BERNSTEIN

Modular Control Enclosures
CC-4000 / CC-4000 SL

Modern industrial design

Modular Control Enclosures
at the highest level

The **CC-4000 / CC-4000 SL** are modular aluminium control enclosure systems. With their outstanding technical features, the enclosures simply and efficiently encapsulate industrial controllers and operator control panels for centralised and decentralised automation in production processes.

The enclosure depth of the **CC-4000** can be adapted precisely to your controller. Based on aluminium frame sections with depths of 52, 80, 140, 200 and 290 mm with extension sections with depths of 68, 128 and 228 mm, depending on the size of the controller, you can choose **depths** between **52 mm** and **646 mm**. Your selected width or height is produced by correspondingly cutting and machining the aluminium sections.

Thanks to its **elegant**, **slimline** design, the **CC-4000 SL** is the ideal addition to the BERNSTEIN CC-4000 range of control enclosures.

The modern, dynamic industrial design of the enclosure gives the entire machine or system a high-quality appearance. Tailored to the size of the controller or operator control panels, a corresponding aluminium section configuration can be selected from the extended range of enclosures. Two enclosure depths (external dimensions: **55** and **99** mm) are possible.

In most applications it is necessary to mount the enclosure on a machine or wall. The following BERNSTEIN **suspension systems** are ideally suited for this purpose:

- Light-duty suspension system CS-2000 SL
- Suspension system CS-3000
- System 80 suspension system

Selection of the suitable system depends on the arm length and the total weight of the enclosure. The enclosure sections are prepared (machined) corresponding to the specific suspension system. We would be pleased to assist you in selecting the right system for your application.

Product features

- Modern monitor-based industrial design
- Modular system made from high-grade cast aluminium with functional surface finish
- Choice of other colours (RAL)
- Heat dissipation suitable for industrial applications without reducing protection class
- Integrated handle elements that make the enclosure easy to handle while underscoring the monitor characteristics
- Protection class IP 65
- All-round mounting grooves for built-in components, no need for modifications

- Internally and externally mounted front panel possible
- Door configurations for direct access

Approvals

- UL 50 Type 12 (label on demand)

CC-4000 / CC-4000 SL

BERNSTEIN System Solutions

Expertise from under one roof

Comprehensive range of services from BERNSTEIN

Thanks to a comprehensive range of accessories, the modular control enclosures concept can be perfectly adapted to your requirements:

- Suspension system components for attaching on the top and on the bottom

- Different keyboard solutions

- Connecting elements for console versions

- Different interface solutions

- Internal, external fans or air conditioner

- Cable routing components

Modular Control Enclosure CC-4000

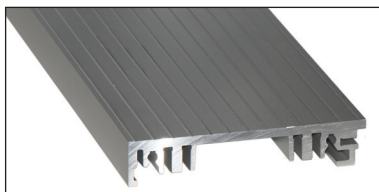Opening CC-4000 enclosure from front with hinged frame section.

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

Opening CC-4000 enclosure and detaching entire frame section at articulated hinges.

The ergonomically formed handles at the front of the enclosure make safe handling easy.

External view of aluminium section. Generously sized cable channels on the inside. Direct screw mounting of components or mounting with easy-to-fit spring nuts.

Combined, frame and expansion sections with different widths make up your specified control enclosure depth.

You determine the type of access

- Hinged rear panel

- Frame sections as front door, also for hinge-mounted controller

- Frame or extension section (rear door) with articulated hinge (fixed or detachable)

  The detachable version makes it possible to replace the complete module together with the built-in controller for servicing purposes.

System features

The single-walled aluminium section offers outstanding heat dissipation properties which are significantly superior to two-walled enclosures where the air trapped between the walls acts as an insulator.

For more demanding requirements, the heat dissipation can be further enhanced and adapted to defined operating conditions by incorporating optional measures such as heat sink rear panel, internal fans or even an air conditioner.

You will find further details in our range of accessories for control enclosures in our catalogue Enclosure systems.

We would be pleased to assist you in selecting the right system for your application.

Stand / console version

Your benefits

- Ergonomically arranged and attractive industrial PC workstation

- Adjustable inclination of the control enclosure and of the keyboard console for the benefit of the users

- Cable duct integrated at the rear, concealed by a cover panel

- Cables and connectors can be routed directly to the attached control enclosure or keyboard console through the coupling head

- Vertically adjustable support feet as well as a set of castors for mobile applications that can be fitted directly to the stand are available as accessories.

NEW at BERNSTEIN: CS-3000 curved tube

- Special design

- Ease of assembly and installation thanks to the bent tube version

- Simple cable routing without any joint

- Protection from impact and injury to the operator when using suspension system elements on the bottom of the enclosure

Modular Control Enclosure CC-4000 SL
for high-quality machines and installations

Comparison of handle sections:
Left: CC-4000 SL   Right: CC-4000

Variety of mounting options thanks to all-round mounting grooves.

Flush-closing door in the rear.

Product features

Thanks to its elegant, slimline design, the CC-4000 SL is the ideal addition to the BERNSTEIN CC-4000 range of control enclosures.

The modern, dynamic industrial design of the enclosure gives the entire machine or system a high-quality appearance. Tailored to the size of the controller or operator control panels, a corresponding aluminium section configuration can be selected from the extended range of enclosures.

With its many outstanding technical features the enclosure makes it easy to encapsulate the controllers cost-effectively.

Open for your applications

The control enclosure range CC-4000 SL ensures absolute flexibility with its extensive range of accessories and coordinated system consisting of control enclosures, suspension system components and stand.

Without the need for mechanical modifications, built-in components are easy to mount and remove with the aid of spring nuts in the all-round mounting grooves in the enclosure.

Rationalisation effects thanks to timesaving installation and servicing.

BERNSTEIN

**Modern industrial design**

System features

- Modern monitor-based industrial design

- Slimline design for configuring small visualisation systems

- Two enclosure depths

- Variety of mounting options thanks to all-round mounting grooves

- Heat dissipation suitable for industrial applications without reducing protection class

- Protection class IP 65

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

❶ Enclosure

☐ **Standard**
☐ Console encl., upper section
☐ Console encl., lower section

Front

Anticipated installation weight

_____ kg
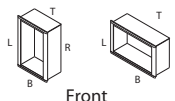
❷ Dimensions (mm)

External encl. dimensions
Width x height (W x H)   _____ x _____

19" Enclosure   W x H   _____ x _____
$H = (n \times HM) + 97\ \text{-}1\ HM = 44{,}45$ HM = _____

***Front panel dim.** (e x f)   _____ x _____
$e \times f = W - 111 \times H - 97$

****Rear panel dim.** (w x h)   _____ x _____
$W \times H = W - 61 \times H - 47$
$W \times H = W - 63 \times H - 47$ (hinged rear panel)
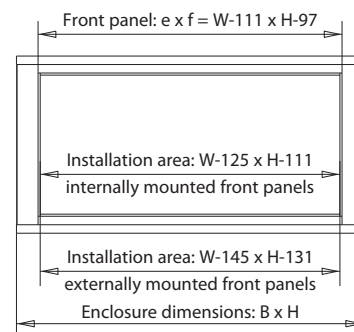
Front panel: e x f = W-111 x H-97

Installation area: W-125 x H-111
internally mounted front panels

Installation area: W-145 x H-131
externally mounted front panels
Enclosure dimensions: B x H

❸ Type of section   ☒ Section without ribbing

❹ Enclosure depth, ext.   **Frame section**   **Extension**

_____ ⟶   with 3 mm deep FP support
☐ 140 ☐ 200 ☐ 290   ☐ 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

Sec-tion	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	●		●			●	●				●			●		●			●				●											Expansion
80		●		●					◆	●			◆			◆		■				●						◆			●			
140			●			●						●	●			●				●		●						●			●			
200					●					◆					●	◆							◆				●		●		◆			
290														●					●						●	●				●		●		
68			●		●				●	●	●	◆	◆●			◆●	●	●				●	◆				●			●	◆			Frame section
68							●			●			●			◆										●								
128				●				◆		●	●	◆			●	●	■●					◆●	●	●			◆	●	●	●				
128									●						■						●							●					
228								●			◆					●			●		●	●		●				●	◆●		◆●	●		

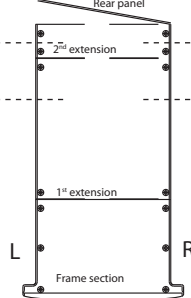** A = External depth, I = Internal depth   Internal depth is increased by **6 mm** for external mounting.   ◆■ = Alternative combination

* Completed by BERNSTEIN AG

❺ Door mount. (susp. syst.)

☐ Automotive version

☐ Rear panel ☐

☐ 2nd extension ☐

☐ 1st extension ☐

Section/fixed rear panel

Rear panel
2nd extension
1st extension
L R
Frame section
Door mounting

☐

☐

☐

☐ 2nd extension

☐ 1st extension

☐ Fr. sect. (from 140)

Suspension syst. position

Door mounting

❻ Partition ☐ not mount.

☐ **vertical** ☐ mount. on right ☐ **horizontal** ☐ bottom mount.

Qty ____ ☐ mount. on left Qty ____ ☐ top mounted

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

☐ Operator panel, anodis., int. mount.
Dim.: g x h (g = Width, h = Height)
☐ 1st operator panel ____ x ____
☐ 2nd operator panel ____ x ____
☐ 3rd operator panel ____ x ____

❼ Front panel ☐ none **Rear panel** ☐ none ☐ standard hinge
with ☐ 3 mm, int. mount. ☐ ext. screw-mounted ☐ screw-moun. rear pan. art hinge
☐ 3 mm, ext. mount. ☐ heat sink rear panel

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 ⓭)

❽ 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

❾ Preparation for susp. syst.

☐ **No** **System** ☐ **Top** ☐ **Bottom**

Type of coupling

☐ Turn/tilt coupling (from section 128) ☐ WS coupling ☐ SL (only section 80)
☐ Flange (see System) ☐ CS-3000/48 ☐ CS-3000 (fr. sect. 128)
☐ Tilt adapter (from section 200) ☐ Special preparation ☐ 80 (from section 128)
☐ Coupling head CC-4000 to customer specificat. ☐ SS cover, top
☐ Console connector ☐ SS cover, bottom
☐ Automotive adapter ☐ SS in section ____
☐ KDL 16/4 ☐ KDL 24/5

T
B

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

☐ Grommet 3-4 mm ☐ Grommet 6-7 mm ☐ Dummy grommet
____ Qty ____ Qty ____ Qty
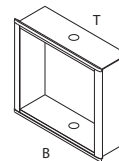
❿ Surface finish **Standard** **Customer specification**

Horizontal sections: ☐ RAL 7043, power-coated ☐ _____
Vertical sections: ☐ anodised, natural ☐ _____
Partition: ☐ RAL 7043, power-coated ☐ _____
Front panels: ☐ anodised, natural ☐ _____
Rear panels: ☐ anodised, natural ☐ _____

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

⓬ ☐ Climate control data for checking heat dissipation over enclosure surface
____ (Pv) total installed power loss ____ (°C) ambient temperature at enclsoure location
____ (°C) max. temperature, installation (e.g. PC) ____ (V) power supply for active cooling

**⓭ Accessories, Remarks** ☐ annexes ☐ no annexes

_____

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

❶ Enclosure

☐ Standard
☐ Console enclosure, upper section
☐ Console enclosure, lower section

Front

Anticipated installation weight

_____ kg
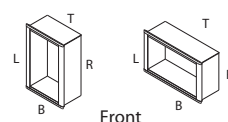
❷ Dimensions (mm)

External enclosure dimensions
Width x height (w x h)   _____ x _____

19" Enclosure   _____ x _____

$H = (n \times HM) + 73 - 1 \quad HM = 44,45$ HM = _____

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)

Front panel : $e \times f = W-81 \times H-73$

Installation area: $W-95 \times H-87$
internally mounted front panel

Installation area $W-115 \times H-107$
externally mounted front panel

Enclosure dimensions: W x H
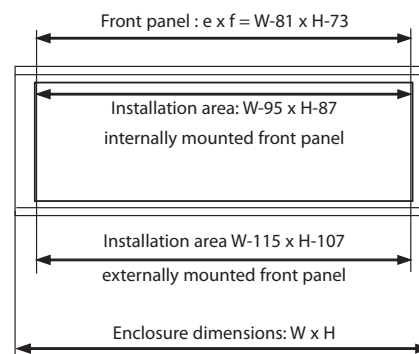
❸ Type of section

☒ Section without ribbing

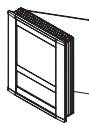## ❹ Enclosure depth, ext. (frame section with 6.5 mm deep FP support)

☐ 55   ☐ 99

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

(Internal depth increased by 6 mm for external mounting)

❺ Door mounting

Door mounting, **left**

Door mounting, **right**

☐ Fixed rear panel

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

☐ Standard hinge
☐ Screw-mounted rear panel articulated hinge

![BERNSTEIN logo]

❻ 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)

1st operator control pan. _____ x _____
2nd operator control pan. _____ x _____

❼ Front panel

☐ none   **with:** ☐ 3 mm, int. mounted
                              ☐ 3 mm, ext. mounted

  Rear panel

☐ none   **with:** ☐ 3 mm, externally screw-mount.
                              ☐ 3 mm, hinged

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

❽ 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:	☐			

❾ Preparation for suspension syst.   ☐ **No**   ☐ **Top**

Type of coupling/system

☐ SL flange / turn/tilt coupling (only section 99)
☐ Coupling head CC-4000
☐ Special preparation to customer specification
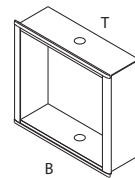
Side:

☐ **Bottom**

❿ Surface finish

	Standard	Customer specification
Horizontal sections:	☐ RAL 7043, power-coated	☐ _____
Vertical sections:	☐ anodised, natural	☐ _____
Partition:	☐ RAL 7043, power-coated	☐ _____
Front panels:	☐ anodised, natural	☐ _____
Rear panels:	☐ anodised, natural	☐ _____

⓫ EMV Version (**electromagnetic compatibility**)

☐ Conductive connection between enclosure body, door, FP and RP

⓬ ☐ Automotive version; braided earthing strap

⓭ ☐ Climate control data for checking heat dissipation over enclosure surface
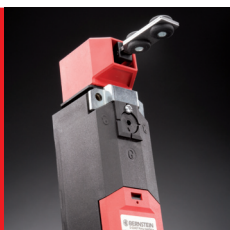
    _____ (PV) total installed power loss
    _____ (°C) ambient temperature at enclosure location
    _____ (°C) max. temperature of installation (e.g. PC)
    _____ (V) power supply for active cooling

⓮ Accessories, Remarks ☐ annexes ☐ no annexes

BERNSTEIN

**Switch systems –
Economy meets safety**

**Sensor systems –
Compact intelligence**

**Enclosure systems –
Function and design**

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