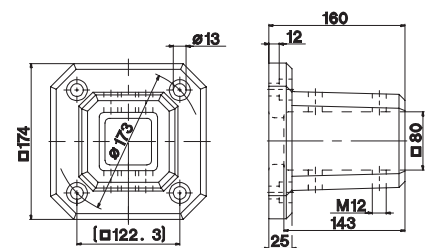
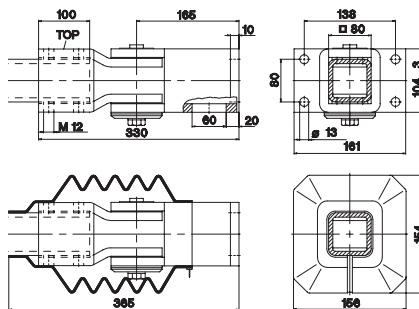
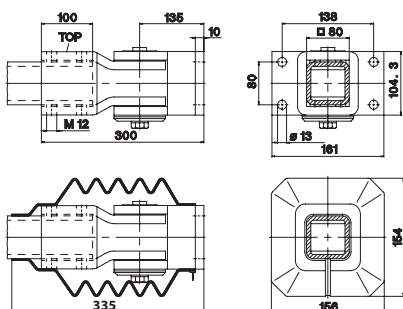
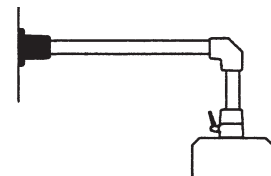
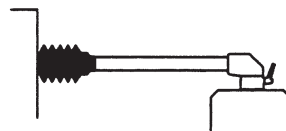
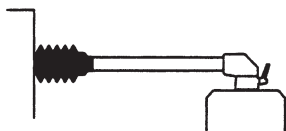
9250  
Steel

9500  
Steel

9100  
GGG

**Swivel angle limiter 9805062000**

**Swivel angle limiter 9805062000**


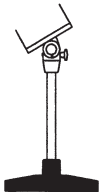


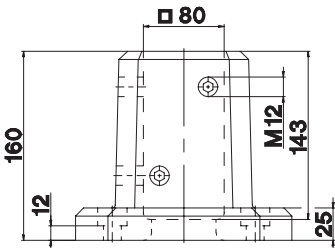
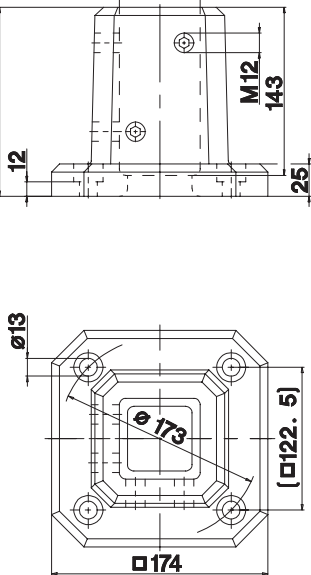
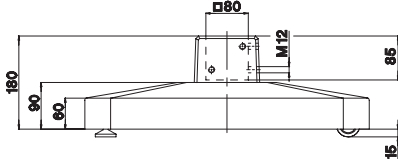
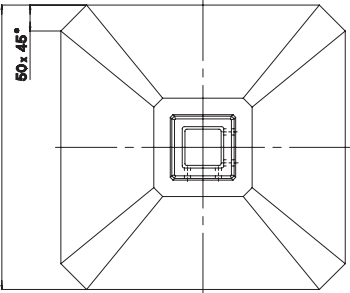
# Heavy-Duty Suspension System CS-2000 System 80

Article		Base CS-2000	Free-standing base CS-2000
Article number	(colour)	1016475000 RAL 7035 light grey 1016886000 RAL 9006 white aluminium	1016323000 RAL 7035 light grey 1016887000 RAL 9006 white aluminium



Details	Complete with seals	For free-standing applications
Weight in g	9240	14300
Material	GGG	Aluminium
Accessories (retrofitable) see pages 154 / 155		Castors and Support feet see pages 154/155

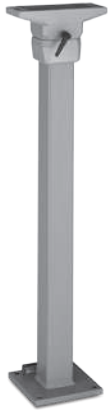
Application example		
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Dimensions in mm	 	 
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CAD files available  
at [www.bernstein.eu](http://www.bernstein.eu)

**Support column, upright version**

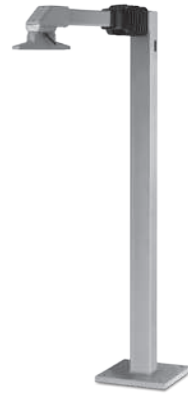
**1016558000** RAL 7035 light grey  
**1016888000** RAL 9006 white aluminium


**Support column, suspended version, 250 mm tube**

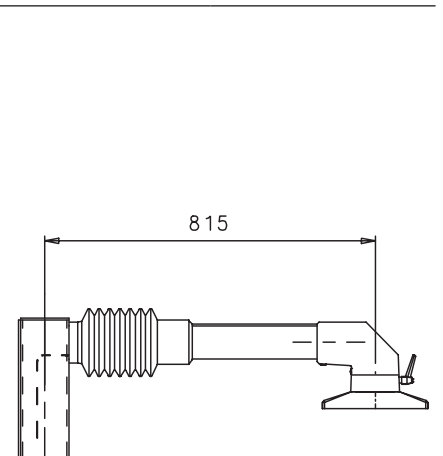
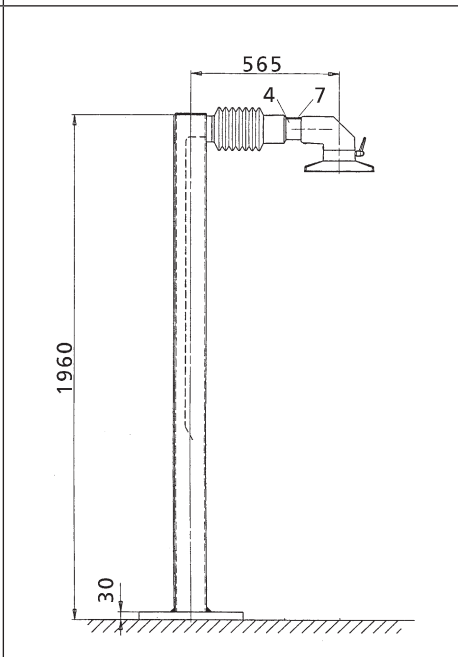
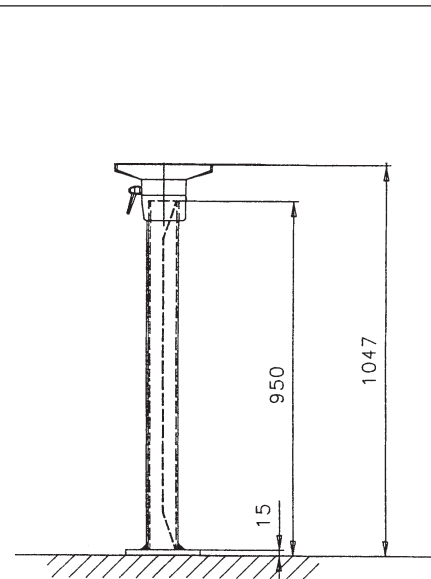
**1016555000** RAL 7035 light grey  
**1016889000** RAL 9006 white aluminium


**Support column, suspended version, 500 mm tube**

**1016556000** RAL 7035 light grey  
**1016890000** RAL 9006 white aluminium

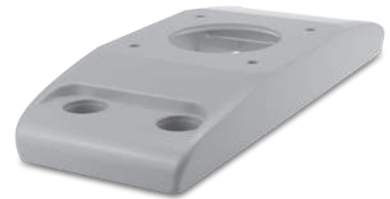
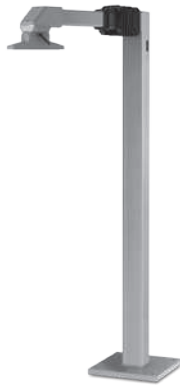


27220	102000	105000
Steel / Aluminium	Steel / Aluminium	Steel / Aluminium

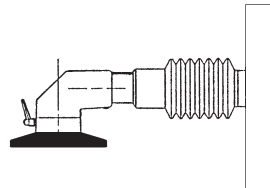


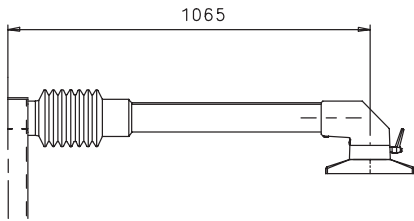
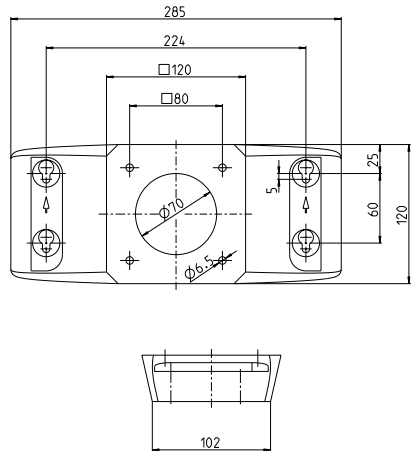
# Heavy-Duty Suspension System CS-2000 System 80

Article		Support column, suspended version, 750 mm tube	Automotive adapter CS-2000
Article number	(colour)	1016557000 RAL 7035 light grey 1016891000 RAL 9006 white aluminium	1016898000 RAL 7035 light grey 1016896000 RAL 9006 white aluminium



Details		
Weight in g	41000	1100
Material	Steel / Aluminium	Aluminium
<b>Accessories</b> (retrofitable)		
see pages 154 / 155		

Application example		
		

Dimensions in mm		
		

CAD files available at [www.bernstein.eu](http://www.bernstein.eu)



**Tilt adapter CS-2000 15°**

**1016459000** RAL 7035 light grey  
**1016892000** RAL 9006 white aluminium

**Tilt adapter CS-2000 30°**

**1016460000** RAL 7035 light grey  
**1016893000** RAL 9006 white aluminium

**Tilt adapter CS-2000 60°**

**1016461000** RAL 7035 light grey  
**1016894000** RAL 9006 white aluminium



A = 15°, B = 39

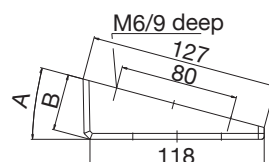
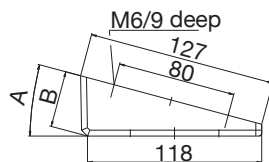
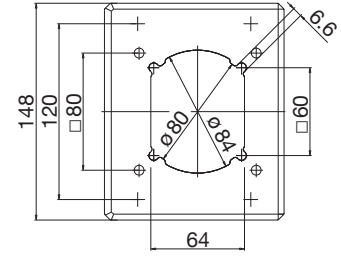
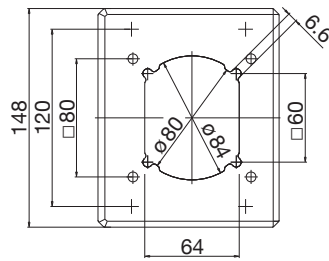
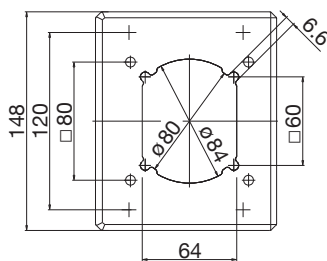
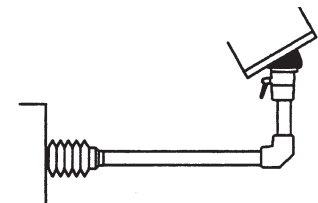
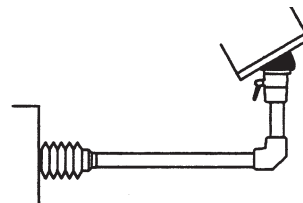
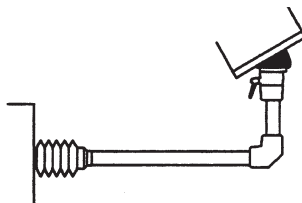
A = 30°, B = 66

A = 60°, B = 111

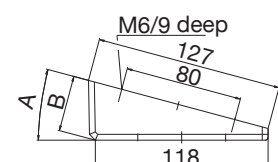
460  
Aluminium

600  
Aluminium

800  
Aluminium

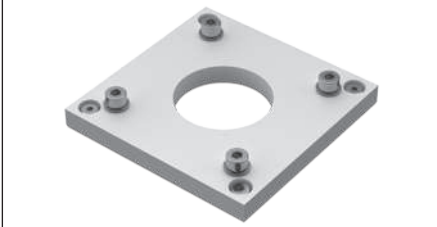
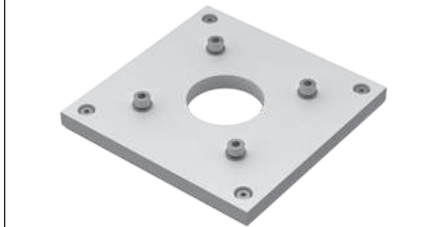






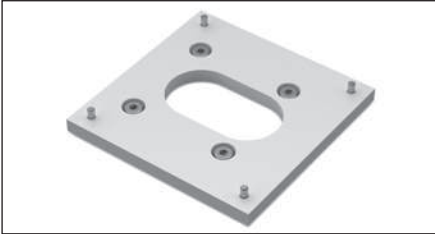
Example illustration



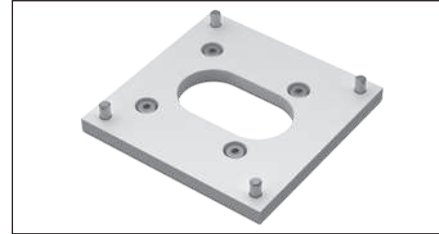
Example illustration

# Accessories for Suspension Systems CS-2000 SL and System 80

<p><b>Article</b></p> <p><b>Article number</b></p>	<p><b>CS-1000 VESA 75 / M4</b></p> <p><b>9806675000</b></p>	<p><b>CS-1000 VESA 100 / M4</b></p> <p><b>9806676000</b></p>				
						
<p><b>Design</b></p>	<p>For rear attachment of monitors or similar with VESA 75 flange on CS-1000 suspension arm system</p>	<p>For rear attachment of monitors or similar with VESA 100 flange on CS-1000 suspension arm system</p>				
<p><b>Article</b></p> <p><b>Article number</b></p>	<p><b>Swivel angle limiter for coupling components, CS-2000 SL system</b></p> <p><b>9805129000</b></p>	<p><b>Swivel angle limiter for coupling components, CS-2000 System 80</b></p> <p><b>9805176000</b></p>				
						
<p><b>Design</b></p>	<p>Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 8.5°. Material PA.</p>	<p>Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 9°. Material PA.</p>				
<p><b>Article</b></p> <p><b>Article number</b></p>	<p><b>Signal lamp adapter CS-2000 System 80</b></p> <table border="1" data-bbox="576 1581 1015 1626"> <tbody> <tr> <td><b>Elbow components</b></td> <td><b>Top joint</b></td> </tr> <tr> <td><b>9805189000</b></td> <td><b>9805188000</b></td> </tr> </tbody> </table>	<b>Elbow components</b>	<b>Top joint</b>	<b>9805189000</b>	<b>9805188000</b>	<p><b>Fixed castors for large free-standing bases CS-2000 SL and CS-2000 System 80</b></p> <p><b>9806043000</b></p>
<b>Elbow components</b>	<b>Top joint</b>					
<b>9805189000</b>	<b>9805188000</b>					
						
<p><b>Design</b></p>	<p>Easy-to-retrofit signal lamp adapter. Installation opening for signal lamp tubes with outside diameter of 25 mm, secured on side with setscrews. Material aluminium</p>	<p>Complete with installation material and instructions for large free-standing bases. Set of 2.</p>				

**CS-2000 SL Panel VESA 100 / M4**
**9806677000**


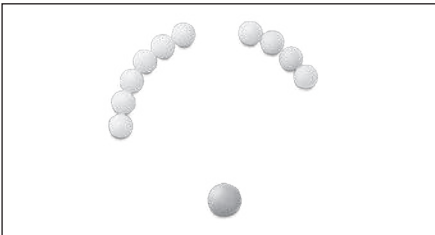
For rear attachment of monitors or similar with VESA 100 flange by means of CS-2000-SL panel couplings (with M4 thread for monitors)

**CS-2000 SL Panel VESA 100 / M6**
**9806698000**


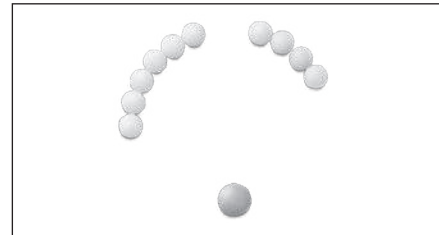
For rear attachment of monitors or similar with VESA 100 flange by means of CS-2000-SL panel couplings (with M4 thread for monitors)

**Swivel angle limiter for wall and intermediate joints CS-2000 System 80**
**9805062000**

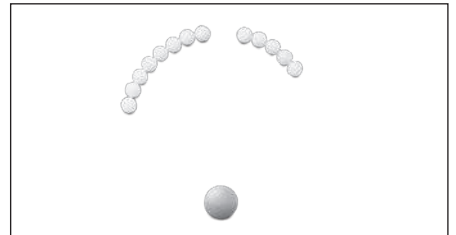

Swivel angle limiter as retrofitable accessory kit for wall and intermediate joints. Swivel angle range adjustable and fixed in steps of 15°. Material steel.

**Swivel angle limiter for joint components System CS-2000 SL**
**9805132000**


Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 14°. Material PA

**Swivel angle limiter for joint components CS-2000 System 80**
**9805177000**


Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 8.5°. Material PA

**Swivel angle limiter for turn / tilt couplings System CS-2000 SL and CS-2000 System 80**
**9805130000**


Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 8.5°. Material PA

**Swivel castors for large free-standing bases CS-2000 SL and CS-2000 System 80**
**9806044000**


Complete with installation material and instructions for large free-standing bases. Set of 2

**Adjustment feet for large free-standing bases CS-2000 SL and CS-2000 System 80**
**9806045000**


Complete with installation material and instructions for large free-standing bases. Set of 2

## Stainless Steel Enclosure CC-800

### Housing concept to the highest standards

Thanks to its specific, individual concept, the redesigned CC-800 range of stainless steel control enclosures provides maximum security for your applications. It is ideally suited for use in applications where the use of stainless steel is a legal requirement.

Features such as high-quality workmanship, modern design and high-grade, durable material makes the CC-800 the first choice over enclosures made from other materials.



The **BERNSTEIN System solutions** (see page 12 to 13) you can be sure that our CC-800 will provide the perfect solution to your specific application: We make your application requirements reality. The combination of customer technology and completely assembled BERNSTEIN stainless steel enclosures is the foundation for complete system integration.

#### Product features

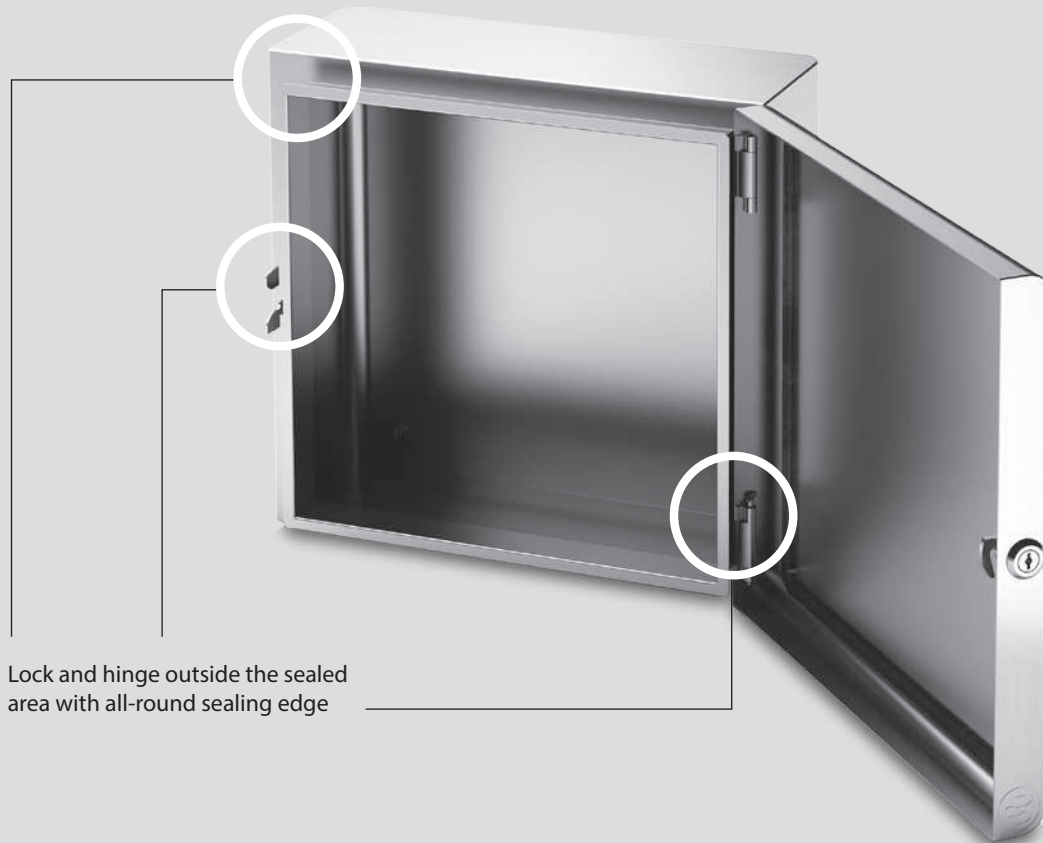
- Individual sizes within the housing concept, external dimens. min. 260 x 250 x 130 mm, max. 610 x 550 x 250 mm (configurable by Checklist)
- Modern design
- Protection class IP 65
- Including earthing material
- Lock and hinges mounted laterally outside the protected area
- Reinforced seal frame for improved stability

#### Material

- Enclosure, lock and optional mounting plate: stainless steel 1.4301
- Earthing strap: copper

#### Surface finish

- Enclosure and front door, brushed finish, grain size 320



Lock and hinge outside the sealed area with all-round sealing edge

#### **Stainless steel 10° tilt Keyboard shelf**

For housing widths of 500 mm.  
Fixing kit included.  
(additional machining required)

**Art. No. 9806176000**



#### **Stainless steel handles**

For side mounting to the enclosure.  
Fixing kit included.  
(additional machining required)

**Art. No. 9808011900** length 250 mm

**Art. No. 9808012000** length 350 mm



**Mounting plate on request.**

# Checklist – Enclosure CC-800

Customer	*Product group	*Code	*Article number
Address		Customer No.	
Telephone	Telefax	Industry	
Contact person		Department	

**Pricing enquiry**

Target price	Quantity
--------------	----------

**Enquiry**

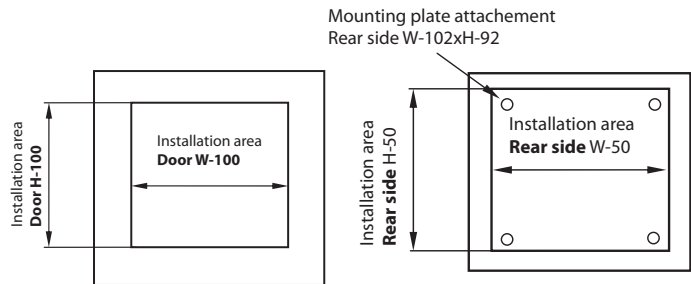
*Enquiry No.	Annual requirement
--------------	--------------------

**Order**

Delivery date

**1 Dimensions (W x H x D in mm)**

\*\*External dims.    \_\_\_\_ x \_\_\_\_ x \_\_\_\_  
 or  
 Installation area    \_\_\_\_ x \_\_\_\_ x \_\_\_\_



**2 Aperture**

None       in door \_\_\_\_ x \_\_\_\_ (W x H in mm)       in rear side \_\_\_\_ x \_\_\_\_ (W x H in mm)

**3 Door mounting**

Left       Right

**4 Preparation for suspension system**

Standard preparation (CS-480 NR)  
 Standard preparation (CS-600 NR)  
 None (if e.g. wall brackets are needed, please note below)  
 Special preparation to customer specification (note below)



**5 Enclosure surface**

Brushed finish, grain size 320 (standard)

**6 Accessories**

Mounting plate       Keyboard shelf       Handl. 250 mm       Handl. 350 mm  
 (Handl. mounted on right or left)

**7 Additional apertures, holes, accessories, remarks**

Annexes       No annexes

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\*Completed by BERNSTEIN  
 \*\* External dims. min. 260 x 250 x 130 mm, max. 610 x 550 x 250 mm



# Stainless Steel Suspension System CS-480 NR

## Product features

The CS-480 NR suspension system was specifically developed for mounting control enclosures in hygienic areas in the food and pharmaceuticals industries.

Thanks to the variety of different models, the CS-480 NR ensures absolute flexibility. You have the choice between a combination of tubes shaped to customer specifications and suspension system components or, if time is pressing, you can combine the preshaped tubes and coupling sleeves available from stock with the suspension system components.



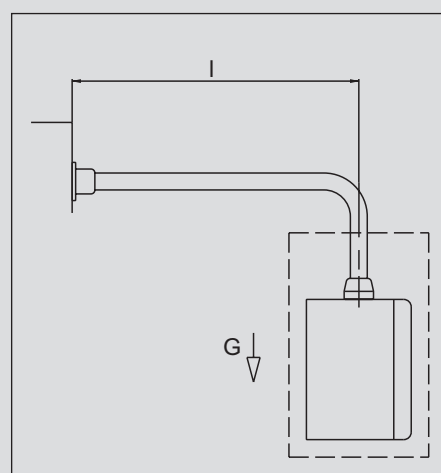
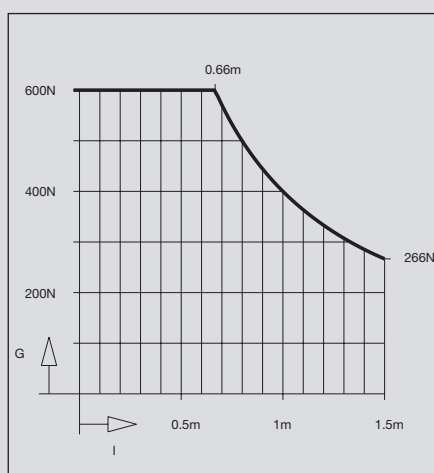
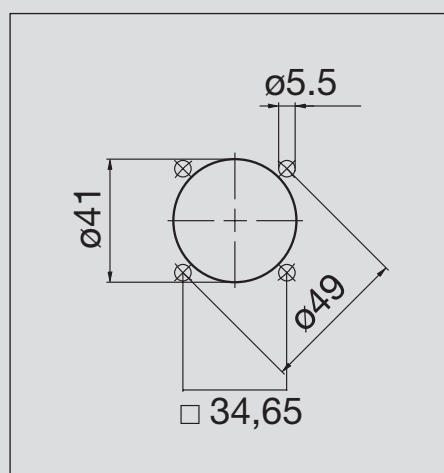
## System features

- Installation openings at bearing components with horizontal outlet
- Easy mounting by clamping the support tubes
- Load bearing capacity 400 N at 1 m
- Protection class IP66/NEMA 4X
- Material 1.4305
- Torque preset at factory



## Enclosure preparation for mounting couplings

The dimensions of the coupling hole pattern for preparing the enclosure are shown in the following drawing.



## Materials and surfaces

- Stainless steel support tubes 1.4301
- Stainless steel components 1.4305
- Bearings POM
- O-rings NBR

## Load diagram

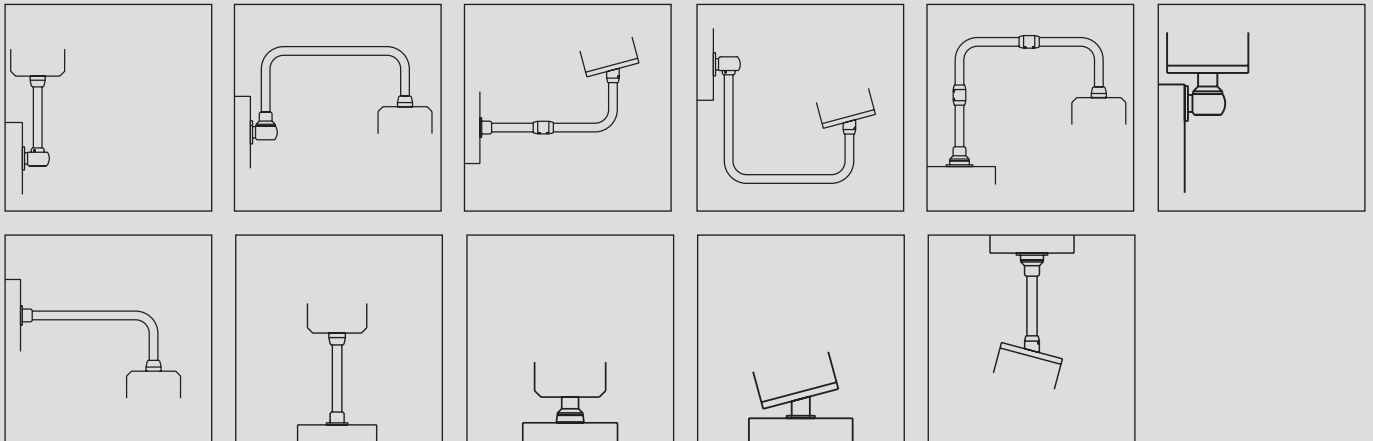
Refer to the diagram for the load bearing capacity of the CS-480 NR suspension system. Approval for higher loads is to be obtained separately. The system length  $l$  refers to the length specification in the diagram.

The overview on Pages 104 / 105 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.




### System combinations

The following selection illustrates the high degree of flexibility that can be achieved in configuring the suspension system:




#### Support tubes

Support tubes with 48.3 mm outside diameter; wall thickness 3.6 mm, straight tubes

	Length mm	Article number	Weights in kg
	250	9523501000	1.00
	500	9523502000	1.90
	750	9523503000	2.90
	1000	9523504000	4.10
	1250	9523505000	4.90
	1500	9523506000	5.80

#### Increased flexibility with L-shaped tubes and coupling sleeves

The use of L-shaped tubes and coupling sleeves together with straight support tubes can render unnecessary time-consuming manufacture of support tubes to customer specifications, L-shaped tubes

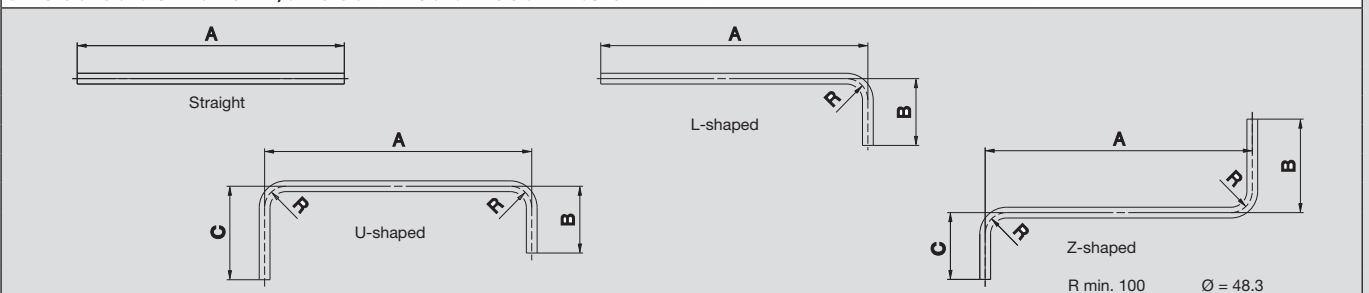
	250 x 250	9523500001	1.80
	500 x 500	9523500011	3.60
	Coupling sleeve	1013051200	

#### Support tubes to customer specifications

Different versions of formed support tubes for the BERNSTEIN CS-480 NR suspension system are available on request. To order customised tubes simply quote the shape (e.g. straight, L-, U- or Z-shaped) and the dimensions.

#### Note:

Dimension B and C min. 220 mm; dimension A in U and Z version min. 320 mm



# Stainless Steel Suspension System CS-480 NR

Article	Straight coupling (for attaching enclosure)	Tilt coupling (for attaching enclosure)
Article number	1013050100	1013050300



Details	Flange coupling for mounting enclosures. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material	Rigid flange coupling with 15° tilt for mounting enclosures. Complete with seals and mounting material
Weight in g	1400	1000
Material	Stainless steel	Stainless steel
Accessories (retrofitable)		

Application example		
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Dimensions in mm	 	 
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CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**Rotary base coupling, external mounting**
**1013050700**
**Rotary base coupling, internal mounting**
**1013050800**
**Base tilt coupling**
**1013050400**


Rotary base coupling (external mounting) for directly mounting enclosures on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material

**4500**

Stainless steel

Rotary base coupling (internal mounting) for directly mounting enclosures on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material

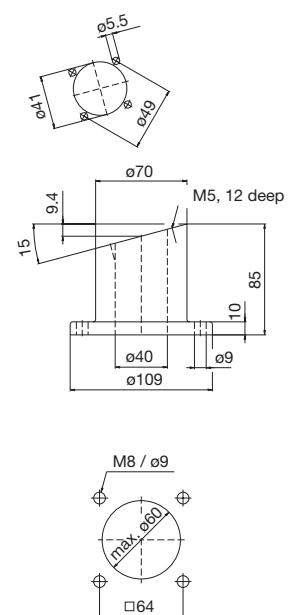
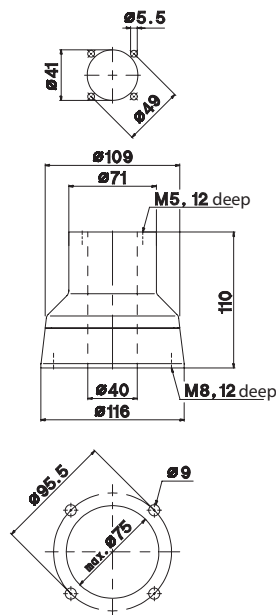
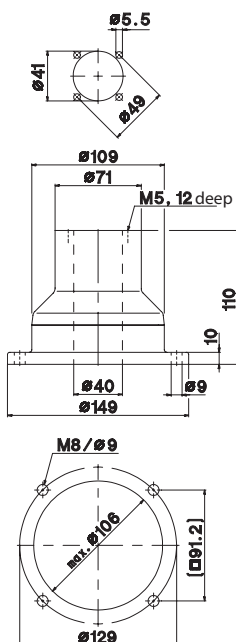
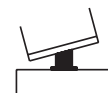
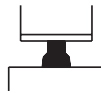
**4100**

Stainless steel

Rigid tilt coupling with 15° tilt for directly mounting enclosures on horizontal surfaces. Complete with seals and mounting material

**1900**

Stainless steel



# Stainless Steel Suspension System CS-480 NR

<b>Article</b>	<b>Coupling sleeve</b>	<b>Wall joint S</b>
<b>Article number</b>	1013051200	1013050900



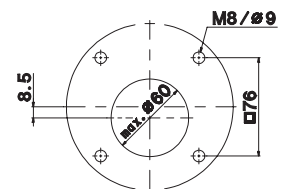
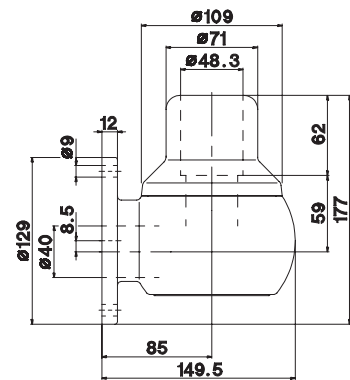
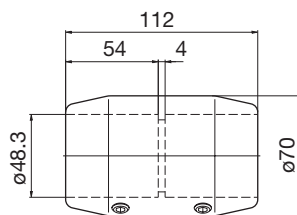
<b>Details</b>	Coupling sleeve for easy assembly and disassembly of tube configurations. Complete with seals	Wall joint with vertical outlet for mounting on vertical surfaces. Cover for easy cable installation. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals
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<b>Weight in g</b>	1500	7300
<b>Material</b>	Stainless steel	Stainless steel

<b>Accessories</b> (retrofitable)		

<b>Application example</b>		
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<b>Dimensions in mm</b>		
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CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**Wall coupling S**
**1013051000**

**Wall bracket S**
**1013051100**

**Rotary base socket, external mounting**
**1013050500**


Rotary wall coupling for directly mounting on vertical machine surfaces. Angle of rotation 340° with limit stop. Cover for easy cable installation. Preset torque. Maintenance-free bearings. Complete with seals and mounting material

7300

Stainless steel

Wall bracket with vertical outlet for mounting on vertical surfaces. Cover for easy cable installation. Complete with seals

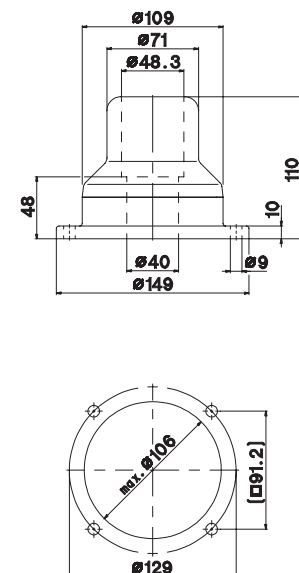
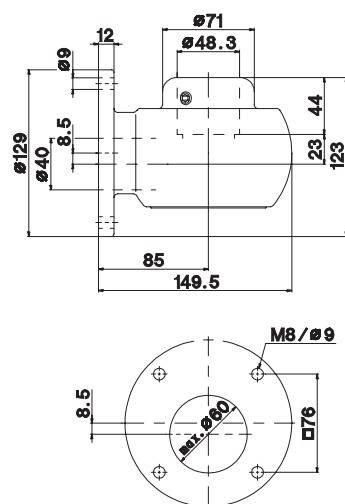
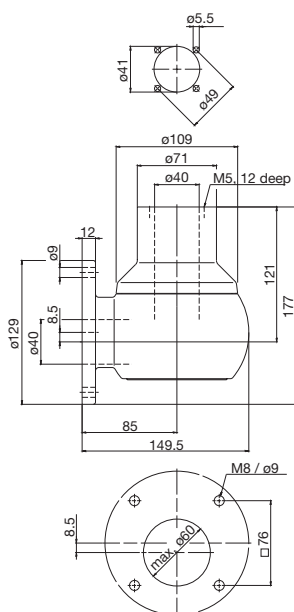
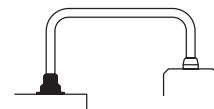
7700

Stainless steel

Rotary base for mounting on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals

4200

Stainless steel

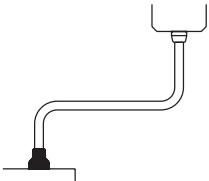
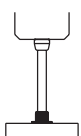


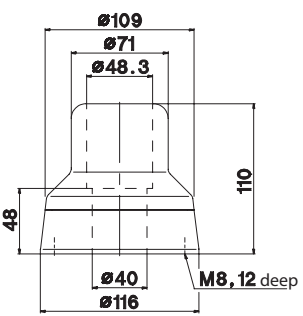
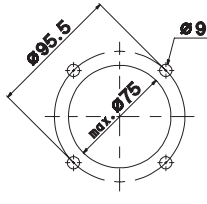
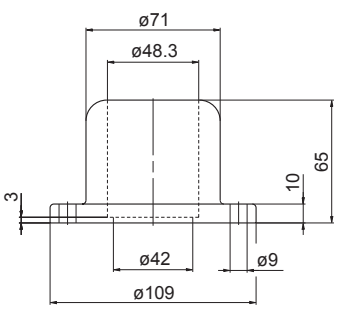
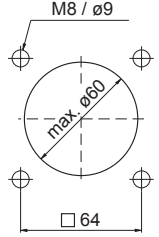
# Stainless Steel Suspension System CS-480 NR

Article	Rotary base socket, internal mounting	Base / wall flange
Article number	1013050600	1013050200



Details	Rotary base for mounting on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals	Base or wall flange for mounting on horizontal and vertical surfaces. Complete with seals
Weight in g	3800	1400
Material	Stainless steel	Stainless steel
Accessories (retrofitable)		

Application example		
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Dimensions in mm	 	 
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CAD files available at [www.bernstein.eu](http://www.bernstein.eu)



# Stainless Steel Suspension System CS-600 NR

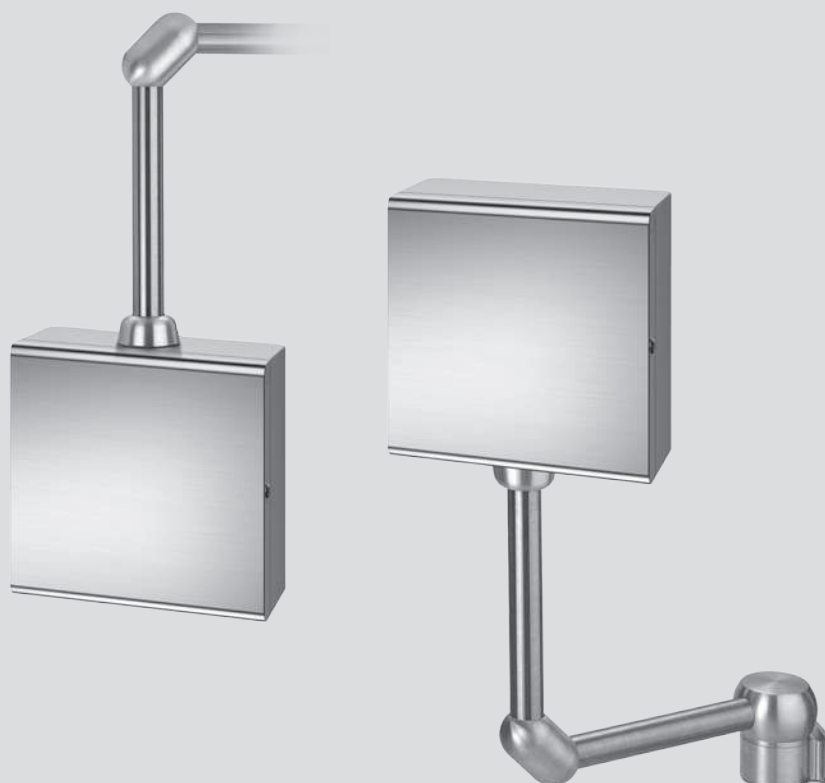
## Product features

The CS-600 NR suspension system was specifically designed for mounting control enclosures in hygienic areas in the food and pharmaceuticals industries.

Compared to the conventional suspension systems, the CS-600 NR is characterised by its outstanding suitability for hygiene applications and its flexible modular concept.

The CS-600 NR makes it possible to mount units at an angle without the need for formed tubes, thus rendering time-consuming procurement of specially formed support tubes unnecessary.

The user can build up the modular suspension system easily, flexibly and variably from individual components available from stock.

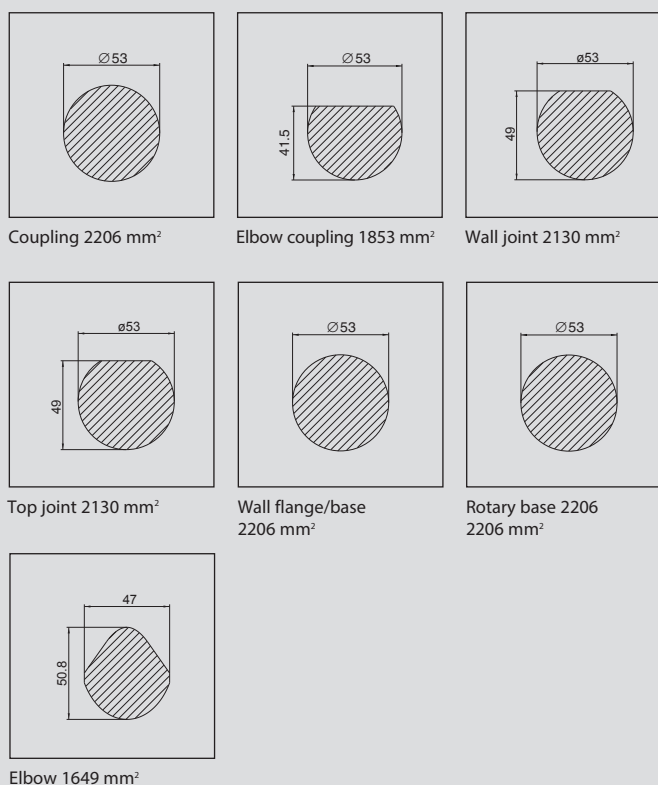


## System advantages

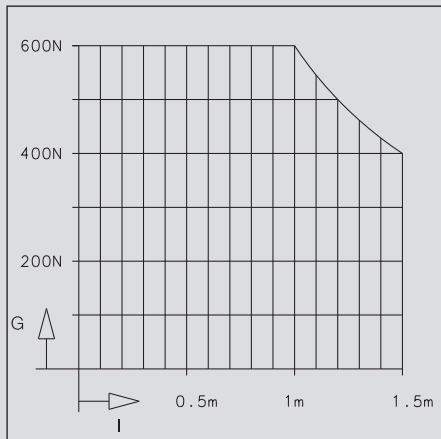
- Installation openings at bearing components with horizontal outlet
- No external screws or dirt-collecting edges – ideal for cleaning
- Easy mounting by clamping the support tubes
- All components vibration-protected
- Load bearing capacity 600 N at 1 m
- Protection class IP 66 / NEMA 4X
- Torque preset at factory
- Modern design
- Diverse range of components for unlimited combination options
- Choice of component materials: stainless steel 1.4305 or anodised aluminium

## Cable leadthrough

Due to different cross sections, the various suspension system components have available varying degrees of space. The dimensioned openings at the narrowest point within the components are specified below.







### Load diagram

The diagram shows the load bearing capacity of the CS-600 NR suspension system.

The system length (l) refers to the length specification in the diagram.

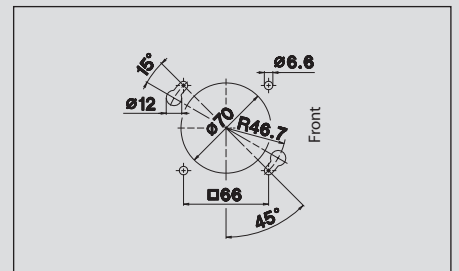
The overview on Pages 104 / 105 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.

### Materials and surfaces

Stainless steel support tubes	1.4301
Stainless steel components	1.4305
Bearings	POM
O-rings	NBR

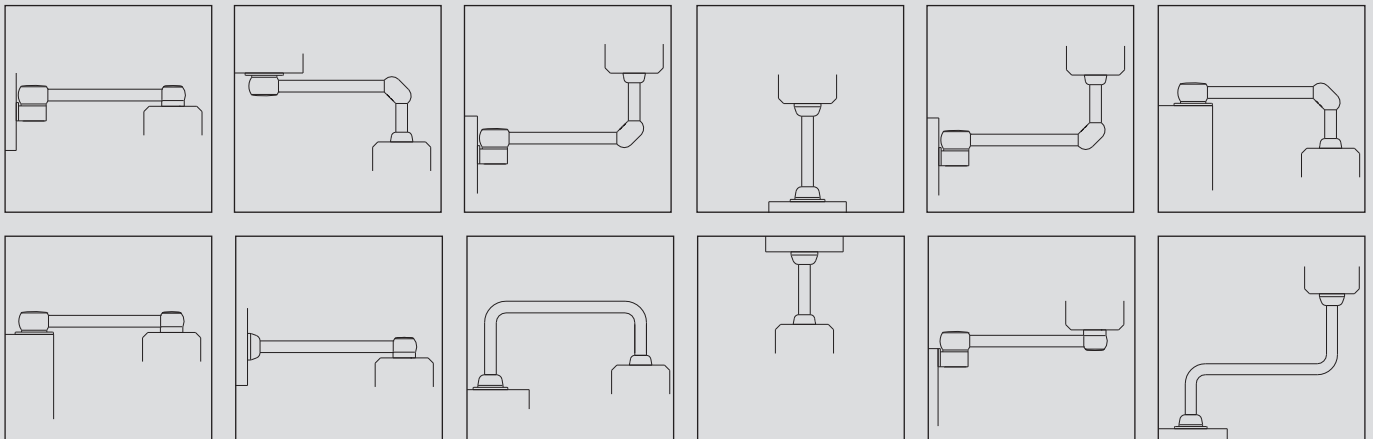
### Enclosure preparation for mounting couplings

The dimensions of the coupling hole pattern for preparing the enclosure are shown in the drawing opposite.



### System combinations

The following selection illustrates the high degree of flexibility that can be achieved in configuring the suspension system:



### Support tubes

Stainless steel support tubes, 60.3mm outside diameter, wall thickness 3.6mm

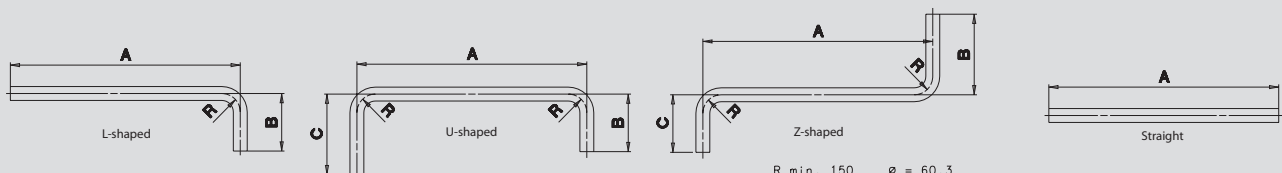
Length mm	Article number	Weights in kg
250	9523001000	1.20
500	9523002000	2.50
750	9523003000	3.50
1000	9523004000	4.70
1250	9523005000	6.20
1500	9523006000	7.30

### Support tubes to customer specifications

Different versions of formed support tubes for the BERNSTEIN CS-600 NR suspension system are available on request. To order customised tubes simply quote the shape (e.g. straight, L-, U- or Z-shaped) and the dimensions.

### Note:

Dimension B and C min. 300 mm; dimension A in U and Z version min. 450mm

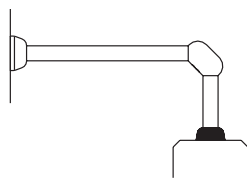
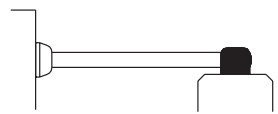


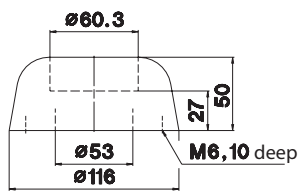
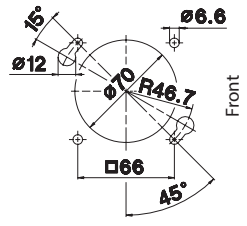
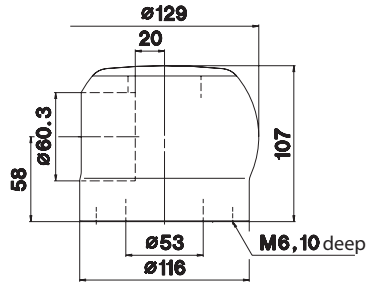
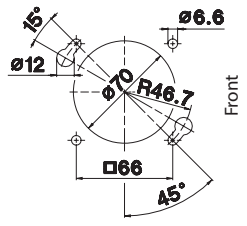
# Stainless Steel Suspension System CS-600 NR

Article	Straight coupling (for attaching enclosure)	Elbow coupling (for attaching enclosure)
Article number	1014050100	1014050200



Details	Flange coupling for mounting enclosures. Angle of rotation 300° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material	Flange elbow coupling for mounting enclosures. Installation opening cover seals off the screws hygiene-safe. Angle of rotation 300° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material
Weight in g	2180	6520
Material	Stainless steel	Stainless steel
Accessories (retrofitable)		

Application example		
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Dimensions in mm	 	 
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CAD files available at [www.bernstein.eu](http://www.bernstein.eu)



# Stainless Steel Suspension System CS-600 NR

Article	Rotary base socket, external mounting	Rotary base socket, internal mounting
Article number	1014050400	1014051500



Details	Rotary base for mounting on machines or floors. Angle of rotation 300° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals	Rotary base for mounting on machines or floors. Angle of rotation 300° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals
Weight in g	5720	6020
Material	Stainless steel	Stainless steel
Accessories (retrofitable)		

Application example		
---------------------	--	--

Dimensions in mm		
------------------	--	--

CAD files available at [www.bernstein.eu](http://www.bernstein.eu)

**Wall joint**
**1014050500**
**Wall flange / base**
**1014050300**


Wall joint for mounting on horizontal surfaces. Installation opening cover seals off the screws hygiene-safe. Angle of rotation 300° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals

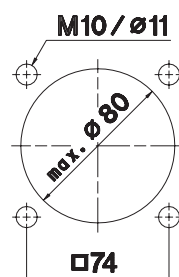
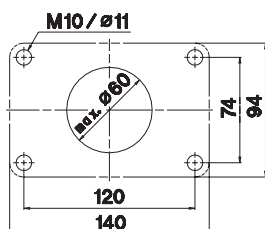
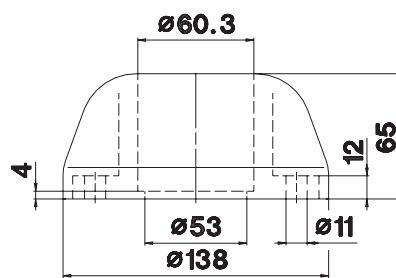
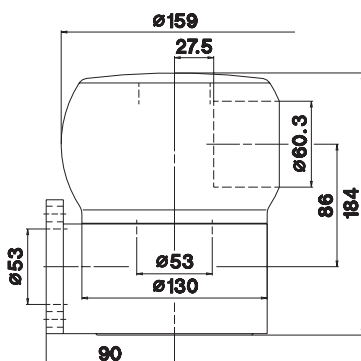
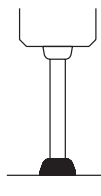
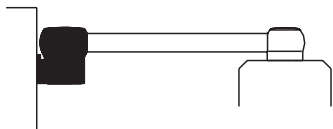
15990

Stainless steel

Wall flange or base for mounting on horizontal and vertical surfaces. Complete with seals

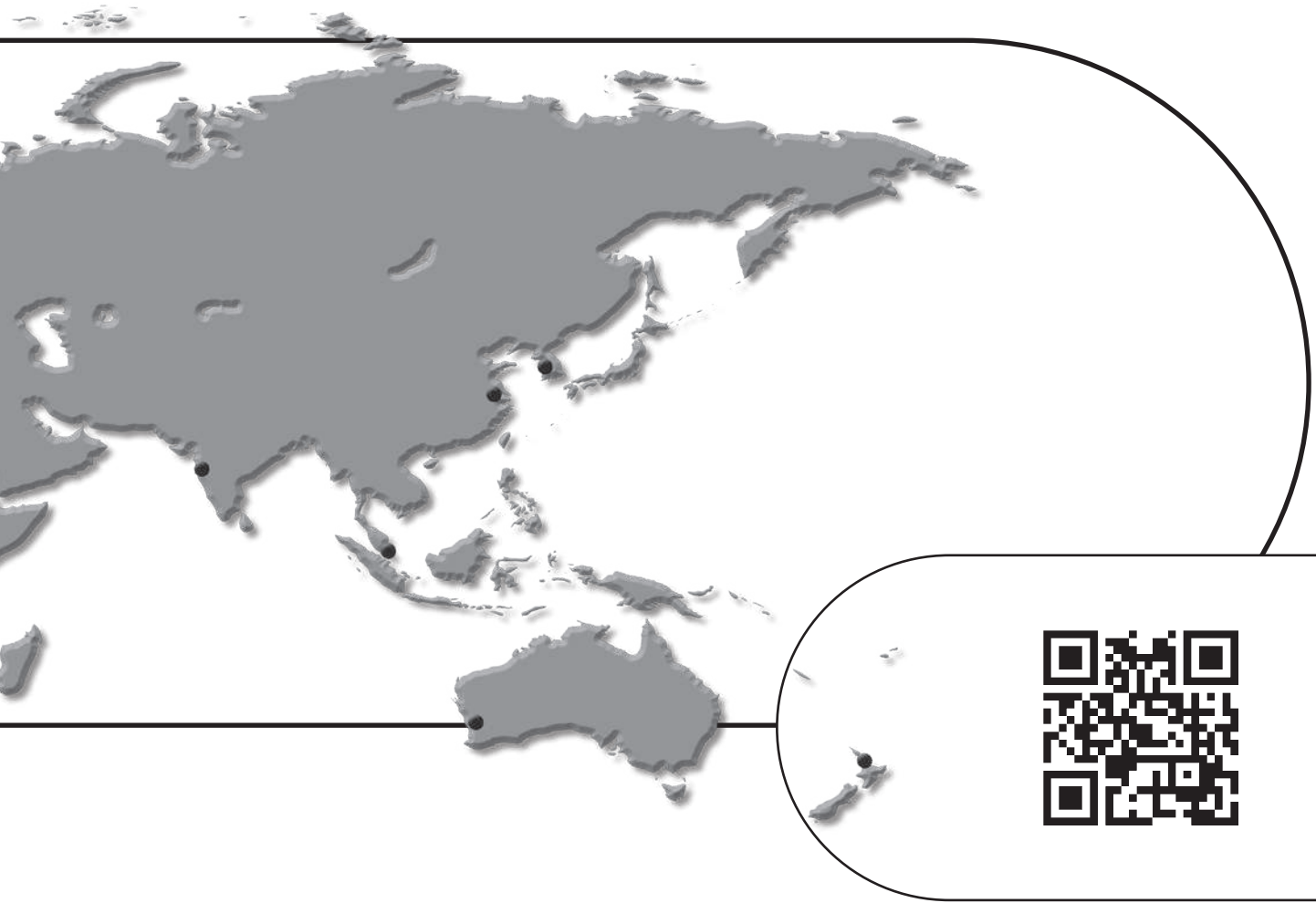
3700

Stainless steel



Worldwide Available











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