

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.



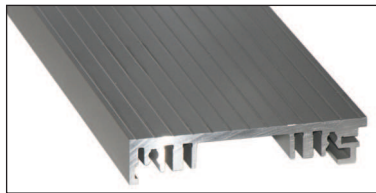
Opening CC-4000 enclosure from rear with flush-closing door.



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



BERNSTEIN CS-3000 Curved tube

Attractive design,
easy installation,
easy cleaning

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.



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

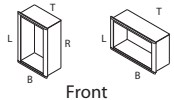
Checklist - Enclosure CC-4000

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 = _____

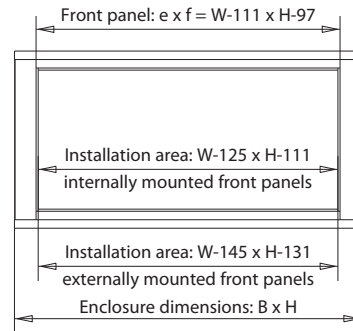
*Front panel dim. (e x f) _____ X _____

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

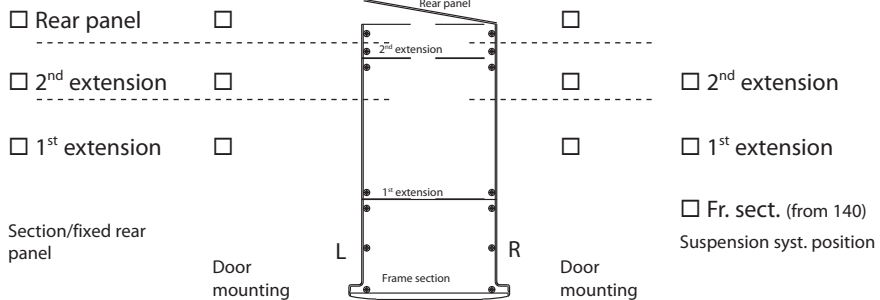
Internal depth is increased by 6 mm for external mounting.

◆ = Alternative combination

* Completed by BERNSTEIN AG

5 Door mount. (susp. syst.)

Automotive version



Rear panel

2nd extension

1st extension

Section/fixed rear panel

Door mounting



Door mounting

Fr. sect. (from 140)
Suspension syst. position

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)

1st operator panel _____ x _____

2nd operator panel _____ x _____

3rd 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

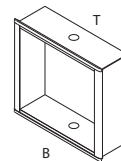
SS in section _____

Dummy grommet

_____ Qty

Top

Bottom



10 Surface finish

Horizontal sections:

Vertical sections:

Partition:

Front panels:

Rear panels:

Standard

RAL 7043, power-coated

anodised, natural

RAL 7043, power-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

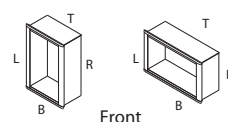
no annexes

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 _____

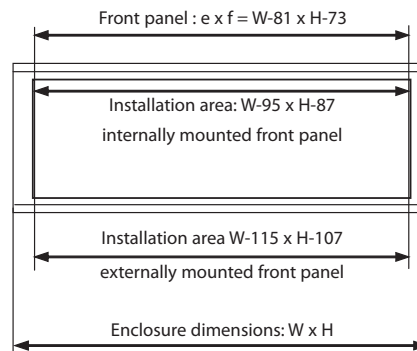
$e \times f = B - 81 \times H - 73$

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

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)

 1st operator control pan. _____ X _____

 2nd 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

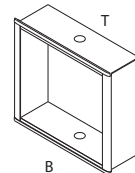
Type of coupling/system
 SL flange / turn/tilt coupling (only section 99)

 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, power-coated

 anodised, natural

 RAL 7043, power-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



**Switch systems –
Economy meets safety**



**Sensor systems –
Compact intelligence**



**Enclosure systems –
Function and design**

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