

GENERAL CATALOGUE

# Enclosures for Automation

## IS2 Enclosures





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# Summary

## Enclosures for automation

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## **Chapter 1**

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# Introduction

## A solution for every application

Enclosure for Automation. Great quality, economically unbeatable.

The ABB range of metal structures for automation was conceived and designed based on many years' experience of working alongside the major switchboard and machine manufacturers in Italy and on the most highly industrialised and technological world markets.

The metal structures conform to the IEC 62208 and IEC 60439-1 reference Standards and to the new IEC 61439-1-2 Standard.

Their performances are the market reference ones: high IP degrees of protection (according to IEC 60529) and IK (according to IEC 62262), which allow installation in most industrial environments.

### **Ideal enclosures, special apparatus**

Where the new enclosures for automation are the most advanced to be found on the market today, ABB's automation apparatus is also a synonym of technological innovation.

The enclosures for automation are, of course, integrated with the various ABB control and operating apparatus, and all the electrical and mechanical values (dissipation, short-time withstand currents, insulation distances, etc.) have been analysed and checked by the manufacturer.

They also offer a high level of preparation for assembly of the apparatus, with optimised hole drillings, fixings and overall dimensions.

And all this is to save you time!

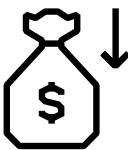




#### **Safety & protection**

We make it easy to create a safe working environment, providing innovative and user friendly machine safety solutions.

With a range of solutions to protect people and equipment, ABB is a trusted partner to support safety in the most productive way.



#### **Affordable range**

Focusing on cost-optimization of components, exploring alternative materials and managing the supply chain delivers cost effective solutions - all this while improving the functionality.

A complete range enables customers to select the right product for their application.



#### **Easy to install**

The focus for ABB is to think of the customer application first. ABB engineers continuously evaluate ways to simplify the installation process.

The focus is on innovative product designs that make it easier to install and maintain components and systems.

Simple instructions and the right accessories mitigate against mounting errors. Use of an ABB product can improve productivity and machine quality.

# Introduction

## The safety provided by a certified product

The law states that all the products must conform to the European Directives and to the reference product Standards, but this is not enough for ABB.

We prefer an external organization to certify the quality of our products, especially with regard to the more critical aspects, both in technical and application terms.

All the products in the range are also UL approved to satisfy requests from markets where this mark is compulsory.

The technical characteristics and high degree of protection allow their use in environments with a potentially explosive atmosphere.



In fact, the switchgear and enclosures conform to the ATEX 99/92/CE and 94/9/CE Directive (suitable for use in areas 2 and 22).

The IS2 enclosure versions dedicated to uses where electromagnetic compatibility (EMC) is required, have also obtained the relative certification.

# Introduction

## Customized directly in the factory

Custom Made Service is ABB's new service for automation metal structures, which, on request, are supplied painted, drilled and, where necessary, assembled according to the customer's specific requirements.

All the products in the range are also UL approved to satisfy requests from markets where this mark is compulsory.



### Painting

A shade of color other than the standard one (grey orange peel RAL 7035) can be requested on the mounted versions of the enclosure.

For the various colors/finishes and for details of the painting cycle characteristics, please consult page XXX of this catalogue.

### Customized drilling

Custom Made Service offers a drilling service complying with your own specific drawing, made using CAD dwg or dxf format drawings. The useful dimensions for drilling are indicated on page XXX and the following.

### Enclosure/Accessories assembly

Should you prefer a solution ready to be worked, you can choose the Custom Made Service solution dedicated to battery assembly of several columns. The accessories can also be supplied already factory-mounted by ABB.



Special painting

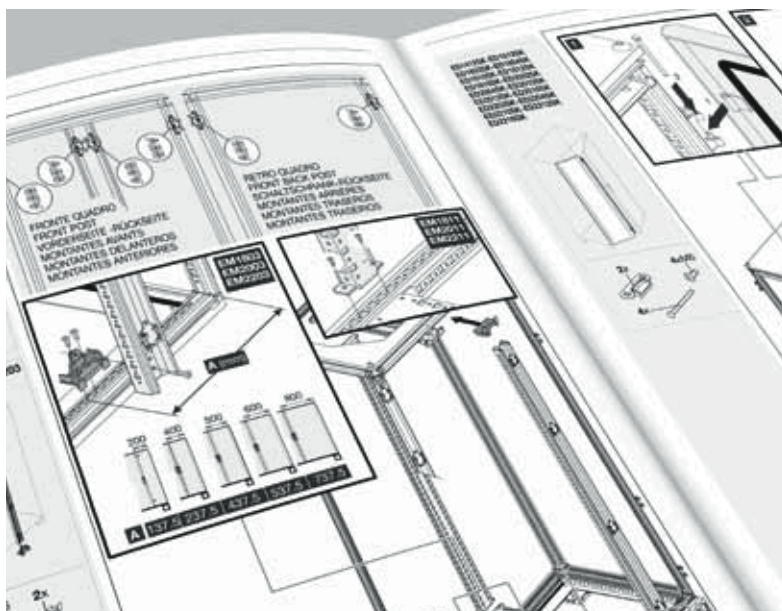


Customized drilling

## Custom Made Service



Enclosure/  
Accessories  
assembly



### Instruction manuals

Detailed multi-language instruction manuals, including drawings, show the correct way to assemble the structures and the components inside them. User compliance with manufacturer instructions allows the set-up of correctly selected and assembled electrical enclosures which conform to EN 60439-1 and the new 61439-1-2 (CEI 17/13-1) in accordance with the European Community Low Voltage Directive (Directive 2006/95/ EC which substitutes 73/23/EEC and subsequent amendments.





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## **Chapter 2**

### IS2 enclosures

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# IS2 Enclosures

## Main characteristics

ABB completes its offer of cabinets for automation with the IS2 series, also available in the kit version. The IS2 enclosures are suitable for making electrical automation, control and operation enclosures.

The IS2 enclosures are suitable for making electrical automation, control and operation enclosures, with the possibility of constructing batteries of cabinets side by side to control complex industrial plants.

They are suitable for floor mounting with the possibility of lateral and rear access and adjustment of the back plate position.

### Versions available

The IS2 cabinets are available in the following versions:

- Cabinet with blind door
- Cabinet with glazed door
- Cabinet with 19" rack frame "L" shaped profile, full height fixed and full height or partial swing
- Cabinet with 19" full height or partial fixed rack cranked shaped uprights and full height swing "C" shaped profile
- Cabinet for PC
- Cabinet with console
- Cabinet with compartments
- Cabinet for modular apparatus





# IS2 Enclosures

## Main characteristics

Main characteristics and applications for IS2 enclosures.

### Cabinet with blind or glazed door

The frame of the enclosure consists of galvanised sheet uprights and pickled sheet panelling with a min. thickness of 1,5mm. The parts made of pickled sheet are painted with 60÷70 micron thick polyester epoxy powder paint of standard medium orange peel grey RAL 7035. The painting can be worked (drilled) without chipping. Other colours are also available on request. Equipotentiality of the structure is obtained automatically during the assembly stage. Placing two or more structures side by side is a simple operation, using the minimum possible number of accessories.



The structure can be fitted with accessories as follows:

- Vertical blind separator between columns, which ensures the degree of protection
- Separator for 24-pole connectors (staggered assembly between the rows) and relative accessories (closure plates, reduction for the 16-10-6 pole versions).
- Lateral incoming cable structure W=300mm D=500-600-800mm- 1000mm – can be fitted with the separators described above.

The dimensions referred to conform to DIN 41488, and should be considered as external.

### Uprights

The upright section is of the closed type and provides excellent resistance to mechanical stresses whilst still keeping the max. dimensions of 47x47mm.

They are drilled with 25mm pitch (in conformity with the DIN 43660 Standard) and allow the accessories to be fixed using M6 self-threading screws and cage nuts.

The multipurpose hinges for fixing the doors allow several structures to be placed side by side, and also to make corner batteries.



There is also an intermediate upright, which allows structures with various compartments to be made (e.g. structure W=800 divided into 600+200mm).

For the structures with width  $\geq 1000$ mm, the upright can be removed to facilitate access.

**The roof is of the removable type and can be fitted with air conditioner, ventilation hoods, top cable connection compartment.**

**The flanges are supplied loose and their assembly is carried out from the front of the enclosure, using two screws.**

### Base, top and plinth

The base has openings which allow cable entry from below, and has different types of flanges:

- guillotine sliding, complete with gasket
- in several pieces of different sizes to be removed or drilled
- completely closed by a single large flange (2,00mm thickness), which can be drilled to house fairlead membranes or for direct entry of large cable bundles.

It can also be fitted with supporting crosspieces for heavy users (e.g. transformers max. 500Kg)  
Various types of plinths are available:

- Standard: 2,5mm angle pieces + 1,00mm flange made of pickled sheet and painted grey orange peel RAL 7012 colour, H=100mm. The flanges are supplied loose. Their assembly is carried out from the front of the enclosure, using two self-threading screws. The angle pieces are fixed to the structure with two bolts placed diagonally to prevent any rotations during handling. Handling can be carried out using transpallet seven when there are two structures side by side.
- Raised H=200mm: this keeps the same characteristics as the previous one and consists of two superimposed angle pieces H=100mm and relative cover flange H=100mm.
- Supporting: able to support the weight of the structure ( $\approx$  300kg loaded) and handle it by means of rollers. Versions H=100mm.



The plinth can be replaced by the following series of accessories:

- Levelling feet (500kg max. weight)
- Free and braked type wheels (70kg max. weight)
- Single: on request the plinth can be made in a single piece, equal to the whole perimeter of the enclosures mounted in a battery. The angle pieces are provided with M12 holes for fixing to the floor.

**The blind door is fitted with reinforced galvanised tube and drilled with 25mm pitch, earthing pins (M6) located in the two corners close to the hinges. The transparent door is fitted with safety glass 4 mm thick screen-printed and with earthed pins.**

### Door

The reversible type doors (right or left opening) are made of 2,00mm thick pickled sheet, and can be mounted on the four sides with an opening angle of 120° for the front ones, even in the case of several structures side by side. The side doors have a maximum opening angle of 100°. Both handles are fitted with different types of key locks. Furthermore the doors are fitted with the following series of accessories:

- Hinges with 180° opening
- Door stop in the open position for the 180° version as well
- Release microswitch
- Voltage indication lamp
- Ventilation Kit
- Swivel work surface (only for doors W=600 and 800mm), which can be mounted on the reinforcement bar
- RAL7035 colour vertical and horizontal A3 format metal document pocket (only for doors W=600-800-1000mm), which can be mounted on the reinforcement bar
- A4 format plastic document pocket
- Crosspieces on the inside of the door, for horizontal connection between reinforcement tubes, for fixing the wiring duct or other accessories.
- Aluminium openable windows for control panels fitted with door and key.
- Inner door, to be mounted at the same time as the front door.

This can house the main components, such as handles for switch-disconnectors/circuitbreakers, mushroom-head pushbuttons and various different pushbuttons.





# IS2 Enclosures

## Main characteristics

### Large functional plate

The structure of the large plate is particularly sturdy, it can support loads up to a total of 500kg without undergoing any deformation. Made of galvanised sheet (2,5mm thick), it is mounted on sliding blocks, which facilitate its insertion in the enclosure in all of the following ways:

- From the front
- From the side
- From the rear
- Two "back-to-back" plates; also in the version with opposed plate
- Fully to the rear, placed inside the uprights on the same level as these.



The plates, which can be adjusted in depth every 25mm, have the same heights and can be in one of the following versions:

- Standard: with insertion from the front or rear. Joining with another plate is carried out using the special kit. Insertion from the side is possible by means of sliding tracks.
- Oversized: in this case the useful width is the same as the width of the structure. Assembly can only be from the side and is carried out thanks to the special tracks. The oversized plate can be adjusted in depth to exploit the useful space to the maximum without inter-

fering with the side-by-side kit. It can be joined to other plates with the help of few accessories which can be mounted from the front.

- Partial: adjustable in depth, this is installed using accessories. The back plates can be fitted with rear reinforcement crosspieces.

**In the cabinets with glazed doors, the useful space between the glass and panels/inner door allows assembly of most of the components, among which: fixed circuit-breakers with transmitted rotary operation, OESA-OETL switch-disconnectors, Tmax circuitbreakers, and various pushbuttons.**

### Cabinet with 19" rack frame

The following types of frame are available:

- Fixed: adjustable in depth with 25mm pitch, able to support a maximum load of 90Kg. With 38, 42, 47 HE module capacity for enclosures 1800, 2000, 2200mm high respectively, width 600, 800mm.
- Swing: in the versions for off-centre mounting in structures with W=800mm and centred in structures with W =600mm with a capacity of 36, 40, 45 HE modules respectively for 1800, 2000 and 2200mm heights.
- Partial swing: with 9, 18, 27 HE module capacity, for frames 500, 900, 1300mm high
- respectively.

The rack frames are completed with the special blind closure panels with dimensions from 1 HE to 20 HE. from 1 HE to 20 HE.





**Cabinet with 19" rack frame fixed with cranked shaped profile, swing decentralized "C" shaped profile and accessories**

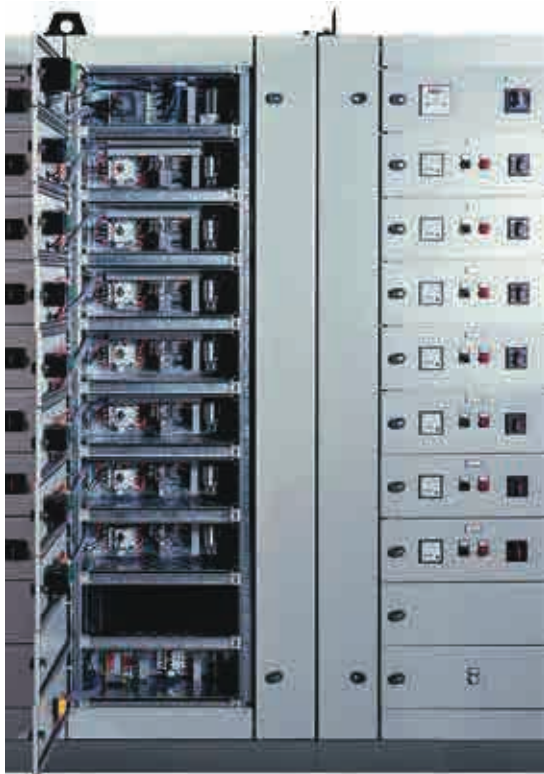
Other fastening systems for rack 19" are available, provided with new accessories on catalogue:

- Fixed: fastening systems for rack 19" with fixed cranked shaped profile uprights at full height in enclosure W=600mm and W=800mm, capacity 38/42/47 HE
- Partial fixed: fastening systems for rack 19" with fixed cranked shaped profile uprights at partial height in enclosure W=600mm and W=800mm, capacity 9/18/27 HE
- Swing: decentralized rack frame with swing decentralized "C" shaped profile for W=800mm, capacity 36/41/45 HE.

Brackets for fixing in W=600mm and W=800mm are available, crosspieces have dedicated slots for the passage of cables and for the ducts fixing. Support for accessories, universal fixed, adjustable in deep or removable shelves plus DIN-rail codes are included in ABB offer for those codes.

**Cabinet with compartments**

The IS2 range also covers construction of versions with cells or compartments. The compartments, available in heights multiples of 100mm up to maximum of 800mm, allow Form 3a type segregation to be obtained. The galvanised sheet back plate can be removed to facilitate assembly of the apparatus. The side parts of the compartment are pre-heard for passage of the conductors.



**The cabinet is fitted with a glazed door for the video part and can take screens up to 17" in size.**

**Cabinet for PC**

In this configuration, the cabinet is fitted with a glazed door for the video part and can take screens up to 17" in size. The window only regards the screen part. The part relative to the CPU is located behind the keyboard surface, accessible through a lift-up top fitted with a key lock.

The PC cabinet can be placed alongside the basic structures. Available in 1800 and 2000mm heights, 600mm width, and 600/800mm depth.

**Cabinet with console**

The structure is fitted with a section dedicated to a console. The versions available are with blind or glazed door.



**Cabinet for modular configurations**

In the 600 and 800mm widths (24 and 36 DIN modules) without cable compartment and in the 800/1000/1200mm widths with internal cable compartment W=200 or 400mm, the IS2 cabinets can be fitted with modular panels.

The modular panels are available in the version with DIN drilling (for one or three rows of modular apparatus), in the blind version and for 72x72mm and 96x96mm measuring instruments. All the panels have vertical modularity of 150 or 200mm and are available in the fixed or hinged version by means of an accessory.

# IS2 Enclosures

## Main characteristics

Installation of Tmax moulded-case circuit-breakers is possible by means of a back plate and blind panels.

Installation of the modular panels in the IS2 cabinets requires the use of the special uprights for IS2 Enclosures for Automation. Modular panels are screwed onto the structure of the cabinet.

Alternatively an assembly of the apparatus on an oversized back plate is possible by means of dedicated uprights.



The modular versions are also fitted with the following series of accessories:

- Hole cover W=2000mm grey RAL 7035 colour
- Adhesive circuit identification label holders
- Distribution frames

**In the 600 and 800mm widths (24 and 36 DIN modules) without cable riser and in the 800/1000/1200mm widths with internal cable riser W=200 or 400mm, the IS2 cabinets can be fitted with modular panels.**

### Air conditioners/fans

There are several solutions for air conditioning and ventilation cabinets:

- Air conditioners, ultra-thin (max depth 105 mm) for wall mounting, IP54, 230 V, 50/60 Hz, 400 V 50 Hz, 460 V 60 Hz, RAL 7035, with a cooling capacity from 1900 W to 2940 W.
- Air conditioners for wall or door mounting, 230V 50/60Hz, RAL 7035 with cooling power of 600 W to 2200 W.
- Heat exchangers (air - air) for wall mounting, IP54, 230 V 50/60 Hz, RAL 7035 with cooling power from 35 W to 85 W.
- Natural ventilation kit through Kit for the raising of the roof IP 20 and grid
- Natural ventilation kit through grid IP21/IP54
- Forced ventilation kit through input grid and output fan on the wall or hood outlet on the roof, IP23 / IP54, 7035, 230V / 115V, 50/60Hz with reversible flow, flow rate of 23 m<sup>3</sup>/h 590 m<sup>3</sup>/h.
- Heater IP20, with 110/230V power supply 50/60 Hz
- Thermostat with 110V, 250V power supply 50/60 Hz


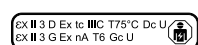




### Accessories

Apart from the accessories dedicated to making up some versions, the following are available for the whole range:

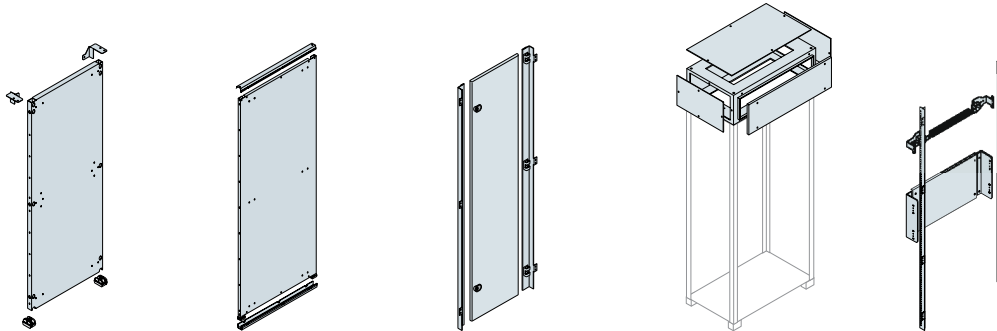
- Reinforcement crosspieces for transformers, able to support weights of 500kg.
- They are placed at the back of the structure in depth
- Reinforcement crosspieces/various applications, which can be mounted both in depth and in width (H=48-100mm). They are independent of the dimensions of the structure and can be positioned both inside and outside the uprights
- "C" guides in depth for mounting DIN rails and blind back plates
- Blind panels (H=50-100-150-200-400-600mm) and DIN cut-outs (H=150-200mm)
- Lamps for enclosure internal lighting, to be installed directly on the upright placed under the roof. They can be of two types: 8-13W fluorescent tube with 220-240V 50/60Hz power supply, or 11W version with integrated UNEL socket
- "Duct" type accessory able to shield the power cables from the signal cables
- Busbar system

Technical characteristics		
Conformity with Standard	IEC 62208, IEC 60439-1, IEC 61439-1-2	
Degree of protection	IP65 (IEC 60529) with single door and fixed flange TYPE 12 (UL Standard)	
Degree of mechanical strength	IK10 blind door IK09 glazed door (IEC 62262)	
Certifications	 	
Type of material	Metallic	
Installation site	Indoors	
Fixing method	floor	
Normal service conditions - ambient temperature	from -5 to +40° C	
Operating climate (t°/Ur%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Vibration test	In accordance with Standard IEC 60068-2-57	
Seismic withstand capability test	In accordance with Standard IEE Std 693	

(\*) UL listed for structures IP65 with plain doors assembled in the factory. Loose components are UL recognized according to UL regulation.

# IS2 Enclosures

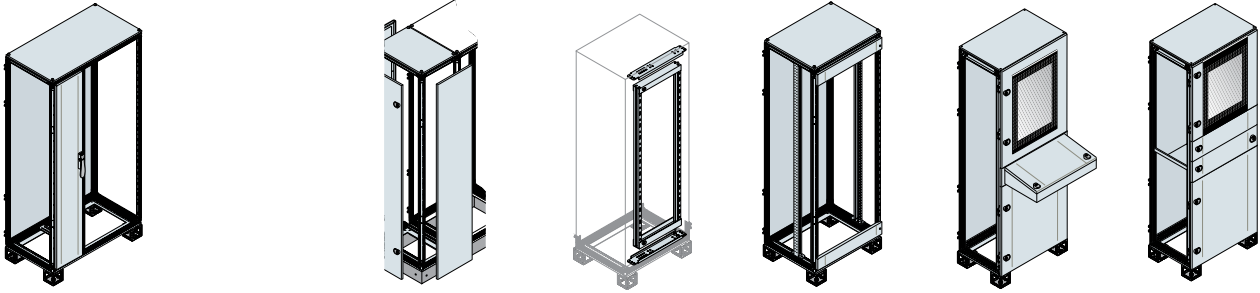
## Composition of the series



Dimensions (mm)			Back plates		Inner door*	Top cable connection cont.	Modular DIN structure
H	D	W	Standard	Oversized			
1400**	400	300					
1600**		400	✓			✓	
1800		600	✓	✓	✓	✓	✓
2000		800	✓	✓	✓	✓	✓
2200		1000	✓	✓	✓	✓	✓ + cable cont.
		1200	✓	✓	✓	✓	✓ + cable cont.
500	400	300					
		400	✓	✓		✓	
		600	✓	✓	✓	✓	✓
		800	✓	✓	✓	✓	✓
		1000	✓	✓	✓	✓	✓ + cable cont.
		1200	✓	✓	✓	✓	✓ + cable cont.
		1600	✓			✓	
600	400	300					
		400	✓	✓		✓	
		600	✓	✓	✓	✓	✓
		800	✓	✓	✓	✓	✓
		1000	✓	✓	✓	✓	✓ + cable cont.
		1200	✓	✓	✓	✓	✓ + cable cont.
800	400	300					
		400	✓	✓		✓	
		600	✓	✓	✓	✓	✓
		800	✓	✓	✓	✓	✓
		1000	✓	✓	✓	✓	✓ + cable cont.
		1200	✓	✓	✓	✓	✓ + cable cont.
1000	400	300					
		400	✓	✓		✓	
		600	✓	✓	✓	✓	✓
		800	✓	✓	✓	✓	✓
		1000	✓	✓	✓	✓	✓

\* For H=1400 and 1600mm inner doors, please contact ABB.

\*\* Cable compartment not available for structures H=1400/1600mm.



**Cable container**

Internal W=200mm

Internal W=400mm

External W=300mm

19" rack structures

**Structures with compartments**

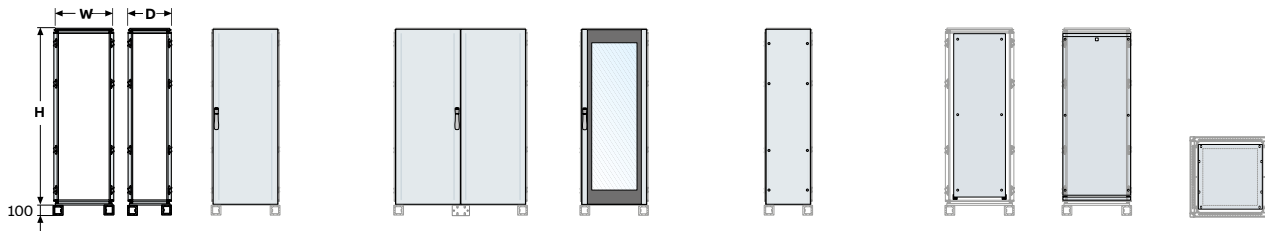
**Cabinet with console**

**Cabinet for computer**

Internal W=200mm	Internal W=400mm	External W=300mm	19" rack structures	Structures with compartments	Cabinet with console	Cabinet for computer
		✓				
			✓	✓	✓	
✓			✓	✓	✓	
✓	✓			✓ + cable cont.		
	✓			✓ + cable cont.		
		✓				
			✓	✓	✓	
✓			✓	✓	✓	
✓	✓			✓ + cable cont.		
	✓			✓ + cable cont.		
		✓				
			✓	✓	✓	✓
✓			✓	✓	✓	
✓	✓			✓ + cable cont.		
	✓			✓ + cable cont.		
		✓				
			✓	✓	✓	
✓			✓	✓	✓	
✓	✓			✓ + cable cont.		

# Pre-assembled IS2 Cabinets

## Selection of the structure - H=1400



### External dimensions

(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Pre assembled structure with blind door and rear panel	Pre assembled structure with blind double door	Pre assembled structure with glass door and rear panel	Side panel	Standard mounting plate	Oversized mounting plate + rails	Fixed cable entry flanges	
1400	400	400	1STQ005349B0000	-	-	EL1440K	EA1440	EA1540	EF4042	
		600	1STQ005361B0000	-	-	EL1460K	EA1440	EA1540	EF4063	
		800	1STQ005365B0000	-	-	EL1480K	EA1440	EA1540	EF4082	
	600	300	400	1STQ005346B0000	-	-	1STQ005322B0000	EA1460	EA1560	1STQ005426B0000
			400	1STQ005350B0000	-	1STQ005355B0000	EL1440K	EA1460	EA1560	EF6043
			500	1STQ005357B0000	-	-	1STQ005323B0000	EA1460	EA1560	EF6052
			600	1STQ005362B0000	-	-	EL1460K	EA1460	EA1560	EF6062
			800	1STQ005366B0000	-	-	EL1480K	EA1460	EA1560	EF6082
	800	300	400	1STQ005347B0000	-	1STQ005354B0000	1STQ005322B0000	EA1480	EA1580	1STQ005427B0000
			400	1STQ005351B0000	-	1STQ005356B0000	EL1440K	EA1480	EA1580	EF8042
			500	1STQ005358B0000	-	-	1STQ005323B0000	EA1480	EA1580	EF8052
			600	1STQ005363B0000	-	-	EL1460K	EA1480	EA1580	EF8062
800			1STQ005367B0000	-	-	EL1480K	EA1480	EA1580	EF8082	
1000	300	400	1STQ005348B0000	-	-	1STQ005322B0000	EA1411	-	1STQ005428B0000	
		400	1STQ005352B0000	-	-	EL1440K	EA1411	-	EF1042	
		500	1STQ005359B0000	-	-	1STQ005323B0000	EA1411	-	EF1052	
1200	400	-	-	1STQ005353B0000	-	EL1440K	EA1412	EA1512	2xEF6043	
		-	-	1STQ005360B0000	-	1STQ005323B0000	EA1412	EA1512	2xEF6052	
		-	-	1STQ005364B0000	-	EL1460K	EA1412	EA1512	2xEF6062	
		-	-	1STQ005368B0000	-	EL1480K	EA1412	EA1512	2xEF6082	

<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.

For H=1400 inner doors, please contact ABB.

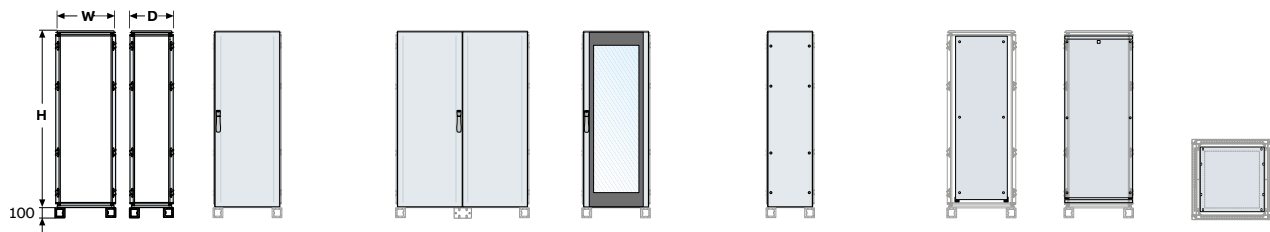




Sliding cable entry flanges	Build-up cable entry flanges	Plinth flanges front/rear	Plinth flanges side	19" Fixed cranked shaped uprights Frame+Fixing kit	Side-by-side structure Kit	Oversized plate joining Kit
EF4040	EF4041	ZN4000	ZN4000	-	EV0002	EA2113
EF4060	EF4061	ZN4000	ZN6000	-	EV0003	
EF4080	EF4081	ZN4000	ZN8000	-	EV0006	
-	-	ZN6000	ZN3000	1STQ005332B0000+EB6000	EV0002	EA2113
EF6040	EF6041	ZN6000	ZN4000	1STQ005332B0000+EB6000	EV0003	
EF6050	EF6051	ZN6000	ZN5000	1STQ005332B0000+EB6000	EV0006	
EF6060	EF6061	ZN6000	ZN6000	1STQ005332B0000+EB6000		
EF6080	EF6081	ZN6000	ZN8000	1STQ005332B0000+EB6000		
-	-	ZN8000	ZN3000	1STQ005332B0000+EB8000	EV0002	
EF8040	EF8041	ZN8000	ZN4000	1STQ005332B0000+EB8000	EV0003	EA2113
EF8050	EF8051	ZN8000	ZN5000	1STQ005332B0000+EB8000	EV0006	
EF8060	EF8061	ZN8000	ZN6000	1STQ005332B0000+EB8000		
EF8080	EF8081	ZN8000	ZN8000	1STQ005332B0000+EB8000		
-	-	ZN1000	ZN3000	-	EV0002	EA2113
EF1040	EF1041	ZN1000	ZN4000	-	EV0003	
EF1053	EF1051	ZN1000	ZN5000	-	EV0006	
2xEF6040	2xEF6041	2xZN6000	ZN4000	-	EV0002	EA2113
2xEF6051	2xEF6051	2xZN6000	ZN5000	-	EV0003	
2xEF6060	2xEF6061	2xZN6000	ZN6000	-	EV0006	
2xEF6080	2xEF6081	2xZN6000	ZN8000	-		

# Pre-assembled IS2 Cabinets

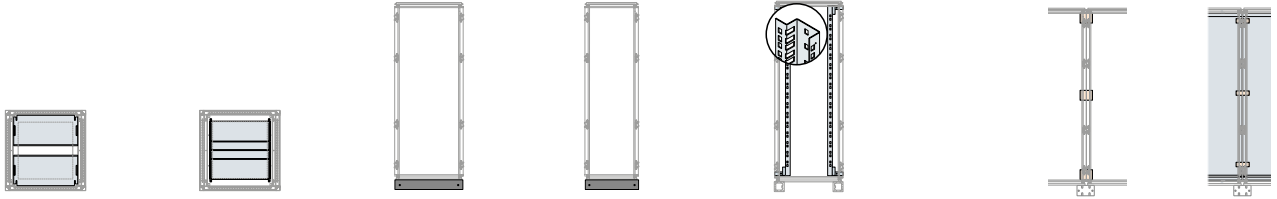
## Selection of the structure - H=1600



### External dimensions

(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Pre assembled structure with blind door and rear panel	Pre assembled structure with blind double door	Pre assembled structure with glass door and rear panel	Side panel	Standard mounting plate	Oversized mounting plate + rails	Fixed cable entry flanges
1600	400	500	1STQ005377B0000	-	-	EL1650K	EA1640	EA1740	EF4052
		600	1STQ005382B0000	-	-	EL1660K	EA1640	EA1740	EF4063
		800	1STQ005387B0000	-	-	EL1680K	EA1640	EA1740	EF4082
		1000	1STQ005392B0000	-	-	EL1610K	EA1640	EA1740	EF4012
600	300	300	1STQ005369B0000	-	-	1STQ005324B0000	EA1616	EA1760	1STQ005426B0000
		400	1STQ005371B0000	-	1STQ005375B0000	1STQ005325B0000	EA1616	EA1760	EF6043
		500	1STQ005378B0000	-	-	EL1650K	EA1616	EA1760	EF6052
		600	1STQ005383B0000	-	-	EL1660K	EA1616	EA1760	EF6062
		800	1STQ005388B0000	-	-	EL1680K	EA1616	EA1760	EF6082
		1000	1STQ005393B0000	-	-	EL1610K	EA1616	EA1760	EF6012
		800	300	1STQ005370B0000	-	-	1STQ005324B0000	EA1619	EA1780
400	1000	400	1STQ005372B0000	-	1STQ005376B0000	1STQ005325B0000	EA1619	EA1780	EF8042
		500	1STQ005379B0000	-	-	EL1650K	EA1619	EA1780	EF8052
		600	1STQ005384B0000	-	-	EL1660K	EA1619	EA1780	EF8062
		800	1STQ005389B0000	-	-	EL1680K	EA1619	EA1780	EF8082
		1000	1STQ005394B0000	-	-	EL1610K	EA1619	EA1780	EF8012
		400	1STQ005373B0000	-	-	1STQ005325B0000	EA1610	EA1710	EF1042
		500	1STQ005380B0000	-	-	EL1650K	EA1610	EA1710	EF1052
600	1200	600	1STQ005385B0000	-	-	EL1660K	EA1610	EA1710	EF1062
		800	1STQ005390B0000	-	-	EL1680K	EA1610	EA1710	EF1082
		1000	1STQ005395B0000	-	-	EL1610K	EA1610	EA1710	EF1012
		400	-	1STQ005374B0000	-	1STQ005325B0000	EA1612	EA1712	2xEF6043
500	-	1STQ005381B0000	-	EL1650K	EA1612	EA1712	2xEF6052		
600	-	1STQ005386B0000	-	EL1660K	EA1612	EA1712	2xEF6062		
800	-	1STQ005391B0000	-	EL1680K	EA1612	EA1712	2xEF6082		

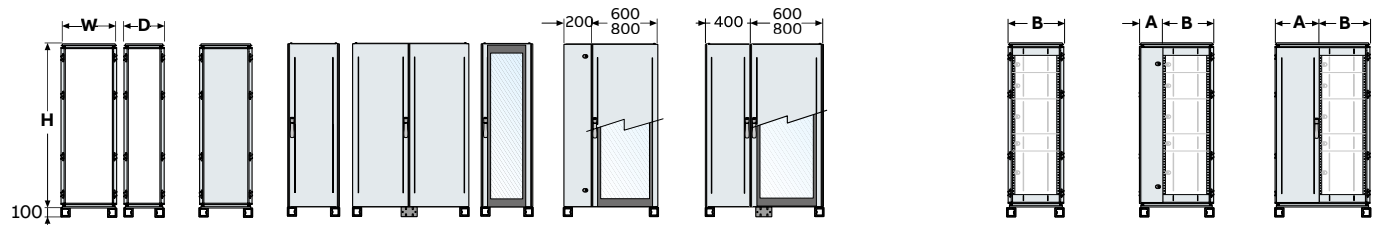
<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less. For H=1600 inner doors, please contact ABB.



Sliding cable entry flanges	Build-up cable entry flanges	Plinth flanges front/rear	Plinth flanges side	19" Fixed cranked shaped uprights Frame+Fixing kit	Side-by-side structure Kit	Oversized platejoining Kit
EF4050	EF4051	ZN4000	ZN5000	-	EV0002	EA2113
EF4060	EF4061	ZN4000	ZN6000	-	EV0003	
EF4080	EF4081	ZN4000	ZN8000	-	EV0006	
EF4010	EF4011	ZN4000	ZN1000	-		
-	-	ZN6000	ZN3000	1STQ005333B0000+EB6000	EV0002	EA2113
EF6040	EF6041	ZN6000	ZN4000	1STQ005333B0000+EB6000	EV0003	
EF6050	EF6051	ZN6000	ZN5000	1STQ005333B0000+EB6000	EV0006	
EF6060	EF6061	ZN6000	ZN6000	1STQ005333B0000+EB6000		
EF6080	EF6081	ZN6000	ZN8000	1STQ005333B0000+EB6000		
EF6010	EF6011	ZN6000	ZN1000	1STQ005333B0000+EB6000		
-	-	ZN8000	ZN3000	1STQ005333B0000+EB8000	EV0002	
EF8040	EF8041	ZN8000	ZN4000	1STQ005333B0000+EB8000	EV0003	
EF8050	EF8051	ZN8000	ZN5000	1STQ005333B0000+EB8000	EV0006	
EF8060	EF8061	ZN8000	ZN6000	1STQ005333B0000+EB8000		
EF8080	EF8081	ZN8000	ZN8000	1STQ005333B0000+EB8000		
EF8080	EF8081	ZN8000	ZN1000	1STQ005333B0000+EB8000		
EF1040	EF1041	ZN1000	ZN4000	-	EV0002	EA2113
EF1053	EF1051	ZN1000	ZN5000	-	EV0003	
EF1060	EF1061	ZN1000	ZN6000	-	EV0006	
EF1080	EF1081	ZN1000	ZN8000	-		
EF1010	EF1011	ZN1000	ZN1000	-		
2xEF6040	2xEF6041	2xZN6000	ZN4000	-	EV0002	EA2113
2xEF6051	2xEF6051	2xZN6000	ZN5000	-	EV0003	
2xEF6060	2xEF6061	2xZN6000	ZN6000	-	EV0006	
2xEF6080	2xEF6081	2xZN6000	ZN8000	-		

# Pre-assembled IS2 Cabinets

## Selection of the structure - H=1800



External dimensions			Cabinet with door				Cabinet with cable container				Cabinet with compartments <sup>(7)</sup>					
(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Cabinet without door			Blind door with cable container W=200mm	Blind door with cable container W=400mm	Glazed door with cable container W=200mm	Glazed door with cable container W=400mm	Width (mm)		Width (mm)				
			Blind door	Double blind with overload closure <sup>(3)</sup>	Glazed door					A	B	A	B			
1800	400	400	-	ES1844K	-	-	-	-	-	-	-	-	-			
	600	-	ES1864SPK	ES1864K	-	ES1864VK	-	-	-	ES1864MFK	-	600	-	-		
800	-	-	ES1884SPK	ES1884K	-	ES1884VK	ES1884FV2K	-	ES1884VC2K	-	ES1884MF2K	200	600	ES1884MFK	-	800
	1000	-	-	ES1804K	ES1814BK	ES1804VK	ES1804FV2K	ES1804FV4K	ES1804VC2K	ES1804VC4K	ES1804MF4K	400	600	ES1804MF2K	200	800
1200	-	-	-	ES1824BK	ES1824VK <sup>(*)</sup>	-	ES1824FV4K	-	ES1824VC4K	-	-	-	ES1824MF4K	400	800	
	400	500	-	ES1845K	-	-	-	-	-	-	-	-	-	-	-	
600	600	-	ES1865SPK	ES1865K	-	ES1865VK	-	-	-	-	ES1865MFK	-	600	-	-	
	800	-	-	ES1885K	-	ES1885VK	ES1885FV2K	-	ES1885VC2K	-	ES1885MF2K	200	600	ES1885MFK	-	800
1000	-	-	-	ES1805K	ES1815BK	ES1805VK	ES1805FV2K	ES1805FV4K	ES1805VC2K	ES1805VC4K	ES1805MF4K	400	600	ES1805MF2K	200	800
	1200	-	-	ES1827BK	ES1825VK <sup>(*)</sup>	-	ES1825FV4K	-	ES1825VC4K	-	-	-	ES1825MF4K	400	800	
1600 <sup>(6)</sup>	-	-	-	ES1875BK	-	-	-	-	-	-	-	-	-	-	-	
	400	600	-	ES1846K	-	-	-	-	-	-	-	-	-	-	-	
600	600	-	ES1866SPK	ES1866K	-	ES1866VK	-	-	-	-	ES1866MFK	-	600	-	-	
	800	-	ES1886SPK	ES1886K	-	ES1886VK	ES1886FV2K	-	ES1886VC2K	-	ES1886MF2K	200	600	ES1886MFK	-	800
1000	-	-	-	ES1806K	ES1816BK	ES1806VK	ES1806FV2K	ES1806FV4K	ES1806VC2K	ES1806VC4K	ES1806MF4K	400	600	ES1806MF2K	200	800
	1200	-	-	ES1826BK	ES1826VK <sup>(*)</sup>	-	ES1826FV4K	-	ES1826VC4K	-	-	-	ES1826MF4K	400	800	
1600 <sup>(6)</sup>	-	-	-	ES1876BK	-	-	-	-	-	-	-	-	-	-	-	
	400	800	-	ES1848K	-	-	-	-	-	-	-	-	-	-	-	
600	600	-	-	ES1868K	-	ES1868VK	-	-	-	-	ES1868MFK	-	600	-	-	
	800	-	-	ES1888K	-	ES1888VK	ES1888FV2K	-	ES1888VC2K	-	ES1888MF2K	200	600	ES1888MFK	-	800
1000	-	-	-	ES1808K	ES1818BK	ES1808VK	ES1808FV2K	ES1808FV4K	ES1808VC2K	ES1808VC4K	ES1808MF4K	400	600	ES1808MF2K	200	800
	1200	-	-	ES1828BK	ES1828VK <sup>(*)</sup>	-	ES1828FV4K	-	ES1828VC4K	-	-	-	ES1828MF4K	400	800	
1600 <sup>(6)</sup>	-	-	-	ES1878BK	-	-	-	-	-	-	-	-	-	-	-	
	400	1000	-	ES1840K	-	-	-	-	-	-	-	-	-	-	-	
600	600	-	-	ES1860K	-	ES1860VK	-	-	-	-	ES1860MFK	-	600	-	-	
	800	-	-	ES1880K	-	ES1880VK	-	-	-	-	ES1880MF2K	200	600	ES1880MFK	-	800
1000	-	-	-	ES1800K	ES1810BK	ES1800VK	-	-	-	-	ES1800MF4K	400	600	ES1800MF2K	200	800

<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.

<sup>(\*)</sup> Implies mounting the intermediate upright EM1801. The doors have overlapping closure on the intermediate upright (removable) fixed onto the crosspieces mounted in depth.

<sup>(2)</sup> Also available with double blind doors with closing on intermediate upright (eliminate the suffix B from the code).

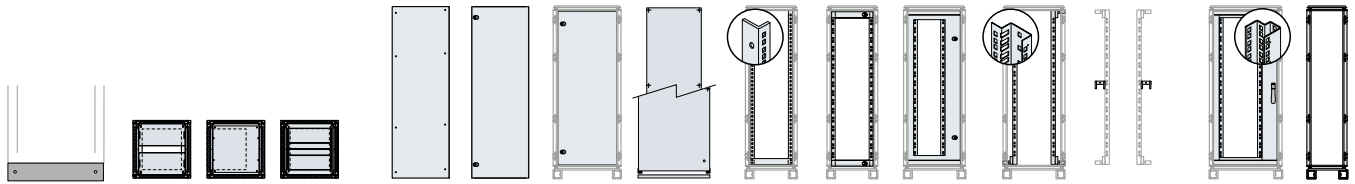
<sup>(3)</sup> Standard plate joining kit: EA1800 (H=1800mm); EA2000 (H=2000mm); EA2200 (H=2200mm). Possibility of lateral insertion with tracks (see pag. 2-66).

<sup>(4)</sup> EA2113 oversized plate joining kit H=1800/2000/2200mm.

<sup>(5)</sup> Kit consisting of 2 oversized back plates with relative insertion tracks + plate joining kit.

<sup>(6)</sup> In case of structures with internal cable container, select the correct rack frame which takes into account the W=200 or W=400mm of the cable container; and leaves W=600mm or W=800mm structure compartment.

<sup>(7)</sup> W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

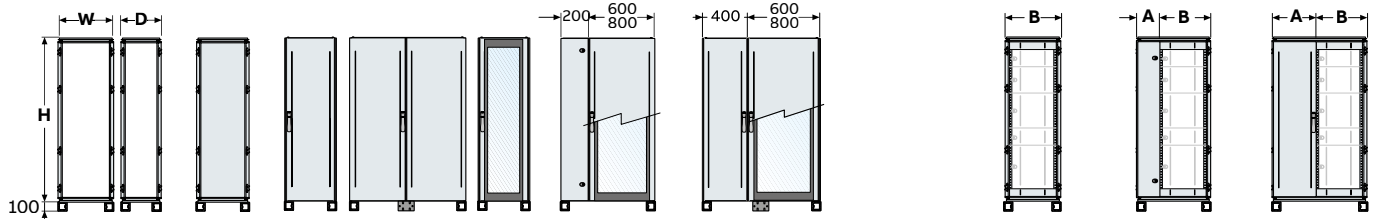


Front/ rear	Flanges for plinth			Incoming cable flanges			Side covers	Inner door	Mounting plates		Rack frames 19" "L" shaped profile <sup>(5)</sup>			Rack frames 19"			External cable container W=300mm		
	Side	Sliding	Fixed	Built up	No. 2 Blind panel <sup>(10)</sup>	Side door with closing box	Standard <sup>(2)</sup>	Over size + tracks <sup>(2)</sup>	Fixed Centred	Swing Centred W=600mm	Decentralized W=800mm	Frame+ Fixing kit	Fixed <sup>(8)</sup> cranked shaped uprights	Optional central fixing kit	Frame+ Fixing kit	Swing <sup>(9)</sup> "C" shaped profile			
ZN4000	ZN4000	EF4040	EF4042	EF4041	EL1840K	EC1841K	-	EA1841	EA1940	-	-	-	-	-	-	-	-	ER3040K	
ZN6000		EF6040	EF6043	EF6041			EE1860K	EA1860	EA1960	EG1800	EG1801K	-	EG1805+	EB6000	EB0400	-	-		-
ZN8000		EF8040	EF8042	EF8041			EE1880K	EA1880	EA1981	EG1880	-	EG1803K	EG1805+	EB8000	EB8001+	EG1804K+	EV0007		-
ZN1000	ZN5000	EF1040	EF1042	EF1041	EL1850K	EC1851K	EE1810K	EA1810	EA1910	-	-	-	-	-	-	-	-	ER3050K	
2xZN6000		2xEF6040	2xEF6043	2xEF6041			-	EA1812	EA1912	-	-	-	-	-	-	-	-		-
ZN4000		EF4050	EF4052	EF4051			-	EA1841	EA1940	-	-	-	-	-	-	-	-		-
ZN6000	ZN6000	EF6050	EF6052	EF6051	EL1860K	EC1861K	EE1860K	EA1860	EA1960	EG1800	EG1801K	-	EG1805+	EB8000	EB0500	-	-	ER3060K	
ZN8000		EF8050	EF8052	EF8051			EE1880K	EA1880	EA1981	EG1880	-	EG1803K	EG1805+	EB8000	EB8001+	EG1804K+	EV0007		
ZN1000		EF1053	EF1052	EF1051			EE1810K	EA1810	EA1910	-	-	-	-	-	-	-	-		-
2xZN6000	2xEF6050	2xEF6052	2xEF6051	-	EA1812	EA1912	-	-	-	-	-	-	-	-	-	-			
2xZN8000	2xEF8050	2xEF8052	2xEF8051	-	2x1STQ006248B0000	EA1916 <sup>(4)</sup>	-	-	-	-	-	-	-	-	-	-			
ZN4000	ZN8000	EF4060	EF4063	EF4061	EL1880K	EC1881K	-	EA1841	EA1940	-	-	-	-	-	-	-	-	ER3080K	
ZN6000		EF6060	EF6062	EF6061			EE1860K	EA1860	EA1960	EG1800	EG1801K	-	EG1805+	EB8000	EB0600	-	-		
ZN8000		EF8060	EF8062	EF8061			EE1880K	EA1880	EA1981	EG1880	-	EG1803K	EG1805+	EB8000	EB8001+	EG1804K+	EV0007		
ZN1000	ZN1000	EF1060	EF1062	EF1061	EL1880K	EC1881K	EE1810K	EA1810	EA1910	-	-	-	-	-	-	-	-	ER3010K	
2xZN6000		2xEF6060	2xEF6062	2xEF6061			-	EA1812	EA1912	-	-	-	-	-	-	-	-		
2xZN8000		2xEF8060	2xEF8062	2xEF8061			-	2x1STQ006248B0000	EA1916 <sup>(4)</sup>	-	-	-	-	-	-	-	-		
ZN4000	ZN1800K	EF4080	EF4082	EF4081	EL1810K	EC1811K	-	EA1841	EA1940	-	-	-	-	-	-	-	-	ER3010K	
ZN6000		EF6080	EF6082	EF6081			EE1860K	EA1860	EA1960	EG1800	EG1801K	-	EG1805+	EB8000	EB0800	-	-		
ZN8000		EF8080	EF8082	EF8081			EE1880K	EA1880	EA1981	EG1880	-	EG1803K	EG1805+	EB8000	EB8001+	EG1804K+	EV0007		
ZN1000	ZN1800K	EF1080	EF1082	EF1081	EL1810K	EC1811K	EE1810K	EA1810	EA1910	-	-	-	-	-	-	-	-	ER3010K	
2xZN6000		2xEF6080	2xEF6082	2xEF6081			-	EA1812	EA1912	-	-	-	-	-	-	-	-		
2xZN8000		2xEF8080	2xEF8082	2xEF8081			-	2x1STQ006248B0000	EA1916 <sup>(4)</sup>	-	-	-	-	-	-	-	-		
ZN4000	ZN1800K	EF4010	EF4012	EF4011	EL1810K	EC1811K	-	EA1841	EA1940	-	-	-	-	-	-	-	-	ER3010K	
ZN6000		EF6010	EF6012	EF6011			EE1860K	EA1860	EA1960	EG1800	EG1801K	-	EG1805+	EB8000	EB1000	-	-		
ZN8000		EF8010	EF8012	EF8011			-	EA1880	EA1981	EG1880	-	EG1803K	EG1805+	EB8000	EB8001+	EG1804K+	EV0007		
ZN1000	ZN1800K	EF1010	EF1012	EF1011	EL1810K	EC1811K	EE1810K	EA1810	EA1910	-	-	-	-	-	-	-	-	ER3010K	

<sup>(7)</sup> Examples of configuration and technical characteristics at page 2-116.  
<sup>(8)</sup> Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Accessories from page 2-88.  
 Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 2-88. Accessories from page 2-89.  
<sup>(9)</sup> Only available for W=800mm (even in structures with cable container and W=800mm structure compartment). Order specific fixing kit EV0007.  
<sup>(10)</sup> Single side panel available on page 2-54.  
<sup>(11)</sup> Not compatible with structures W800 with internal cable container for the presence of intermediate upright (600+200mm).  
 Kit for placing structures side by side EV0002/EV0003/EV0006 see page 2-76.

# Pre-assembled IS2 Cabinets

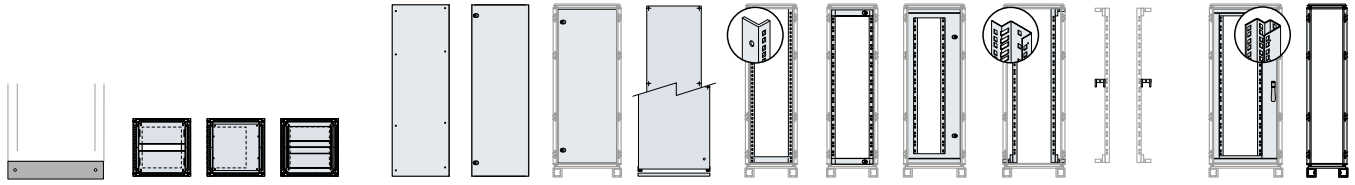
## Selection of the structure - H=2000



External dimensions			Cabinet with door				Cabinet with cable container				Cabinet with compartments <sup>(7)</sup>					
(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Cabinet without door				Blind door with cable container W=200mm	Blind door with cable container W=400mm	Glazed door with cable container W=200mm	Glazed door with cable container W=400mm	Width (mm)		Width (mm)			
			Blind door	Double blind with overload closure <sup>(3)</sup>	Glazed door	Blind door					Blind door	A	B	A	B	
2000	400	400	-	ES2044K	-	-	-	-	-	-	-	-	-	-		
	600	-	ES2064SPK	ES2064K	-	ES2064VK	-	-	-	ES2064MFK	-	600	-	-		
	800	-	ES2084SPK	ES2084K	-	ES2084VK	ES2084FV2K	-	ES2084VC2K	-	ES2084MF2K	200	600	ES2084MFK	-	800
	1000	-	-	ES2004K	ES2014BK	ES2004VK	ES2004FV2K	ES2004FV4K	ES2004VC2K	ES2004VC4K	ES2004MF4K	400	600	ES2004MF2K	200	800
	1200	-	-	-	ES2024BK	ES2024VK <sup>(*)</sup>	-	ES2024FV4K	-	ES2024VC4K	-	-	-	ES2024MF4K	400	800
	400	500	-	ES2045K	-	-	-	-	-	-	-	-	-	-	-	
	600	-	ES2065SPK	ES2065K	-	ES2065VK	-	-	-	-	ES2065MFK	-	600	-	-	
	800	-	-	ES2085K	-	ES2085VK	ES2085FV2K	-	ES2085VC2K	-	ES2085MF2K	200	600	ES2085MFK	-	800
	1000	-	-	ES2007K	ES2015BK	ES2005VK	ES2005FV2K	ES2005FV4K	ES2005VC2K	ES2005VC4K	ES2005MF4K	400	600	ES2005MF2K	200	800
	1200	-	-	-	ES2025BK	ES2025VK <sup>(*)</sup>	-	ES2025FV4K	-	ES2025VC4K	-	-	-	ES2025MF4K	400	800
	1600 <sup>(6)</sup>	-	-	-	ES2075BK	-	-	-	-	-	-	-	-	-	-	
	400	600	-	ES2046K	-	-	-	-	-	-	-	-	-	-	-	
	600	-	ES2066SPK	ES2066K	-	ES2066VK	-	-	-	-	ES2066MFK	-	600	-	-	
	800	-	ES2086SPK	ES2086K	-	ES2086VK	ES2086FV2K	-	ES2086VC2K	-	ES2086MF2K	200	600	ES2086MFK	-	800
	1000	-	-	ES2006K	ES2016BK	ES2006VK	ES2006FV2K	ES2006FV4K	ES2006VC2K	ES2006VC4K	ES2006MF4K	400	600	ES2006MF2K	200	800
	1200	-	-	-	ES2026BK	ES2026VK <sup>(*)</sup>	-	ES2026FV4K	-	ES2026VC4K	-	-	-	ES2026MF4K	400	800
	1600 <sup>(6)</sup>	-	-	-	ES2076BK	-	-	-	-	-	-	-	-	-	-	
	400	800	-	ES2048K	-	-	-	-	-	-	-	-	-	-	-	
	600	-	-	ES2068K	-	ES2068VK	-	-	-	-	ES2068MFK	-	600	-	-	
	800	-	-	ES2089K	-	ES2089VK	ES2089FV2K	-	ES2089VC2K	-	ES2089MF2K	200	600	ES2089MFK	-	800
	1000	-	-	ES2008K	ES2018BK	ES2008VK	ES2008FV2K	ES2008FV4K	ES2008VC2K	ES2008VC4K	ES2008MF4K	400	600	ES2008MF2K	200	800
	1200	-	-	-	ES2028BK	ES2028VK <sup>(*)</sup>	-	ES2028FV4K	-	ES2028VC4K	-	-	-	ES2028MF4K	400	800
	1600 <sup>(6)</sup>	-	-	-	ES2078BK	-	-	-	-	-	-	-	-	-	-	
	400	1000	-	ES2040K	-	-	-	-	-	-	-	-	-	-	-	
	600	-	-	ES2060K	-	ES2060VK	-	-	-	-	ES2060MFK	-	600	-	-	
	800	-	-	ES2080K	-	ES2080VK	-	-	-	-	ES2080MF2K	200	600	ES2080MFK	-	800
	1000	-	-	ES2000K	ES2010BK	ES2000VK	-	-	-	-	ES2000MF4K	400	600	ES2000MF2K	200	800

<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.  
<sup>(\*)</sup> Implies mounting the intermediate upright EM1801. The doors have overlapping closure on the intermediate upright (removable) fixed onto the crosspieces mounted in depth.  
<sup>(2)</sup> Also available with double blind doors with closing on intermediate upright (eliminate the suffix B from the code).  
<sup>(3)</sup> Standard plate joining kit: EA1800 (H=1800mm); EA2000 (H=2000mm); EA2200 (H=2200mm). Possibility of lateral insertion with tracks (see pag. 2-66).  
<sup>(4)</sup> EA2113 oversized plate joining kit H=1800/2000/2200mm.  
<sup>(5)</sup> Kit consisting of 2 oversized back plates with relative insertion tracks + plate joining kit.  
<sup>(6)</sup> In case of structures with internal cable container, select the correct rack frame which takes into account the W=200 or W=400mm of the cable container; and leaves W=600mm or W=800mm structure compartment.  
<sup>(7)</sup> W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).



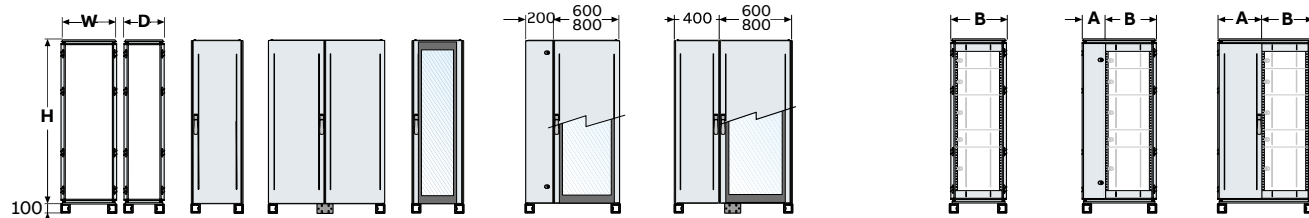


Front/ rear	Flanges for plinth			Incoming cable flanges			Side covers	Inner door	Mounting plates			Rack frames 19" "L" shaped profile <sup>(5)</sup>			Rack frames 19"		
	Side	Sliding	Fixed	Built up	No. 2 Blind panel <sup>(10)</sup>	Side door with closing box	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>
ZN4000																	
ZN6000	ZN4000	EF4040	EF4042	EF4041	EL2040K	EC2041K	-	EA2040	EA2140	-	-	-	-	-	-	-	-
ZN8000	ZN4000	EF6040	EF6043	EF6041	EL2040K	EC2041K	EE2060K	EA2060	EA2161	EG2000	EG2001K	-	EG2005+	EB6000	EB0400	-	ER3041K
ZN1000		EF8040	EF8042	EF8041			EE2080K	EA2080	EA2180	EG2080	-	EG2003K	EG2005+	EB6000	EB8001+	EG2004K+	EV0007
2xZN6000		EF1040	EF1042	EF1041			EE2010K	EA2010	EA2110	-	-	-	-	-	-	-	-
ZN4000	ZN5000	2xEF6040	2xEF6043	2xEF6041			-	EA2013	EA2112	-	-	-	-	-	-	-	-
ZN6000	ZN5000	EF4050	EF4052	EF4051	EL2050K	EC2051K	-	EA2040	EA2140	-	-	-	-	-	-	-	-
ZN8000	ZN5000	EF6050	EF6052	EF6051	EL2050K	EC2051K	EE2060K	EA2060	EA2161	EG2000	EG2001K	-	EG2005+	EB6000	EB0500	-	ER3051K
ZN1000		EF8050	EF8052	EF8051			EE2080K	EA2080	EA2180	EG2080	-	EG2003K	EG2005+	EB6000	EB8001+	EG2004K+	EV0007
2xZN6000		EF1053	EF1052	EF1051			EE2010K	EA2010	EA2110	-	-	-	-	-	-	-	-
2xZN8000		2xEF6050	2xEF6052	2xEF6051			-	EA2013	EA2112	-	-	-	-	-	-	-	-
ZN4000	ZN6000	2xEF8050	2xEF8052	2xEF8051			-	2x1STQ006249B0000	EA2116 <sup>(4)</sup>	-	-	-	-	-	-	-	-
ZN6000	ZN6000	EF4060	EF4063	EF4061	EL2060K	EC2061K	-	EA2040	EA2140	-	-	-	-	-	-	-	-
ZN8000	ZN6000	EF6060	EF6062	EF6061	EL2060K	EC2061K	EE2060K	EA2060	EA2161	EG2000	EG2001K	-	EG2005+	EB6000	EB0600	-	ER3061K
ZN1000		EF8060	EF8062	EF8061			EE2080K	EA2080	EA2180	EG2080	-	EG2003K	EG2005+	EB6000	EB8001+	EG2004K+	EV0007
2xZN6000		EF1060	EF1062	EF1061			EE2010K	EA2010	EA2110	-	-	-	-	-	-	-	-
2xZN8000		2xEF6060	2xEF6062	2xEF6061			-	EA2013	EA2112	-	-	-	-	-	-	-	-
ZN4000	ZN8000	2xEF8060	2xEF8062	2xEF8061			-	2x1STQ006249B0000	EA2116 <sup>(4)</sup>	-	-	-	-	-	-	-	-
ZN6000	ZN8000	EF4080	EF4082	EF4081	EL2080K	EC2081K	-	EA2040	EA2140	-	-	-	-	-	-	-	-
ZN8000	ZN8000	EF6080	EF6082	EF6081	EL2080K	EC2081K	EE2060K	EA2060	EA2161	EG2000	EG2001K	-	EG2005+	EB6000	EB0800	-	ER3081K
ZN1000		EF8080	EF8082	EF8081			EE2080K	EA2080	EA2180	EG2080	-	EG2003K	EG2005+	EB6000	EB8001+	EG2004K+	EV0007
2xZN6000		EF1080	EF1082	EF1081			EE2010K	EA2010	EA2110	-	-	-	-	-	-	-	-
2xZN8000		2xEF6080	2xEF6082	2xEF6081			-	EA2013	EA2112	-	-	-	-	-	-	-	-
ZN4000	ZN1000	2xEF8080	2xEF8082	2xEF8081			-	2x1STQ006249B0000	EA2116 <sup>(4)</sup>	-	-	-	-	-	-	-	-
ZN6000	ZN1000	EF4010	EF4012	EF4011	EL2012K	EC2011K	-	EA2040	EA2140	-	-	-	-	-	-	-	-
ZN8000	ZN1000	EF6010	EF6012	EF6011	EL2012K	EC2011K	EE2060K	EA2060	EA2161	EG2000	EG2001K	-	EG2005+	EB6000	EB1000	-	ER3011K
ZN1000		EF8010	EF8012	EF8011			-	EA2080	EA2180	EG2080	-	EG2003K	EG2005+	EB6000	EB8001+	EG2004K+	EV0007
		EF1010	EF1012	EF1011			EE2010K	EA2010	EA2110	-	-	-	-	-	-	-	-

<sup>(7)</sup> Examples of configuration and technical characteristics at page 2-116.  
<sup>(8)</sup> Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Accessories from page 2-88.  
 Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 2-88. Accessories from page 2-89.  
<sup>(9)</sup> Only available for W=800mm (even in structures with cable container and W=800mm structure compartment). Order specific fixing kit EV0007.  
<sup>(10)</sup> Single side panel available on page 2-54.  
<sup>(11)</sup> Not compatible with structures W800 with internal cable container for the presence of intermediate upright (600+200mm).  
 Kit for placing structures side by side EV0002/EV0003/EV0006 see page 2-76.

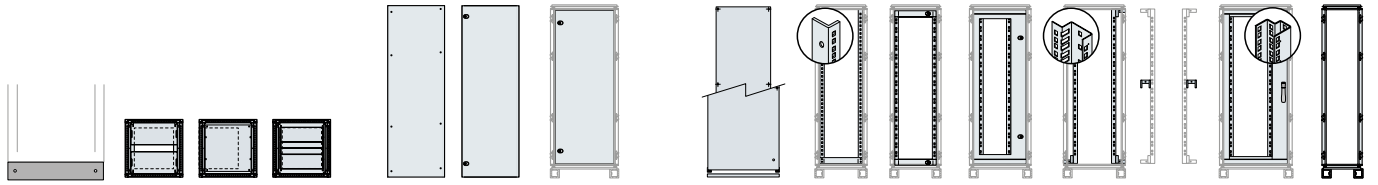
# Pre-assembled IS2 Cabinets

## Selection of the structure - H=2200



External dimensions			Cabinet with door				Cabinet with cable container				Cabinet with compartments <sup>(7)</sup>				
(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Blind door	Double blind with overload closure <sup>(1)</sup>	Glazed door	Blind door with cable container W=200mm	Blind door with cable container W=400mm	Glazed door with cable container W=200mm	Glazed door with cable container W=400mm	Width (mm)		Width (mm)			
											A	B	A	B	
2200	400	400	ES2244K	-	-	-	-	-	-	-	-	-	-		
	600		ES2264K	-	ES2264VK	-	-	-	-	ES2264MFK	-	-	-		
	800		ES2284K	-	ES2284VK	ES2284FV2K	-	ES2284VC2K	-	ES2284MF2K	-	800	ES2284MFK	-	800
	1000		ES2204K	ES2214BK	ES2204VK	ES2204FV2K	ES2204FV4K	ES2204VC2K	ES2204VC4K	ES2204MF4K	200	800	ES2204MF2K	200	800
	1200		-	ES2224BK	ES2224VK <sup>(*)</sup>	-	ES2224FV4K	-	ES2224VC4K	-	400	800	ES2224MF4K	400	800
	400	500	ES2245K	-	-	-	-	-	-	-	-	-	-	-	
	600		ES2265K	-	ES2265VK	-	-	-	-	ES2265MFK	-	-	-	-	
	800		ES2285K	-	ES2285VK	ES2285FV2K	-	ES2285VC2K	-	ES2285MF2K	-	800	ES2285MFK	-	800
	1000		ES2205K	ES2215BK	ES2205VK	ES2205FV2K	ES2205FV4K	ES2205VC2K	ES2205VC4K	ES2205MF4K	200	800	ES2205MF2K	200	800
	1200		-	ES2225BK	ES2225VK <sup>(*)</sup>	-	ES2225FV4K	-	ES2225VC4K	-	400	800	ES2225MF4K	400	800
	1600 <sup>(6)</sup>		-	ES2275BK	-	-	-	-	-	-	-	-	-	-	
	400	600	ES2246K	-	-	-	-	-	-	-	-	-	-	-	
	600		ES2266K	-	ES2266VK	-	-	-	-	ES2266MFK	-	-	-	-	
	800		ES2287K	-	ES2287VK	ES2287FV2K	-	ES2287VC2K	-	ES2287MF2K	-	800	ES2287MFK	-	800
	1000		ES2206K	ES2216BK	ES2206VK	ES2206FV2K	ES2206FV4K	ES2206VC2K	ES2206VC4K	ES2206MF4K	200	800	ES2206MF2K	200	800
	1200		-	ES2226BK	ES2226VK <sup>(*)</sup>	-	ES2226FV4K	-	ES2226VC4K	-	400	800	ES2226MF4K	400	800
	1600 <sup>(6)</sup>		-	ES2276BK	-	-	-	-	-	-	-	-	-	-	
	400	800	ES2248K	-	-	-	-	-	-	-	-	-	-	-	
	600		ES2268K	-	ES2268VK	-	-	-	-	ES2268MFK	-	-	-	-	
	800		ES2288K	-	ES2288VK	ES2288FV2K	-	ES2288VC2K	-	ES2288MF2K	-	800	ES2288MFK	-	800
	1000		ES2208K	ES2218BK	ES2208VK	ES2208FV2K	ES2208FV4K	ES2208VC2K	ES2208VC4K	ES2208MF4K	200	800	ES2208MF2K	200	800
	1200		-	ES2228BK	ES2228VK <sup>(*)</sup>	-	ES2228FV4K	-	ES2228VC4K	-	400	800	ES2228MF4K	400	800
	1600 <sup>(6)</sup>		-	ES2279BK	-	-	-	-	-	-	-	-	-	-	
	400	1000	ES2240K	-	-	-	-	-	-	-	-	-	-	-	
	600		ES2260K	-	ES2260VK	-	-	-	-	ES2260MFK	-	-	-	-	
	800		ES2280K	-	ES2280VK	-	-	-	-	ES2281MF2K	-	800	ES2280MFK	-	800
	1000		ES2200K	ES2210BK	ES2200VK	-	-	-	-	ES2200MF4K	200	800	ES2200MF2K	200	800

<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.  
<sup>(\*)</sup> Implies mounting the intermediate upright EM1801. The doors have overlapping closure on the intermediate upright (removable) fixed onto the crosspieces mounted in depth.  
<sup>(1)</sup> Also available with double blind doors with closing on intermediate upright (eliminate the suffix B from the code).  
<sup>(2)</sup> Standard plate joining kit: EA1800 (H=1800mm); EA2000 (H=2000mm); EA2200 (H=2200mm). Possibility of lateral insertion with tracks (see pag. 2-66).  
<sup>(3)</sup> EA2113 oversized plate joining kit H=1800/2000/2200mm.  
<sup>(4)</sup> Kit consisting of 2 oversized back plates with relative insertion tracks + plate joining kit.  
<sup>(5)</sup> In case of structures with internal cable container, select the correct rack frame which takes into account the W=200 or W=400mm of the cable container; and leaves W=600mm or W=800mm structure compartment.  
<sup>(6)</sup> W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).  
<sup>(7)</sup>

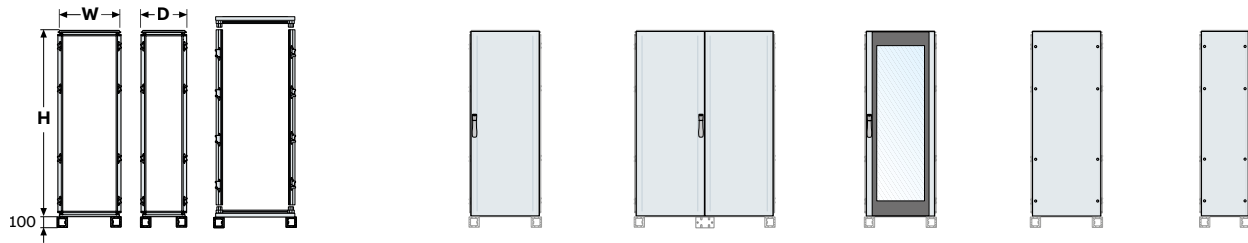


Front/ rear	Flanges for plinth			Incoming cable flanges			Side covers	Inner door	Mounting plates	Rack frames 19" "L" shaped profile <sup>(5)</sup>			Rack frames 19"						
	Side	Sliding	Fixed	Built up	No. 2 Blind panel <sup>(10)</sup>	Side door with closing box	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Standard <sup>(2)</sup>	Fixed Centred	Swing Centred W=600mm	Decentralized W=800mm	Frame+Fixing kit	Optional central fixing kit	Frame+ Fixing kit	Swing <sup>(9)</sup> "C" shaped profile	External cable container W=300mm		
ZN4000	ZN4000	EF4040	EF4042	EF4041	EL2240K	EC2241K	-	EA2240	EA2340	-	-	-	-	-	-	-	-	ER3042K	
ZN6000		EF6040	EF6043	EF6041			EE2260K	EA2260	EA2360	EG2200	EG2201K	-	EG2205+	EB6000	EB0400	-	-		-
ZN8000		EF8040	EF8042	EF8041			EE2280K	EA2280	EA2380	EG2280	-	EG2203K	EG2205+	EB6000	EB8001+	EG2204K+	EV0007		-
ZN1000	ZN5000	EF1040	EF1042	EF1041	EL2250K	EC2251K	-	EA2210	EA2310	-	-	-	-	-	-	-	-	ER3052K	
2xZN6000		2xEF6040	2xEF6043	2xEF6041			-	EA2212	EA2312	-	-	-	-	-	-	-	-		-
ZN4000		EF4050	EF4052	EF4051			-	EA2240	EA2340	EG2200	EG2201K	-	EG2205+	EB6000	EB0500	-	-		-
ZN6000	EF6050	EF6052	EF6051	EE2260K	EA2260	EA2360	EG2200	EG2201K	-	EG2205+	EB6000	EB8001+	EG2204K+	EV0007	-	-			
ZN8000	EF8050	EF8052	EF8051	EE2280K	EA2280	EA2380	EG2280	-	EG2203K	EG2205+	EB6000	EB0500	-	-	-	-			
ZN1000	ZN6000	EF1053	EF1052	EF1051	EL2260K	EC2261K	-	EA2210	EA2310	-	-	-	-	-	-	-	-	ER3062K	
2xZN6000		2xEF6050	2xEF6052	2xEF6051			-	EA2212	EA2312	-	-	-	-	-	-	-	-		-
2xZN8000		2xEF8050	2xEF8052	2xEF8051			-	2x1STQ006250B0000	EA2316 <sup>(4)</sup>	-	-	-	-	-	-	-	-		-
ZN4000	EF4060	EF4063	EF4061	-	EA2240	EA2340	-	-	-	-	-	-	-	-	-	-	ER3082K		
ZN6000	EF6060	EF6062	EF6061	EE2260K	EA2260	EA2360	EG2200	EG2201K	-	EG2205+	EB6000	EB0600	-	-	-				
ZN8000	EF8060	EF8062	EF8061	EE2280K	EA2280	EA2380	EG2280	-	EG2203K	EG2205+	EB6000	EB8001+	EG2204K+	EV0007	-				
ZN1000	ZN8000	EF1060	EF1062	EF1061	EL2280K	EC2281K	-	EA2210	EA2310	-	-	-	-	-	-	-	-	ER3082K	
2xZN6000		2xEF6060	2xEF6062	2xEF6061			-	EA2212	EA2312	-	-	-	-	-	-	-	-		-
2xZN8000		2xEF8060	2xEF8062	2xEF8061			-	2x1STQ006250B0000	EA2316 <sup>(4)</sup>	-	-	-	-	-	-	-	-		-
ZN4000	EF4080	EF4082	EF4081	-	EA2240	EA2340	-	-	-	-	-	-	-	-	-	-	ER3012K		
ZN6000	EF6080	EF6082	EF6081	EE2260K	EA2260	EA2360	EG2200	EG2201K	-	EG2205+	EB6000	EB0800	-	-	-				
ZN8000	EF8080	EF8082	EF8081	EE2280K	EA2280	EA2380	EG2280	-	EG2203K	EG2205+	EB6000	EB8001+	EG2204K+	EV0007	-				
ZN1000	ZN1000	EF1080	EF1082	EF1081	EL2210K	EC2211K	-	EA2210	EA2310	-	-	-	-	-	-	-	-	ER3012K	
2xZN6000		2xEF6080	2xEF6082	2xEF6081			-	EA2212	EA2312	-	-	-	-	-	-	-	-		-
2xZN8000		2xEF8080	2xEF8082	2xEF8081			-	2x1STQ006250B0000	EA2316 <sup>(4)</sup>	-	-	-	-	-	-	-	-		-
ZN4000	EF4010	EF4012	EF4011	-	EA2240	EA2340	-	-	-	-	-	-	-	-	-	-	ER3012K		
ZN6000	EF6010	EF6012	EF6011	EE2260K	EA2260	EA2360	EG2200	EG2201K	-	EG2205+	EB6000	EB1000	-	-	-				
ZN8000	EF8010	EF8012	EF8011	-	EA2280	EA2380	EG2280	-	EG2203K	EG2205+	EB6000	EB8001+	EG2204K+	EV0007	-				
ZN1000	EF1010	EF1012	EF1011	EE2210K	EA2210	EA2310	-	-	-	-	-	-	-	-	-	-	-		

<sup>(7)</sup> Examples of configuration and technical characteristics at page 2-116.  
<sup>(8)</sup> Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Accessories from page 2-88.  
 Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 2-88. Accessories from page 2-89.  
<sup>(9)</sup> Only available for W=800mm (even in structures with cable container and W=800mm structure compartment). Order specific fixing kit EV0007.  
<sup>(10)</sup> Single side panel available on page 2-54.  
<sup>(11)</sup> Not compatible with structures W800 with internal cable container for the presence of intermediate upright (600+200mm).  
 Kit for placing structures side by side EV0002/EV0003/EV0006 see page 2-76.

# IS2 kit version cabinets

## Selection of the structure - H=1400mm

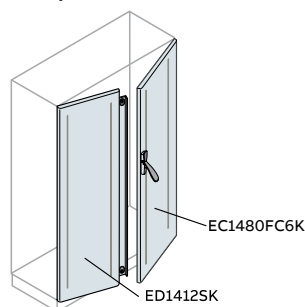


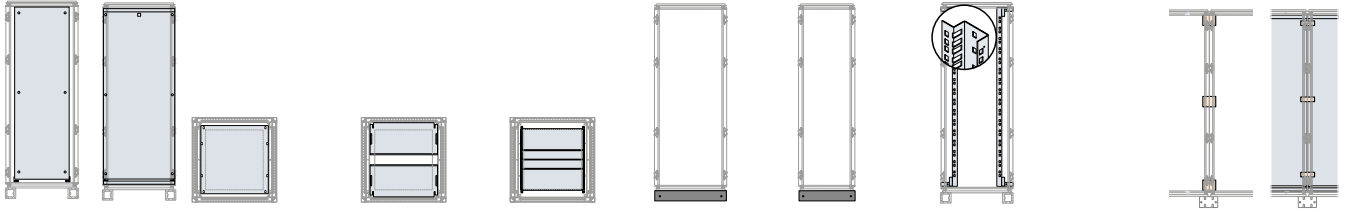
### External dimensions

(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Base/ Top/ Plinth	Uprights For structure	IP65 blind door	Blind doors for version with double door with overlapping closing	IP65 glass door	Rear panel	Side panel
1400	400	400	EK4040KN	EM1400	EC1440K	-	-	EP1440K	EL1440K
		600	EK4060KN		EC1440K	-	-	EP1440K	EL1460K
		800	EK4080KN		EC1440K	-	-	EP1440K	EL1480K
	600	300	1STQ005317B0000	EM1400	EC1460K	-	1STQ005328B0000	EP1460K	1STQ005322B0000
		400	EK6040KN		EC1460K	-	1STQ005328B0000	EP1460K	EL1440K
		500	EK6050KN		EC1460K	-	1STQ005328B0000	EP1460K	1STQ005323B0000
		600	EK6060KN		EC1460K	-	1STQ005328B0000	EP1460K	EL1460K
		800	EK6080KN		EC1460K	-	1STQ005328B0000	EP1460K	EL1480K
	800	300	1STQ005318B0000	EM1400	EC1480K	-	1STQ005329B0000	EP1480K	1STQ005322B0000
		400	EK8040KN		EC1480K	-	1STQ005329B0000	EP1480K	EL1440K
		500	EK8050KN		EC1480K	-	1STQ005329B0000	EP1480K	1STQ005323B0000
		600	EK8060KN		EC1480K	-	1STQ005329B0000	EP1480K	EL1460K
		800	EK8080KN		EC1480K	-	1STQ005329B0000	EP1480K	EL1480K
	1000	300	1STQ005319B0000	EM1400	1STQ005321B0000	-	-	1STQ005320B0000	1STQ005322B0000
		400	EK1040KN		1STQ005321B0000	-	-	1STQ005320B0000	EL1440K
		500	EK1050KN		1STQ005321B0000	-	-	1STQ005320B0000	1STQ005323B0000
	1200	400	EK1240KN	EM1400	-	ED1412SK+ EC1480FC6K	-	EP1412K	EL1440K
		500	EK1250KN		-	ED1412SK+ EC1480FC6K	-	EP1412K	1STQ005323B0000
		600	EK1260KN		-	ED1412SK+ EC1480FC6K	-	EP1412K	EL1460K
		800	EK1280KN		-	ED1412SK+ EC1480FC6K	-	EP1412K	EL1480K

<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.

### Example of double door enclosure

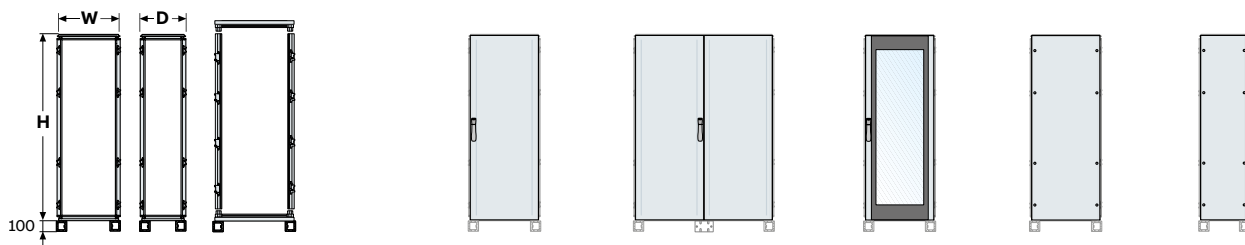




Standard mounting plate	Oversized mounting plate + rails	Fixed cable entry flanges	Sliding cable entry flanges	Build-up cable entry flanges	Plinth flanges front/rear	Plinth flanges side	19" Fixed cranked shaped upright	Side-by-side structure Kit	Oversized platejoining Kit
EA1440	EA1540	EF4042	EF4040	EF4041	ZN4000	ZN4000	-	EV0002	EA2113
EA1440	EA1540	EF4063	EF4060	EF4061	ZN4000	ZN6000	-	EV0003	
EA1440	EA1540	EF4082	EF4080	EF4081	ZN4000	ZN8000	-	EV0006	
EA1460	EA1560	1STQ005426B0000	-	-	ZN6000	ZN3000	1STQ005332B0000+EB6000	EV0002	EA2113
EA1460	EA1560	EF6043	EF6040	EF6041	ZN6000	ZN4000	1STQ005332B0000+EB6000	EV0003	
EA1460	EA1560	EF6052	EF6050	EF6051	ZN6000	ZN5000	1STQ005332B0000+EB6000	EV0006	
EA1460	EA1560	EF6062	EF6060	EF6061	ZN6000	ZN6000	1STQ005332B0000+EB6000		
EA1460	EA1560	EF6082	EF6080	EF6081	ZN6000	ZN8000	1STQ005332B0000+EB6000		
EA1480	EA1580	1STQ005427B0000	-	-	ZN8000	ZN3000	1STQ005332B0000+EB8000	EV0002	EA2113
EA1480	EA1580	EF8042	EF8040	EF8041	ZN8000	ZN4000	1STQ005332B0000+EB8000	EV0003	
EA1480	EA1580	EF8052	EF8050	EF8051	ZN8000	ZN5000	1STQ005332B0000+EB8000	EV0006	
EA1480	EA1580	EF8062	EF8060	EF8061	ZN8000	ZN6000	1STQ005332B0000+EB8000		
EA1480	EA1580	EF8082	EF8080	EF8081	ZN8000	ZN8000	1STQ005332B0000+EB8000		
EA1411	-	1STQ005428B0000	-	-	ZN1000	ZN3000	-	EV0002	EA2113
EA1411	-	EF1042	EF1040	EF1041	ZN1000	ZN4000	-	EV0003	
EA1411	-	EF1052	EF1053	EF1051	ZN1000	ZN5000	-	EV0006	
EA1412	EA1512	2xEF6043	2xEF6040	2xEF6041	2xZN6000	ZN4000	-		
EA1412	EA1512	2xEF6052	2xEF6051	2xEF6051	2xZN6000	ZN5000	-	EV0002	EA2113
EA1412	EA1512	2xEF6062	2xEF6060	2xEF6061	2xZN6000	ZN6000	-	EV0003	
EA1412	EA1512	2xEF6082	2xEF6080	2xEF6081	2xZN6000	ZN8000	-	EV0006	

# IS2 kit version cabinets

## Selection of the structure - H=1600mm

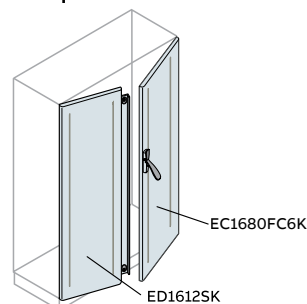


### External dimensions

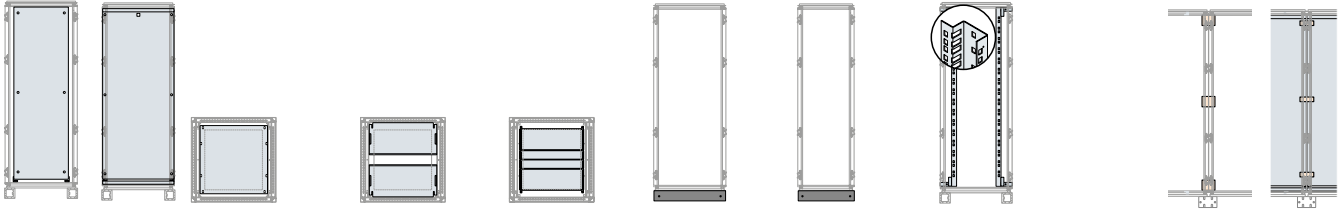
(H) <sup>(1)</sup> mm	(W) mm	(D) mm	Base/ Top/ Plinth	Uprights For structure	IP65 blind door	Blind doors for version with double door with overlapping closing	IP65 glass door	Rear panel	Side panel
1600	400	500	EK4050KN	EM1600	EC1640K	-	-	EP1640K	EL1650K
		600	EK4060KN	EM1600	EC1640K	-	-	EP1640K	EL1660K
		800	EK4080KN	EM1600	EC1640K	-	-	EP1640K	EL1680K
		1000	EK4010KN	EM1600	EC1640K	-	-	EP1640K	EL1610K
	600	300	1STQ005317B0000	EM1600	EC1660K	-	1STQ005330B0000	EP1660K	1STQ005324B0000
		400	EK6040KN	EM1600	EC1660K	-	1STQ005330B0000	EP1660K	1STQ005325B0000
		500	EK6050KN	EM1600	EC1660K	-	1STQ005330B0000	EP1660K	EL1650K
		600	EK6060KN	EM1600	EC1660K	-	1STQ005330B0000	EP1660K	EL1660K
		800	EK6080KN	EM1600	EC1660K	-	1STQ005330B0000	EP1660K	EL1680K
		1000	EK6010KN	EM1600	EC1660K	-	1STQ005330B0000	EP1660K	EL1610K
	800	300	1STQ005318B0000	EM1600	EC1680K	-	1STQ005331B0000	EP1680K	1STQ005324B0000
		400	EK8040KN	EM1600	EC1680K	-	1STQ005331B0000	EP1680K	1STQ005325B0000
		500	EK8050KN	EM1600	EC1680K	-	1STQ005331B0000	EP1680K	EL1650K
		600	EK8060KN	EM1600	EC1680K	-	1STQ005331B0000	EP1680K	EL1660K
		800	EK8080KN	EM1600	EC1680K	-	1STQ005331B0000	EP1680K	EL1680K
		1000	EK8010KN	EM1600	EC1680K	-	1STQ005331B0000	EP1680K	EL1610K
	1000	400	EK1040KN	EM1600	EC1610K	-	-	EP1610K	1STQ005325B0000
		500	EK1050KN	EM1600	EC1610K	-	-	EP1610K	EL1650K
		600	EK1060KN	EM1600	EC1610K	-	-	EP1610K	EL1660K
		800	EK1080KN	EM1600	EC1610K	-	-	EP1610K	EL1680K
		1000	EK1010KN	EM1600	EC1610K	-	-	EP1610K	EL1610K
	1200	400	EK1240KN	EM1600	-	ED1612SK+ EC1680FC6K	-	EP1612K	1STQ005325B0000
		500	EK1250KN	EM1600	-	ED1612SK+ EC1680FC6K	-	EP1612K	EL1650K
		600	EK1260KN	EM1600	-	ED1612SK+ EC1680FC6K	-	EP1612K	EL1660K
		800	EK1280KN	EM1600	-	ED1612SK+ EC1680FC6K	-	EP1612K	EL1680K

<sup>(1)</sup> The useful height is always 100mm less than the external dimension of the enclosure.  
For the version with compartments, the useful height is 200mm less.

### Example of double door enclosure



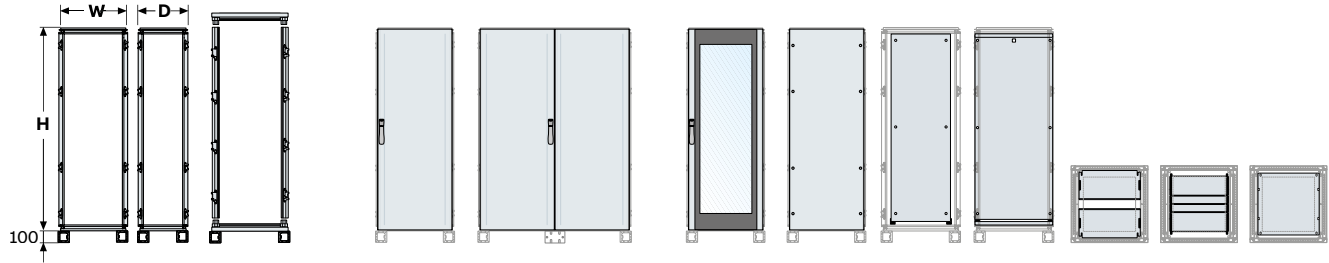




Standard mounting plate	Oversized mounting plate + rails	Fixed cable entry flanges	Sliding cable entry flanges	Build-up cable entry flanges	Plinth flanges front/rear	Plinth flanges side	19" Fixed cranked shaped upright	Side-by-side structure Kit	Oversized platejoining Kit
EA1640	EA1740	EF4052	EF4050	EF4051	ZN4000	ZN5000	-	EV0002	EA2113
EA1640	EA1740	EF4063	EF4060	EF4061	ZN4000	ZN6000	-	EV0003	
EA1640	EA1740	EF4082	EF4080	EF4081	ZN4000	ZN8000	-	EV0006	
EA1640	EA1740	EF4012	EF4010	EF4011	ZN4000	ZN1000	-		
EA1616	EA1760	1STQ005426B0000	-	-	ZN6000	ZN3000	1STQ005333B0000+EB6000	EV0002	EA2113
EA1616	EA1760	EF6043	EF6040	EF6041	ZN6000	ZN4000	1STQ005333B0000+EB6000	EV0003	
EA1616	EA1760	EF6052	EF6050	EF6051	ZN6000	ZN5000	1STQ005333B0000+EB6000	EV0006	
EA1616	EA1760	EF6062	EF6060	EF6061	ZN6000	ZN6000	1STQ005333B0000+EB6000		
EA1616	EA1760	EF6082	EF6080	EF6081	ZN6000	ZN8000	1STQ005333B0000+EB6000		
EA1616	EA1760	EF6012	EF6010	EF6011	ZN6000	ZN1000	1STQ005333B0000+EB6000		
EA1619	EA1780	1STQ005427B0000	-	-	ZN8000	ZN3000	1STQ005333B0000+EB8000	EV0002	EA2113
EA1619	EA1780	EF8042	EF8040	EF8041	ZN8000	ZN4000	1STQ005333B0000+EB8000	EV0003	
EA1619	EA1780	EF8052	EF8050	EF8051	ZN8000	ZN5000	1STQ005333B0000+EB8000	EV0006	
EA1619	EA1780	EF8062	EF8060	EF8061	ZN8000	ZN6000	1STQ005333B0000+EB8000		
EA1619	EA1780	EF8082	EF8080	EF8081	ZN8000	ZN8000	1STQ005333B0000+EB8000		
EA1619	EA1780	EF8012	EF8010	EF8011	ZN8000	ZN1000	1STQ005333B0000+EB8000		
EA1610	EA1710	EF1042	EF1040	EF1041	ZN1000	ZN4000	-	EV0002	EA2113
EA1610	EA1710	EF1052	EF1053	EF1051	ZN1000	ZN5000	-	EV0003	
EA1610	EA1710	EF1062	EF1060	EF1061	ZN1000	ZN6000	-	EV0006	
EA1610	EA1710	EF1082	EF1080	EF1081	ZN1000	ZN8000	-		
EA1610	EA1710	EF1012	EF1010	EF1011	ZN1000	ZN1000	-		
EA1612	EA1712	2xEF6043	2xEF6040	2xEF6041	2xZN6000	ZN4000	-	EV0002	EA2113
EA1612	EA1712	2xEF6052	2xEF6051	2xEF6051	2xZN6000	ZN5000	-	EV0003	
EA1612	EA1712	2xEF6062	2xEF6060	2xEF6061	2xZN6000	ZN6000	-	EV0006	
EA1612	EA1712	2xEF6082	2xEF6080	2xEF6081	2xZN6000	ZN8000	-		

# IS2 kit version cabinets

## Selection of the structure - H=1800mm



External dimensions			Base/Top/Plinth	Uprights For structure	Front/rear covers			Mounting plate			Incoming cable flanges			
(H)* mm	(W) mm	(D) mm			IP65 blind door	Blind doors for version with double door with overlapping closing <sup>(1)</sup>	IP65 Glazed door	IP65 Blind panel	Standard	Oversized + tracks	Sliding	Built up	Fixed	
1800	400	400	EK4040KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4040	EF4041	EF4042	
			600		EK6040KN	EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6040	EF6041	EF6043
			800		EK8040KN	EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8040	EF8041	EF8042
			1000		EK1040KN	EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1040	EF1041	EF1042
			1200		EK1240KN	-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6040	2xEF6041	2xEF6043
	400	500	EK4050KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4050	EF4051	EF4052	
			600		EK6050KN	EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6050	EF6051	EF6052
			800		EK8050KN	EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8050	EF8051	EF8052
			1000		EK1050KN	EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1053	EF1051	EF1052
			1200		EK1250KN	-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6050	2xEF6051	2xEF6052
	400	600	EK4060KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4060	EF4061	EF4063	
			600		EK6060KN	EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6060	EF6061	EF6062
			800		EK8060KN	EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8060	EF8061	EF8062
			1000		EK1060KN	EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1060	EF1061	EF1062
			1200		EK1260KN	-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6060	2xEF6061	2xEF6062
	400	800	EK4080KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4080	EF4081	EF4082	
			600		EK6080KN	EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6080	EF6081	EF6082
			800		EK8080KN	EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8080	EF8081	EF8082
			1000		EK1080KN	EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1080	EF1081	EF1082
			1200		EK1280KN	-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6080	2xEF6081	2xEF6082
400	1000	EK4010KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4010	EF4011	EF4012		
		600		EK6010KN	EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6010	EF6011	EF6012	
		800		EK8010KN	EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8010	EF8011	EF8012	
		1000		EK1010KN	EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1010	EF1011	EF1012	

(\*) The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.

For versions with compartments see page 2-77, for modular versions see page 2-80.

<sup>(1)</sup> Double blind doors with intermediate upright EM1801, double glass doors with intermediate upright EM1801, and combinations of structures with internal cable container W=200/400mm available (see pag. 2-32, 2-33, 2-52 and 2-53).

<sup>(2)</sup> In the case of structures with internal cable container, select the correct rack frame which takes into account the 200/400mm of the cable container. For the new rack 19" and relative accessories see page 2-85.

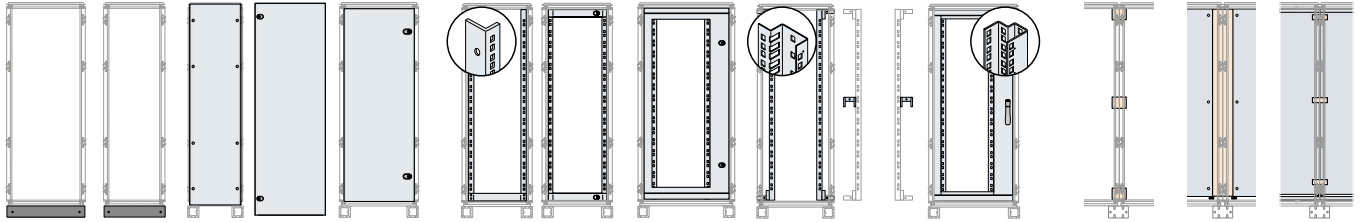
W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

<sup>(3)</sup> Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Accessories from page 2-88.

Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 2-84. Accessories from page 2-88.

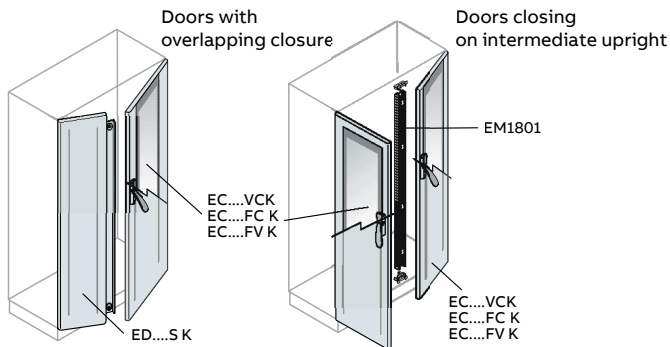
<sup>(4)</sup> Only available for W=800mm (even in structures with cable container with W=800mm available structure compartment). Order specific fixing kit EV0007.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 2-76.



Front/rear	Plinth flanges		Rack frames 19" "L" shaped profile <sup>(2)</sup>				Rack frames 19"		Side-by-side structure Kit	Standard plate joining Kit	Oversized plate joining Kit		
	Side	Pair of blind panels	Swing	Swing	Fixed <sup>(3)</sup>	Swing <sup>(4)</sup>							
		Side door with closing box	Inner door	Fixed Centred	Centred W=600mm	Decentralized W=800mm	Frame+ Fixing kit	Optional central fixing kit	Frame+ Fixing kit				
ZN4000	ZN4000	EL1840K	EC1841K	-	-	-	-	-	-	EV0002 EV0003 EV0006	EA1800	EA2113	
ZN6000				EE1860K	EG1800	EG1801K	-	EG1805+EB6000	EB0400				-
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+EB8000	EB8001+EB0400				EG1804K+EV0007
ZN1000				EE1810K	-	-	-	-	-				-
2xZN6000				-	-	-	-	-	-				-
ZN4000	ZN5000	EL1850K	EC1851K	-	-	-	-	-	-	EV0002 EV0003 EV0006	EA1800	EA2113	
ZN6000				EE1860K	EG1800	EG1801K	-	EG1805+EB6000	EB0500				-
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+EB8000	EB8001+EB0500				EG1804K+EV0007
ZN1000				EE1810K	-	-	-	-	-				-
2xZN6000				-	-	-	-	-	-				-
ZN4000	ZN6000	EL1860K	EC1861K	-	-	-	-	-	-	EV0002 EV0003 EV0006	EA1800	EA2113	
ZN6000				EE1860K	EG1800	EG1801K	-	EG1805+EB6000	EB0600				-
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+EB8000	EB8001+EB0600				EG1804K+EV0007
ZN1000				EE1810K	-	-	-	-	-				-
2xZN6000				-	-	-	-	-	-				-
ZN4000	ZN8000	EL1880K	EC1881K	-	-	-	-	-	-	EV0002 EV0003 EV0006	EA1800	EA2113	
ZN6000				EE1860K	EG1800	EG1801K	-	EG1805+EB6000	EB0800				-
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+EB8000	EB8001+EB0800				EG1804K+EV0007
ZN1000				EE1810K	-	-	-	-	-				-
2xZN6000				-	-	-	-	-	-				-
ZN4000	ZN1000	EL1810K	EC1811K	-	-	-	-	-	-	EV0002 EV0003 EV0006	EA1800	EA2113	
ZN6000				EE1860K	EG1800	EG1801K	-	EG1805+EB6000	EB1000				-
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+EB8000	EB8001+EB1000				EG1804K+EV0007
ZN1000				EE1810K	-	-	-	-	-				-
				-	-	-	-	-	-				-

Example of double door enclosure



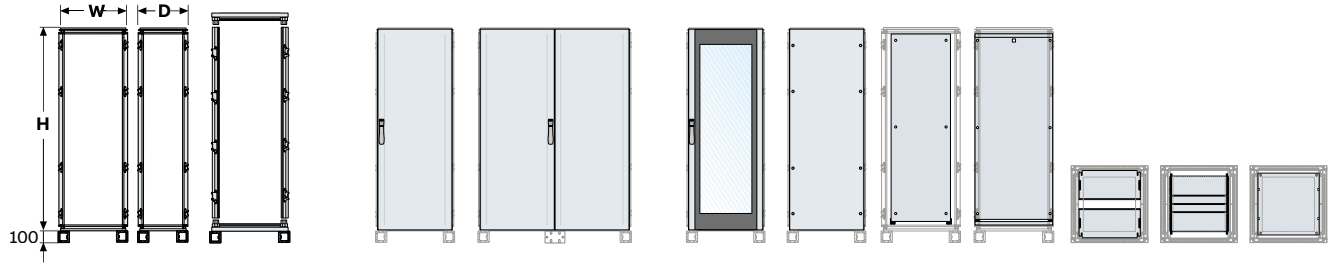
• Ordering codes 2-34

• In-depth technical information page 4-1

• Overall dimensions page 5-1

# IS2 kit version cabinets

## Selection of the structure - H=2000mm



External dimensions				Front/rear covers			Back plates			Incoming cable flanges					
(H)* mm	(W) mm	(D) mm	Base/Top/Plinth	Uprights For structure	IP65 blind door	Blind doors for version with double door with overlapping closing <sup>(1)</sup>	IP65 Glazed door	IP65 Blind panel	Standard	Oversized + tracks	Sliding	Removable	Fixed		
2000	400	400	EK4040KN	EM2000	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4040	EF4041	EF4042		
			600		EK6040KN	EC2060K	-	-	ET2060K	EP2060K	EA2060	EA2161	EF6040	EF6041	EF6043
			800		EK8040KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8040	EF8041	EF8042	
			1000		EK1040KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1040	EF1041	EF1042	
			1200		EK1240KN	-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6040	2xEF6041	2xEF6043	
	400	500	EK4050KN	EM2000	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4050	EF4051	EF4052		
			600		EK6050KN	EC2060K	-	-	ET2060K	EP2060K	EA2060	EA2161	EF6050	EF6051	EF6052
			800		EK8050KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8050	EF8051	EF8052	
			1000		EK1050KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1053	EF1051	EF1052	
			1200		EK1250KN	-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6050	2xEF6051	2xEF6052	
	400	600	EK4060KN	EM2000	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4060	EF4061	EF4063		
			600		EK6060KN	EC2060K	-	-	ET2060K	EP2060K	EA2060	EA2161	EF6060	EF6061	EF6062
			800		EK8060KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8060	EF8061	EF8062	
			1000		EK1060KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1060	EF1061	EF1062	
			1200		EK1260KN	-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6060	2xEF6061	2xEF6062	
	400	800	EK4080KN	EM2000	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4080	EF4081	EF4082		
			600		EK6080KN	EC2060K	-	-	ET2060K	EP2060K	EA2060	EA2161	EF6080	EF6081	EF6082
			800		EK8080KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8080	EF8081	EF8082	
			1000		EK1080KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1080	EF1081	EF1082	
			1200		EK1280KN	-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6080	2xEF6081	2xEF6082	
400	1000	EK4010KN	EM2000	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4010	EF4011	EF4012			
		600		EK6010KN	EC2060K	-	-	ET2060K	EP2060K	EA2060	EA2161	EF6010	EF6011	EF6012	
		800		EK8010KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8010	EF8011	EF8012		
		1000		EK1010KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1010	EF1011	EF1012		

(\*) The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.

For versions with compartments see page 2-77, for modular versions see page 2-80.

<sup>(1)</sup> Double blind doors with intermediate upright EM1801, double glass doors with intermediate upright EM1801, and combinations of structures with internal cable container W=200/400mm available (see pag. 2-32, 2-33, 2-52 and 2-53).

<sup>(2)</sup> In the case of structures with internal cable container, select the correct rack frame which takes into account the 200/400mm of the cable container. For the new rack 19" and relative accessories see page 2-85.

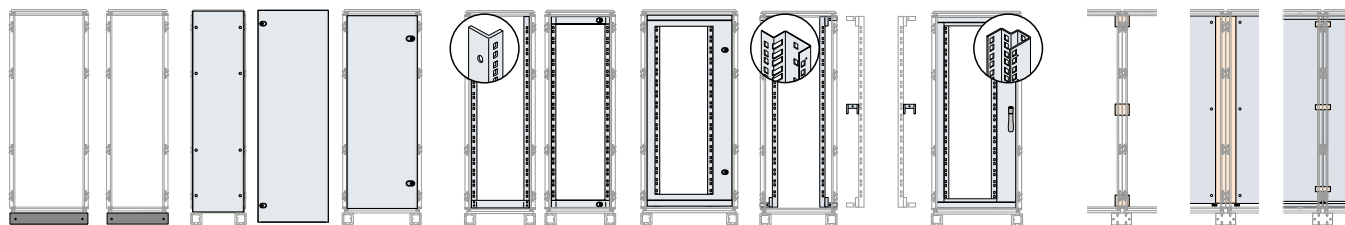
W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

<sup>(3)</sup> Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Accessories from page 2-88.

Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 2-84. Accessories from page 2-88.

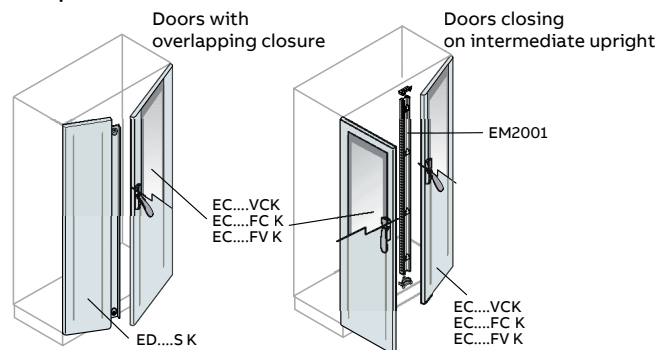
<sup>(4)</sup> Only available for W=800mm (even in structures with cable container with W=800mm available structure compartment). Order specific fixing kit EV0007.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 2-76.



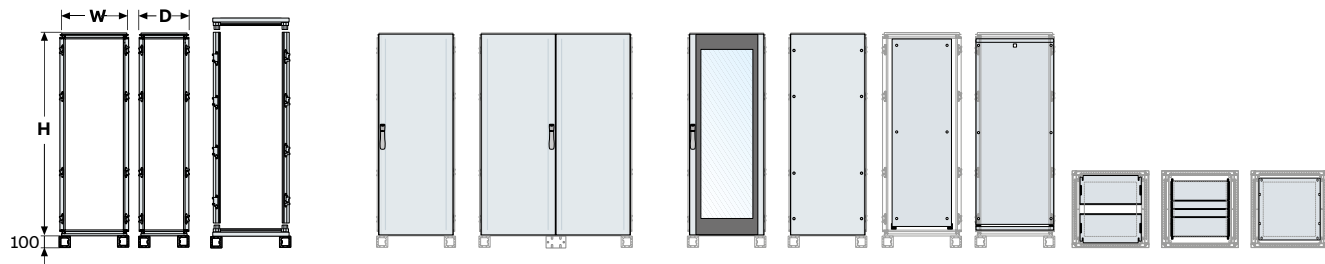
Plinth flanges		Rack frames 19" "L" shaped profile <sup>(2)</sup>				Rack frames 19"							
Front/rear	Side	Pair of blind panels	Side door with closing box	Inner door	Swing		Fixed <sup>(3)</sup>		Swing <sup>(4)</sup>		Side-by-side structure Kit	Standard plate joining Kit	Oversized plate joining Kit
					Fixed Centred	Centred W=600mm	Decentralized W=800mm	Frame+ Fixing kit	Optional central fixing kit	Frame+ Fixing kit			
ZN4000	ZN4000	EL2040K	EC2041K	-	-	-	-	-	-	-	EV0002	EA2000	EA2113
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0400	-	EV0003		
ZN8000				EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001+ EB0400	EG2004K+ EV0007	EV0006		
ZN1000				EE2010K	-	-	-	-	-	-	-		
2xZN6000				-	-	-	-	-	-	-	-		
ZN4000	ZN5000	EL2050K	EC2051K	-	-	-	-	-	-	-	EV0002	EA2000	EA2113
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0500	-	EV0003		
ZN8000				EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001+ EB0500	EG2004K+ EV0007	EV0006		
ZN1000				EE2010K	-	-	-	-	-	-	-		
2xZN6000				-	-	-	-	-	-	-	-		
ZN4000	ZN6000	EL2060K	EC2061K	-	-	-	-	-	-	-	EV0002	EA2000	EA2113
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0600	-	EV0003		
ZN8000				EE2080K	EG2080	-	EG2003K	EG2005+ EB6000	EB8001+ EB0600	EG2004K+ EV0007	EV0006		
ZN1000				EE2010K	-	-	-	-	-	-	-		
2xZN6000				-	-	-	-	-	-	-	-		
ZN4000	ZN8000	EL2080K	EC2081K	-	-	-	-	-	-	-	EV0002	EA2000	EA2113
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0800	-	EV0003		
ZN8000				EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001+ EB0800	EG2004K+ EV0007	EV0006		
ZN1000				EE2010K	-	-	-	-	-	-	-		
2xZN6000				-	-	-	-	-	-	-	-		
ZN4000	ZN1000	EL2012K	EC2011K	-	-	-	-	-	-	-	EV0002	EA2000	EA2113
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB1000	-	EV0003		
ZN8000				EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001+ EB1000	EG2004K+ EV0007	EV0006		
ZN1000				EE2010K	-	-	-	-	-	-	-		

Example of double door enclosure



# IS2 kit version cabinets

## Selection of the structure - H=2200mm



External dimensions			Base/Top/Plinth	Uprights For structure	Front/rear covers			Back plates			Incoming cable flanges			
(H)* mm	(W) mm	(D) mm			IP65 blind door	Blind doors for version with double door with overlapping closing <sup>(1)</sup>	IP65 Glazed door	IP65 Blind panel	Standard	Oversized + tracks	Sliding	Removable	Fixed	
2200	400	400	EK4040KN	EM2200	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4040	EF4041	EF4042	
			600		EK6040KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6040	EF6041	EF6043
			800		EK8040KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8040	EF8041	EF8042
			1000		EK1040KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1040	EF1041	EF1042
			1200		EK1240KN	-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6040	2xEF6041	2xEF6043
	400	500	EK4050KN	EM2200	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4050	EF4051	EF4052	
			600		EK6050KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6050	EF6051	EF6052
			800		EK8050KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8050	EF8051	EF8052
			1000		EK1050KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1053	EF1051	EF1052
			1200		EK1250KN	-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6050	2xEF6051	2xEF6052
	400	600	EK4060KN	EM2200	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4060	EF4061	EF4063	
			600		EK6060KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6060	EF6061	EF6062
			800		EK8060KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8060	EF8061	EF8062
			1000		EK1060KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1060	EF1061	EF1062
			1200		EK1260KN	-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6060	2xEF6061	2xEF6062
	400	800	EK4080KN	EM2200	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4080	EF4081	EF4082	
			600		EK6080KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6080	EF6081	EF6082
			800		EK8080KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8080	EF8081	EF8082
			1000		EK1080KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1080	EF1081	EF1082
			1200		EK1280KN	-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6080	2xEF6081	2xEF6082
400	1000	EK4010KN	EM2200	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4010	EF4011	EF4012		
		600		EK6010KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6010	EF6011	EF6012	
		800		EK8010KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8010	EF8011	EF8012	
		1000		EK1010KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1010	EF1011	EF1012	

(\* The useful height is always 100mm less than the external dimension of the enclosure. For the version with compartments, the useful height is 200mm less.

For versions with compartments see page 2-77, for modular versions see page 2-80.

<sup>(1)</sup> Double blind doors with intermediate upright EM1801, double glass doors with intermediate upright EM1801, and combinations of structures with internal cable container W=200/400mm available (see pag. 2-32, 2-33, 2-52 and 2-53).

<sup>(2)</sup> In the case of structures with internal cable container, select the correct rack frame which takes into account the 200/400mm of the cable container. For the new rack 19" and relative accessories see page 2-85.

W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

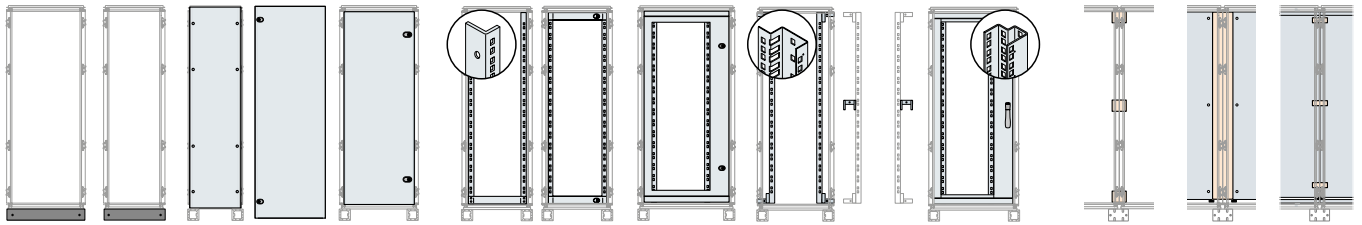
<sup>(3)</sup> Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Accessories from page 2-88.

Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 2-70 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 2-84. Accessories from page 2-88.

<sup>(4)</sup> Only available for W=800mm (even in structures with cable container with W=800mm available structure compartment). Order specific fixing kit EV0007.

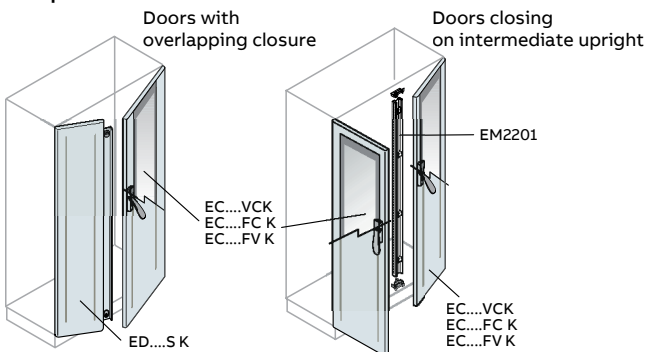
Kit for placing structures side by side EV0002/EV0003/EV0006 see page 2-76.





Plinth flanges		Rack frames 19" "L" shaped profile <sup>(2)</sup>				Rack frames 19"							
Front/rear	Side	Pair of blind panels	Side door with closing box	Inner door	Swing		Fixed <sup>(3)</sup>		Swing <sup>(4)</sup>		Side-by-side structure Kit	Standard plate joining Kit	Oversized plate joining Kit
					Fixed Centred	Centred W=600mm	Decentralized W=800mm	Frame+ Fixing kit	Optional central fixing kit	Frame+ Fixing kit			
ZN4000	ZN4000	EL2240K	EC 2241K	-	-	-	-	-	-	-	EV0002	EA2200	EA2113
ZN6000	ZN4000	EL2240K	EC 2241K	EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0400	-	EV0003	EA2200	EA2113
ZN8000	ZN4000	EL2240K	EC 2241K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001+ EB0400	EG2204K+ EV0007	EV0006	EA2200	EA2113
ZN1000	ZN4000	EL2240K	EC 2241K	EE2210K	-	-	-	-	-	-	-	-	-
2xZN6000	ZN4000	EL2240K	EC 2241K	-	-	-	-	-	-	-	-	-	-
ZN4000	ZN5000	EL2250K	EC 2251K	-	-	-	-	-	-	-	EV0002	EA2200	EA2113
ZN6000	ZN5000	EL2250K	EC 2251K	EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0500	-	EV0003	EA2200	EA2113
ZN8000	ZN5000	EL2250K	EC 2251K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001+ EB0500	EG2204K+ EV0007	EV0006	EA2200	EA2113
ZN1000	ZN5000	EL2250K	EC 2251K	EE2210K	-	-	-	-	-	-	-	-	-
2xZN6000	ZN5000	EL2250K	EC 2251K	-	-	-	-	-	-	-	-	-	-
ZN4000	ZN6000	EL2260K	EC 2261K	-	-	-	-	-	-	-	EV0002	EA2200	EA2113
ZN6000	ZN6000	EL2260K	EC 2261K	EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0600	-	EV0003	EA2200	EA2113
ZN8000	ZN6000	EL2260K	EC 2261K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001+ EB0600	EG2204K+ EV0007	EV0006	EA2200	EA2113
ZN1000	ZN6000	EL2260K	EC 2261K	EE2210K	-	-	-	-	-	-	-	-	-
2xZN6000	ZN6000	EL2260K	EC 2261K	-	-	-	-	-	-	-	-	-	-
ZN4000	ZN8000	EL2280K	EC 2281K	-	-	-	-	-	-	-	EV0002	EA2200	EA2113
ZN6000	ZN8000	EL2280K	EC 2281K	EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0800	-	EV0003	EA2200	EA2113
ZN8000	ZN8000	EL2280K	EC 2281K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001+ EB0800	EG2204K+ EV0007	EV0006	EA2200	EA2113
ZN1000	ZN8000	EL2280K	EC 2281K	EE2210K	-	-	-	-	-	-	-	-	-
2xZN6000	ZN8000	EL2280K	EC 2281K	-	-	-	-	-	-	-	-	-	-
ZN4000	ZN1000	EL2210K	EC 2211K	-	-	-	-	-	-	-	EV0002	EA2200	EA2113
ZN6000	ZN1000	EL2210K	EC 2211K	EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB1000	-	EV0003	EA2200	EA2113
ZN8000	ZN1000	EL2210K	EC 2211K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001+ EB1000	EG2204K+ EV0007	EV0006	EA2200	EA2113
ZN1000	ZN1000	EL2210K	EC 2211K	EE2210K	-	-	-	-	-	-	-	-	-

Example of double door enclosure




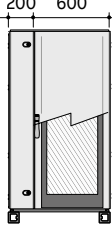
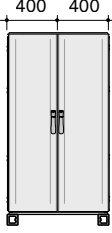
• Ordering codes 2-34

• In-depth technical information page 4-1

• Overall dimensions page 5-1

# IS2 kit version cabinets

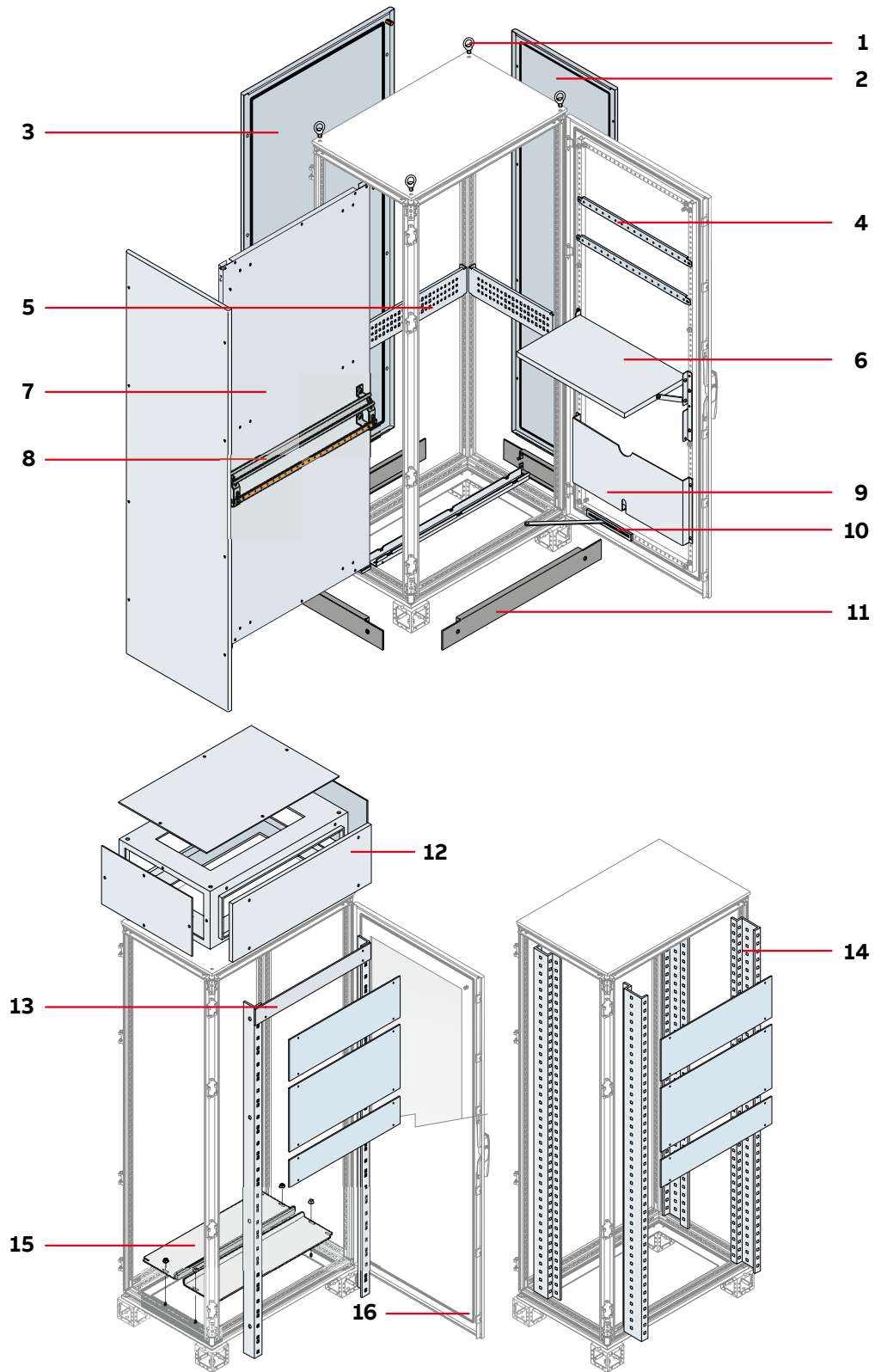
## Single doors for making the double door version

		<b>Double doors</b> Closure on door with overlapping (without intermediate upright)		<b>Double doors</b> Closure on door with intermediate upright		
<b>Structure W=600mm</b>		<b>Door W=200mm</b>	<b>Door W=400mm</b>	<b>Door W=200mm</b>	<b>Door W=400mm</b>	<b>Intermediate upright</b>
	H=1800mm	blind ED1802SK	EC1880VC4K	EC1880VC2K	EC1880VC4K	
		glazed -	+	-	-	+ EM1801
	H=2000mm	blind ED2002SK	EC1880VC4K	EC2080VC2K	EC2080VC4K	
		glazed -	+	-	-	+ EM2001
	H=2200mm	blind ED2202SK	EC2280VC4K	EC2280VC2K	EC2280VC4K	
		glazed -	+	-	-	+ EM2201
<b>Structure W=800mm</b>		<b>Door W=200mm</b>	<b>Door W=600mm</b>	<b>Door W=200mm</b>	<b>Door W=600mm</b>	<b>Intermediate upright</b>
	H=1800mm	blind ED1802SK	EC1880FC6K	EC1880VC2K	EC1880FC6K	
		glazed -	+	-	-	+ EM1801
	H=2000mm	blind ED2002SK	EC2080FC6K	EC2080VC2K	EC2080FC6K	
		glazed -	+	-	-	+ EM2001
	H=2200mm	blind ED2202SK	EC2280FC6K	EC2280VC2K	EC2280FC6K	
		glazed -	+	-	-	+ EM2201
		<b>Door W=400mm</b>	<b>Door W=400mm</b>	<b>Door W=400mm</b>	<b>Door W=400mm</b>	<b>Intermediate upright</b>
	H=1800mm	blind ED1804SK	EC1880VC4K	EC1880VC4K	EC1880VC4K	
		glazed -	+	-	-	+ EM1801
	H=2000mm	blind ED2004SK	EC2080VC4K	EC2080VC4K	EC2080VC4K	
		glazed -	+	-	-	+ EM2001
	H=2200mm	blind ED2204SK	EC2280VC4K	EC2280VC4K	EC2280VC4K	
		glazed -	+	-	-	+ EM2201

		Double doors Closure on door with overlapping (without intermediate upright)			Double doors Closure on door with intermediate upright			
Structure W=1000mm		Door W=200mm		Door W=800mm	Door W=200mm		Door W=800mm	Intermediate upright
	H=1800mm	blind	ED1802SK	EC1880FC8K	EC1880VC2K	EC1880FC8K		
		glazed	-	EC1880FV8K	-	EC1880FV8K	+ EM1801	
	H=2000mm	blind	ED2002SK	EC2080FC8K	EC2080VC2K	EC2080FC8K		
		glazed	-	EC2080FV8K	-	EC2080FV8K	+ EM2001	
	H=2200mm	blind	ED2202SK	EC2280FC8K	EC2280VC2K	EC2280FC8K		
		glazed	-	EC2280FV8K	-	EC2280FV8K	+ EM2201	
Structure W=1000mm		Door W=400mm		Door W=600mm	Door W=400mm		Door W=600mm	Intermediate upright
	H=1800mm	blind	ED1804SK	EC1880FC6K	EC1880VC4K	EC1880FC6K		
		glazed	-	EC1880FV6K	-	EC1880FV6K	+ EM1801	
	H=2000mm	blind	ED2004SK	EC2080FC6K	EC2080VC4K	EC2080FC6K		
		glazed	-	EC2080FV6K	-	EC2080FV6K	+ EM2001	
	H=2200mm	blind	ED2204SK	EC2280FC6K	EC2280VC4K	EC2280FC6K		
		glazed	-	EC2280FV6K	-	EC2280FV6K	+ EM2201	
Structure W=1000mm		Door W=500mm		Door W=500mm	Door W=500mm		Door W=500mm	Intermediate upright
	H=1800mm	blind	ED1810SK	EC1880FC5K	EC1880FC5K	EC1880FC5K		
		glazed	-	-	-	-	+ EM1801	
	H=2000mm	blind	ED2010SK	EC2080FC5K	EC2080FC5K	EC2080FC5K		
		glazed	-	-	-	-	+ EM2001	
	H=2200mm	blind	ED2210SK	EC2280FC5K	EC2280FC5K	EC2280FC5K		
		glazed	-	-	-	-	+ EM2201	
Structure W=1200mm		Door W=400mm		Door W=800mm	Door W=400mm		Door W=800mm	Intermediate upright
	H=1800mm	blind	ED1804SK	EC1880FC8K	EC1880VC4K	EC1880FC8K		
		glazed	-	EC1880FV8K	-	EC1880FV8K	+ EM1801	
	H=2000mm	blind	ED2004SK	EC2080FC8K	EC2080VC4K	EC2080FC8K		
		glazed	-	EC2080FV8K	-	EC2080FV8K	+ EM2001	
	H=2200mm	blind	ED2204SK	EC2280FC8K	EC2280VC4K	EC2280FC8K		
		glazed	-	EC2280FV8K	-	EC2280FV8K	+ EM2201	
Structure W=1200mm		Door W=600mm		Door W=600mm	Door W=600mm		Door W=600mm	Intermediate upright
	H=1400mm	blind	ED1412SK	EC1480FC6K	-	-		
	H=1600mm	blind	ED1612SK	EC1680FC6K	-	-		
	H=1800mm	blind	ED1812SK	EC1880FC6K	EC1880FC6K	EC1880FC6K		
		glazed	-	EC1880FV6K	EC1880FV6K	EC1880FV6K	+ EM1801	
	H=2000mm	blind	ED2012SK	EC2080FC6K	EC2080FC6K	EC2080FC6K		
		glazed	-	EC2080FV6K	EC2080FV6K	EC2080FV6K	+ EM2001	
H=2200mm	blind	ED2012SK	EC2280FC6K	EC2280FC6K	EC2280FC6K			
	glazed	-	EC2280FV6K	EC2280FV6K	EC2280FV6K	+ EM2201		
Structure W=1600mm		W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).						

# IS2 kit version cabinets

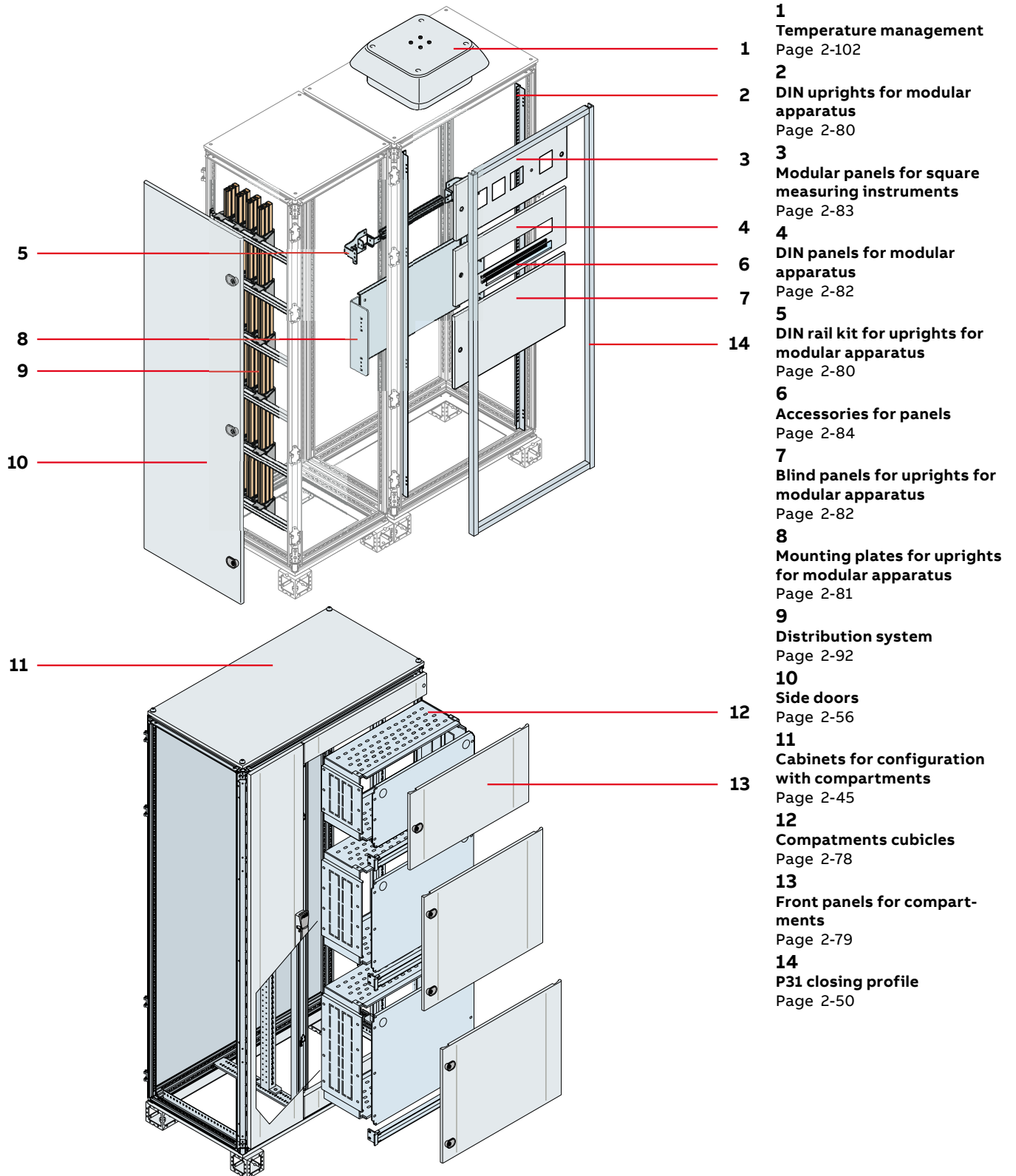
## Ordering codes



- 1** Lifting eyebolts  
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- 2** Side panels  
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- 3** Rear panels  
Page 2-54
- 4** Reinforcement profiles for door  
Page 2-109
- 5** Crosspieces for accessories  
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- 6** Folding shelf for door  
Page 2-110
- 7** Mounting plate  
Page 2-64
- 8** Angled supports for terminal boxes and earthing busbars  
Page 2-99
- 9** Document pocket  
Page 2-110
- 10** Anti-closing device for door  
Page 2-110
- 11** Cover flanges for plinth  
Page 2-62
- 12** Top container for cable connection  
Page 2-75
- 13** Rack frame 19" "L" shaped profile  
Page 2-85
- 14** "Rack frame 19" cranked shape uprights and other rack 19"  
Page 2-86
- 15** Cable entry flanges  
Page 2-57
- 16** Blind doors, glass doors and aerated doors  
Page 2-50

**IS2 kit version cabinets**

Ordering codes



- 1** Temperature management  
Page 2-102
- 2** DIN uprights for modular apparatus  
Page 2-80
- 3** Modular panels for square measuring instruments  
Page 2-83
- 4** DIN panels for modular apparatus  
Page 2-82
- 5** DIN rail kit for uprights for modular apparatus  
Page 2-80
- 6** Accessories for panels  
Page 2-84
- 7** Blind panels for uprights for modular apparatus  
Page 2-82
- 8** Mounting plates for uprights for modular apparatus  
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- 9** Distribution system  
Page 2-92
- 10** Side doors  
Page 2-56
- 11** Cabinets for configuration with compartments  
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- 12** Compartments cubicles  
Page 2-78
- 13** Front panels for compartments  
Page 2-79
- 14** P31 closing profile  
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## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinet with blind door

Structure with removable roof, complete with blind door and rear panel, plinth H=100mm consisting of four angle pieces. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Code	Package/ No. of pieces	
H	W	D			
1400	400	400	1STQ005349B0000	1/1	
		600	1STQ005361B0000	1/1	
		800	1STQ005365B0000	1/1	
	600	300	400	1STQ005346B0000	1/1
			400	1STQ005350B0000	1/1
			500	1STQ005357B0000	1/1
		600	400	1STQ005362B0000	1/1
			800	1STQ005366B0000	1/1
			800	1STQ005347B0000	1/1
	800	300	400	1STQ005351B0000	1/1
			500	1STQ005358B0000	1/1
			600	1STQ005363B0000	1/1
		800	400	1STQ005367B0000	1/1
			400	1STQ005352B0000	1/1
			500	1STQ005359B0000	1/1
1600	400	500	1STQ005377B0000	1/1	
		600	1STQ005382B0000	1/1	
		800	1STQ005387B0000	1/1	
		1000	1STQ005392B0000	1/1	
		600	300	1STQ005369B0000	1/1
			400	1STQ005371B0000	1/1
	500		1STQ005378B0000	1/1	
	600		1STQ005383B0000	1/1	
	800		1STQ005388B0000	1/1	
	1000		1STQ005393B0000	1/1	
	800	300	400	1STQ005370B0000	1/1
			400	1STQ005372B0000	1/1
			500	1STQ005379B0000	1/1
			600	1STQ005384B0000	1/1
			800	1STQ005389B0000	1/1
			1000	1STQ005394B0000	1/1
		1000	400	1STQ005373B0000	1/1
			500	1STQ005380B0000	1/1
			600	1STQ005385B0000	1/1
			800	1STQ005390B0000	1/1
			1000	1STQ005395B0000	1/1
			1800	400	400
	500	ES1845K			1/1
	600	ES1846K			1/1
	800	ES1848K			1/1
	1000	ES1840K			1/1
	600	400			ES1864K
		500		ES1865K	1/1
		600		ES1866K	1/1
		800		ES1868K	1/1
1000		ES1860K		1/1	
800		400		ES1884K	1/1
	500	ES1885K		1/1	
	600	ES1886K		1/1	
	800	ES1888K		1/1	
	1000	ES1880K		1/1	
	1000	400		ES1804K	1/1
500		ES1805K		1/1	
600		ES1806K		1/1	
800		ES1808K		1/1	
1000		ES1800K		1/1	

CONTINUED



## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinet with blind door

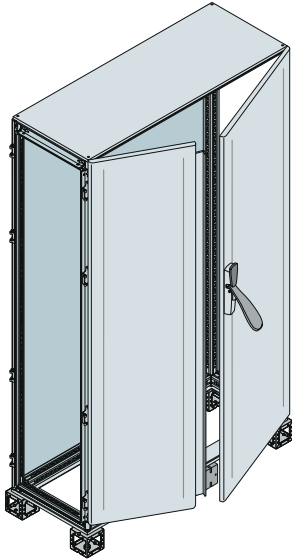
Structure with removable roof, complete with blind door and rear panel, plinth H=100mm consisting of four angle pieces. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Code	Package/ No. of pieces		
H	W	D				
2000	400	400	ES2044K	1/1		
		500	ES2045K	1/1		
		600	ES2046K	1/1		
		800	ES2048K	1/1		
	600	400	1000	ES2040K	1/1	
			400	ES2064K	1/1	
			500	ES2065K	1/1	
			600	ES2066K	1/1	
		800	400	800	ES2068K	1/1
				1000	ES2060K	1/1
				400	ES2084K	1/1
				500	ES2085K	1/1
	1000	600	600	ES2086K	1/1	
			800	ES2089K	1/1	
			1000	ES2080K	1/1	
			400	ES2004K	1/1	
800		400	500	ES2007K	1/1	
			600	ES2006K	1/1	
			800	ES2008K	1/1	
			1000	ES2000K	1/1	
2200	400	400	ES2244K	1/1		
		500	ES2245K	1/1		
		600	ES2246K	1/1		
		800	ES2248K	1/1		
	600	400	1000	ES2240K	1/1	
			400	ES2264K	1/1	
			500	ES2265K	1/1	
			600	ES2266K	1/1	
		800	400	800	ES2268K	1/1
				1000	ES2260K	1/1
				400	ES2284K	1/1
				500	ES2285K	1/1
	1000	600	600	ES2287K	1/1	
			800	ES2288K	1/1	
			1000	ES2280K	1/1	
			400	ES2204K	1/1	
		800	400	500	ES2205K	1/1
				600	ES2206K	1/1
				800	ES2208K	1/1
				1000	ES2200K	1/1

Examples of configuration and technical characteristics at page 2-118.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinets with double blind door with overlapping closure

Structure with removable roof complete with double blind door and rear panel, plinth H=100mm made up of four angle pieces. The versions with double door include a pair of crosspieces mounted in depth and an intermediate upright (removable) for door closure. The cabinets 1200/1600mm wide include the intermediate plinth.

To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1400	1200	400	1STQ005353B0000	1/1	
		500	1STQ005360B0000	1/1	
		600	1STQ005364B0000	1/1	
		800	1STQ005368B0000	1/1	
1600	1200	400	1STQ005374B0000	1/1	
		500	1STQ005381B0000	1/1	
		600	1STQ005386B0000	1/1	
		800	1STQ005391B0000	1/1	
1800	1000	400	ES1814BK	1/1	
		500	ES1815BK	1/1	
		600	ES1876BK	1/1	
		800	ES1818BK	1/1	
	1200	1000	ES1810BK	1/1	
		400	ES1824BK	1/1	
		500	ES1827BK	1/1	
		600	ES1826BK	1/1	
		800	ES1828BK	1/1	
		1600	500	ES1875BK	1/1
			600	ES1876BK	1/1
		800	ES1878BK	1/1	
2000	1000	400	ES2014BK	1/1	
		500	ES2015BK	1/1	
		600	ES2016BK	1/1	
		800	ES2018BK	1/1	
	1200	1000	ES2010BK	1/1	
		400	ES2024BK	1/1	
		500	ES2025BK	1/1	
		600	ES2026BK	1/1	
	1600	800	ES2028BK	1/1	
		500	ES2075BK	1/1	
		600	ES2076BK	1/1	
		800	ES2078BK	1/1	
2200	1000	400	ES2214BK	1/1	
		500	ES2215BK	1/1	
		600	ES2216BK	1/1	
		800	ES2218BK	1/1	
	1200	1000	ES2210BK	1/1	
		400	ES2224BK	1/1	
		500	ES2225BK	1/1	
		600	ES2226BK	1/1	
	1600	800	ES2228BK	1/1	
		500	ES2275BK	1/1	
		600	ES2276BK	1/1	
		800	ES2279BK	1/1	

Examples of configuration and technical characteristics at page 2-118.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinets with double blind door with overlapping closure on intermediate upright

Structure with removable roof complete with double blind door and rear panel, plinth H=100mm made up of four angle pieces. The versions with double door include a pair of crosspieces mounted in depth and an intermediate upright (removable) for door closure. The cabinets 1200/1600mm wide include the intermediate plinth.

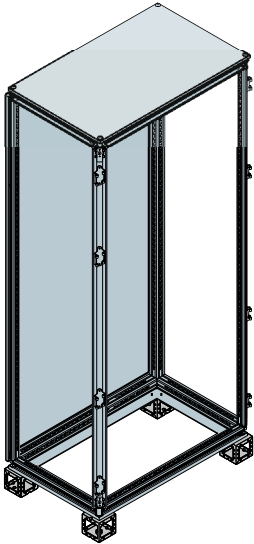
To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Code	Package/ No. of pieces	
H	W	D			
1800	1000	400	ES1814K	1/1	
		500	ES1815K	1/1	
		600	ES1816K	1/1	
		800	ES1818K	1/1	
		1000	ES1810K	1/1	
	1200	400	ES1824K	1/1	
		500	ES1827K	1/1	
		600	ES1826K	1/1	
		800	ES1828K	1/1	
		1600	500	ES1875K	1/1
			600	ES1876K	1/1
	800		ES1878K	1/1	
	2000	1000	400	ES2014K	1/1
			500	ES2015K	1/1
			600	ES2016K	1/1
800			ES2018K	1/1	
1000			ES2010K	1/1	
1200		400	ES2024K	1/1	
		500	ES2025K	1/1	
		600	ES2026K	1/1	
		800	ES2028K	1/1	
		1600	500	ES2075K	1/1
			600	ES2076K	1/1
800			ES2078K	1/1	
2200		1000	400	ES2214K	1/1
			500	ES2215K	1/1
			600	ES2216K	1/1
	800		ES2218K	1/1	
	1000		ES2210K	1/1	
	1200	400	ES2224K	1/1	
		500	ES2225K	1/1	
		600	ES2226K	1/1	
		800	ES2228K	1/1	
		1600	500	ES2275K	1/1
			600	ES2276K	1/1
	800		ES2279K	1/1	

Examples of configuration and technical characteristics at page 2-118.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinets without front door

Structures with removable roof complete with rear panel, plinth H=100mm made up of four angle pieces. To be completed with door, plinth flanges, cable entry flanges and side panels.

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1800	600	400	ES1864SPK	1/1	
		500	ES1865SPK	1/1	
		600	ES1866SPK	1/1	
	800	400	ES1884SPK	1/1	
		600	ES1886SPK	1/1	
		600	ES1886SPK	1/1	
2000	600	400	ES2064SPK	1/1	
		500	ES2065SPK	1/1	
		600	ES2066SPK	1/1	
	800	400	ES2084SPK	1/1	
		500	ES2085SPK	1/1	
		600	ES2086SPK	1/1	
		600	ES2086SPK	1/1	
		800	ES2089SPK	1/1	

For the codes listed, the Custom Made Service (assembly of accessories/special painting/special drilling) is not provided.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinet with glazed door

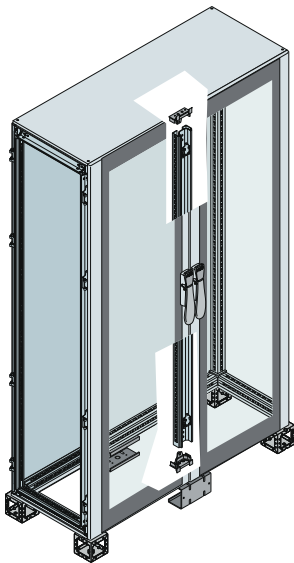
Structure with removable roof, complete with glazed door and rear panel, plinth H=100mm consisting of four angle pieces.

To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1400	600	400		1STQ005355B0000	1/1
		800	300	1STQ005354B0000	1/1
			400		1STQ005356B0000
1600	600	400		1STQ005375B0000	1/1
	800	400		1STQ005376B0000	1/1
1800	600	400		ES1864VK	1/1
		500		ES1865VK	1/1
		600		ES1866VK	1/1
		800		ES1868VK	1/1
		1000		ES1860VK	1/1
	800	400		ES1884VK	1/1
		500		ES1885VK	1/1
		600		ES1886VK	1/1
		800		ES1888VK	1/1
		1000		ES1880VK	1/1
	1000	400		ES1804VK	1/1
		500		ES1805VK	1/1
		600		ES1806VK	1/1
		800		ES1808VK	1/1
		1000		ES1800VK	1/1
	2000	600	400		ES2064VK
500				ES2065VK	1/1
600				ES2066VK	1/1
800				ES2068VK	1/1
1000				ES2060VK	1/1
800		400		ES2084VK	1/1
		500		ES2085VK	1/1
		600		ES2086VK	1/1
		800		ES2088VK	1/1
		1000		ES2080VK	1/1
1000		400		ES2004VK	1/1
		500		ES2005VK	1/1
		600		ES2006VK	1/1
		800		ES2008VK	1/1
		1000		ES2000VK	1/1
2200		600	400		ES2264VK
	500			ES2265VK	1/1
	600			ES2266VK	1/1
	800			ES2268VK	1/1
	1000			ES2260VK	1/1
	800	400		ES2284VK	1/1
		500		ES2285VK	1/1
		600		ES2286VK	1/1
		800		ES2288VK	1/1
		1000		ES2280VK	1/1
	1000	400		ES2204VK	1/1
		500		ES2205VK	1/1
		600		ES2206VK	1/1
		800		ES2208VK	1/1
		1000		ES2200VK	1/1

## IS2 Enclosures

Ordering codes - Pre-assembled structures



### Cabinets with double glazed door with overlapping closure on intermediate upright

Structure with removable roof complete with glazed door and rear panel, plinth H=100mm made up of six angle pieces. The versions with double door include a pair of crosspieces mounted in depth and an intermediate upright (removable) for door closure.

To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1800	1200	400	ES1824VK	1/1	
		500	ES1825VK	1/1	
		600	ES1826VK	1/1	
		800	ES1828VK	1/1	
2000	1200	400	ES2024VK	1/1	
		500	ES2025VK	1/1	
		600	ES2026VK	1/1	
		800	ES2028VK	1/1	
2200	1200	400	ES2224VK	1/1	
		500	ES2225VK	1/1	
		600	ES2226VK	1/1	
		800	ES2228VK	1/1	



## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Blind door cabinets with internal cable container W=200-400mm

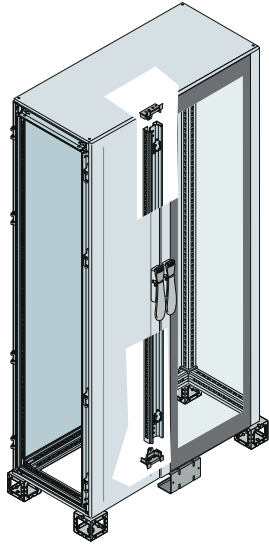
Structure with removable roof, complete with blind door + cable container door, upright, intermediate crosspiece and rear panel, plinth H=100mm consisting of four angle pieces. The cabinets with 1200mm width include the intermediate plinth. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Internal cable container (mm)	Code	Package/ No. of pieces	
H	W	D	W			
1800	800	400	200	ES1884FV2K	1/1	
		500		ES1885FV2K	1/1	
		600		ES1886FV2K	1/1	
		800		ES1888FV2K	1/1	
	1000	400		ES1804FV2K	1/1	
		500		ES1805FV2K	1/1	
		600		ES1806FV2K	1/1	
		800		ES1808FV2K	1/1	
	1000		400	400	ES1804FV4K	1/1
			500		ES1805FV4K	1/1
			600		ES1806FV4K	1/1
			800		ES1808FV4K	1/1
	1200		400		ES1824FV4K	1/1
			500		ES1825FV4K	1/1
			600		ES1826FV4K	1/1
			800		ES1828FV4K	1/1
2000	800	400	200	ES2084FV2K	1/1	
		500		ES2085FV2K	1/1	
		600		ES2086FV2K	1/1	
		800		ES2088FV2K	1/1	
	1000		400		ES2004FV2K	1/1
			500		ES2005FV2K	1/1
			600		ES2006FV2K	1/1
			800		ES2008FV2K	1/1
	1000		400	400	ES2004FV4K	1/1
			500		ES2005FV4K	1/1
			600		ES2006FV4K	1/1
			800		ES2008FV4K	1/1
	1200		400		ES2024FV4K	1/1
			500		ES2025FV4K	1/1
			600		ES2026FV4K	1/1
			800		ES2028FV4K	1/1
2200	800	400	200	ES2284FV2K	1/1	
		500		ES2285FV2K	1/1	
		600		ES2286FV2K	1/1	
		800		ES2288FV2K	1/1	
	1000		400		ES2204FV2K	1/1
			500		ES2205FV2K	1/1
			600		ES2206FV2K	1/1
			800		ES2208FV2K	1/1
	1000		400	400	ES2204FV4K	1/1
			500		ES2205FV4K	1/1
			600		ES2206FV4K	1/1
			800		ES2208FV4K	1/1
	1200		400		ES2224FV4K	1/1
			500		ES2225FV4K	1/1
			600		ES2226FV4K	1/1
			800		ES2228FV4K	1/1

The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering or enclose a drawing.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Glazed door cabinets with cable container W=200-400mm

Structure with removable roof, complete with glazed door + cable container door, upright, intermediate crosspiece and rear panel, plinth H=100mm consisting of four angle pieces.

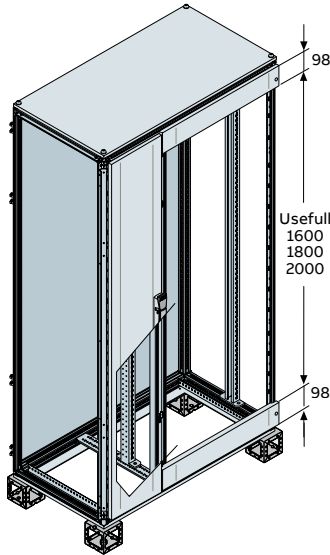
The cabinets with 1200mm width include the intermediate plinth. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Internal cable container (mm)	Code	Package/ No. of pieces
H	W	D	W		
1800	800	400	200	ES1884VC2K	1/1
		500		ES1885VC2K	1/1
		600		ES1886VC2K	1/1
		800		ES1888VC2K	1/1
	1000	400		ES1804VC2K	1/1
		500		ES1805VC2K	1/1
		600		ES1806VC2K	1/1
		800		ES1808VC2K	1/1
	1000	400	400	ES1804VC4K	1/1
			500	ES1805VC4K	1/1
			600	ES1806VC4K	1/1
			800	ES1808VC4K	1/1
	1200	400	400	ES1824VC4K	1/1
			500	ES1825VC4K	1/1
			600	ES1826VC4K	1/1
			800	ES1828VC4K	1/1
2000	800	400	200	ES2084VC2K	1/1
		500		ES2085VC2K	1/1
		600		ES2086VC2K	1/1
		800		ES2088VC2K	1/1
	1000	400		ES2004VC2K	1/1
		500		ES2005VC2K	1/1
		600		ES2006VC2K	1/1
		800		ES2008VC2K	1/1
	1000	400	400	ES2004VC4K	1/1
			500	ES2005VC4K	1/1
			600	ES2006VC4K	1/1
			800	ES2008VC4K	1/1
	1200	400	400	ES2024VC4K	1/1
			500	ES2025VC4K	1/1
			600	ES2026VC4K	1/1
			800	ES2028VC4K	1/1
2200	800	400	200	ES2284VC2K	1/1
		500		ES2285VC2K	1/1
		600		ES2286VC2K	1/1
		800		ES2288VC2K	1/1
	1000	400		ES2204VC2K	1/1
		500		ES2205VC2K	1/1
		600		ES2206VC2K	1/1
		800		ES2208VC2K	1/1
	1000	400	400	ES2204VC4K	1/1
			500	ES2205VC4K	1/1
			600	ES2206VC4K	1/1
			800	ES2208VC4K	1/1
	1200	400	400	ES2224VC4K	1/1
			500	ES2225VC4K	1/1
			600	ES2226VC4K	1/1
			800	ES2228VC4K	1/1

The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering or enclose a drawing.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinets for configuration with compartments

Pre-assembled self-supporting structure made of galvanised steel, consisting of a closed section drilled with 25mm pitch preset for mounting the compartment cubicles and partial doors. Removable roof, plinth H=100mm (consisting of four angle pieces 2,5mm), complete with rear panel. The structures with internal compartment W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key. The structures with internal compartment W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), fixed handle with double tongue key. Both versions are complete with removable intermediate upright and pair of top/bottom crosspieces and uprights. The useful dimension is always 200mm less than the total height of the enclosure. To be completed with plinth flanges, cable entry flanges and side panels. Compensation panels H=100mm are included in the supply. Maximum segregation Form 3a.

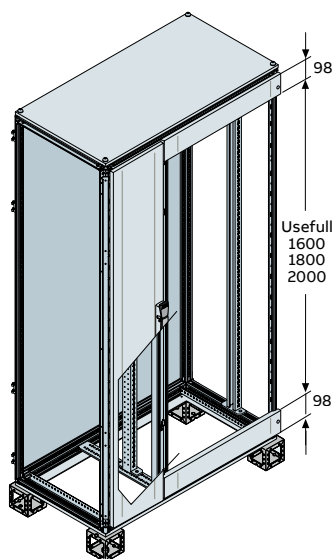
Dimensions (mm)			Internal cable container* (mm)	Code	Package/ No. of pieces
H	W	D	W		
1800	400	600	-	ES1864MFK	1/1
		800	-	ES1884MFK	1/1
		800	200	ES1884MF2K	1/1
		1000	200	ES1804MF2K	1/1
		1000	400	ES1804MF4K	1/1
		1200	400	ES1824MF4K	1/1
	500	600	-	ES1865MFK	1/1
		800	-	ES1885MFK	1/1
		800	200	ES1885MF2K	1/1
		1000	200	ES1805MF2K	1/1
		1000	400	ES1805MF4K	1/1
		1200	400	ES1825MF4K	1/1
	600	600	-	ES1866MFK	1/1
		800	-	ES1886MFK	1/1
		800	200	ES1886MF2K	1/1
		1000	200	ES1806MF2K	1/1
		1000	400	ES1806MF4K	1/1
		1200	400	ES1826MF4K	1/1
	800	600	-	ES1868MFK	1/1
		800	-	ES1888MFK	1/1
800		200	ES1888MF2K	1/1	
1000		200	ES1808MF2K	1/1	
1000		400	ES1808MF4K	1/1	
1200		400	ES1828MF4K	1/1	
1000	600	-	ES1860MFK	1/1	
	800	-	ES1880MFK	1/1	
	800	200	ES1880MF2K	1/1	
	1000	200	ES1800MF2K	1/1	
	1000	400	ES1800MF4K	1/1	
	1200	400	ES2024MF4K	1/1	
2000	400	600	-	ES2064MFK	1/1
		800	-	ES2084MFK	1/1
		800	200	ES2084MF2K	1/1
		1000	200	ES2004MF2K	1/1
		1000	400	ES2004MF4K	1/1
		1200	400	ES2024MF4K	1/1
	500	600	-	ES2065MFK	1/1
		800	-	ES2085MFK	1/1
		800	200	ES2085MF2K	1/1
		1000	200	ES2005MF2K	1/1
		1000	400	ES2005MF4K	1/1
		1200	400	ES2025MF4K	1/1

CONTINUED

\* Versions inclusive of pair of crosspieces mounted depth-wise and of intermediate upright for door closure. The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering. Examples of configuration and technical characteristics at page 2-120.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinets for configuration with compartments

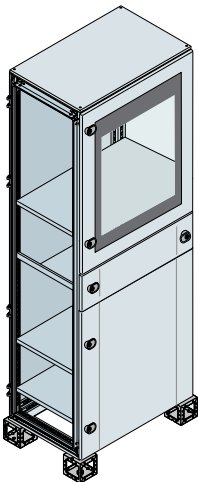
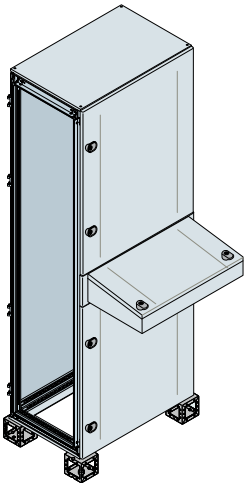
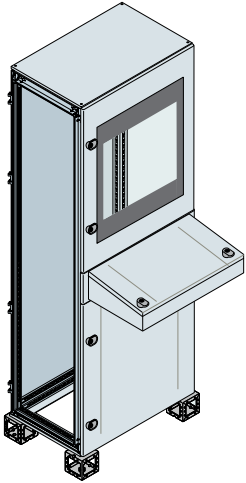
Pre-assembled self-supporting structure made of galvanised steel, consisting of a closed section drilled with 25mm pitch preset for mounting the compartment cubicles and partial doors. Removable roof, plinth H=100mm (consisting of four angle pieces 2,5mm), complete with rear panel. The structures with internal compartment W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key. The structures with internal compartment W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), fixed handle with double tongue key. Both versions are complete with removable intermediate upright and pair of top/bottom crosspieces and uprights. The useful dimension is always 200mm less than the total height of the enclosure. To be completed with plinth flanges, cable entry flanges and side panels. Compensation panels H=100mm are included in the supply. Maximum segregation Form 3a.

Dimensions (mm)			Internal cable container* (mm)	Code	Package/ No. of pieces	
H	W	D	W			
2000	600	600	-	ES2066MFK	1/1	
		800	-	ES2086MFK	1/1	
		800	200	ES2086MF2K	1/1	
		1000	200	ES2006MF2K	1/1	
		1000	400	ES2006MF4K	1/1	
			1200	400	ES2026MF4K	1/1
		800	600	-	ES2068MFK	1/1
			800	-	ES2088MFK	1/1
			800	200	ES2088MF2K	1/1
			1000	200	ES2008MF2K	1/1
			1000	400	ES2008MF4K	1/1
			1200	400	ES2028MF4K	1/1
		1000	600	-	ES2060MFK	1/1
			800	-	ES2080MFK	1/1
			800	200	ES2080MF2K	1/1
	1000		200	ES2000MF2K	1/1	
	1000		400	ES2000MF4K	1/1	
2200	400	600	-	ES2264MFK	1/1	
		800	-	ES2284MFK	1/1	
		800	200	ES2284MF2K	1/1	
		1000	200	ES2204MF2K	1/1	
		1000	400	ES2204MF4K	1/1	
			1200	400	ES2224MF4K	1/1
		500	600	-	ES2265MFK	1/1
			800	-	ES2285MFK	1/1
			800	200	ES2285MF2K	1/1
			1000	200	ES2205MF2K	1/1
			1000	400	ES2205MF4K	1/1
			1200	400	ES2225MF4K	1/1
		600	600	-	ES2266MFK	1/1
			800	-	ES2286MFK	1/1
			800	200	ES2286MF2K	1/1
			1000	200	ES2206MF2K	1/1
			1000	400	ES2206MF4K	1/1
			1200	400	ES2226MF4K	1/1
		800	600	-	ES2268MFK	1/1
			800	-	ES2288MFK	1/1
			800	200	ES2288MF2K	1/1
			1000	200	ES2208MF2K	1/1
			1000	400	ES2208MF4K	1/1
			1200	400	ES2228MF4K	1/1
		1000	600	-	ES2260MFK	1/1
			800	-	ES2280MFK	1/1
			800	200	ES2281MF2K	1/1
			1000	200	ES2200MF2K	1/1
			1000	400	ES2200MF4K	1/1

\* Versions inclusive of pair of crosspieces mounted depth-wise and of intermediate upright for door closure. The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering. Examples of configuration and technical characteristics at page 2-120.

## IS2 Enclosures

### Ordering codes - Pre-assembled structures



#### Cabinets with console IP41

Structure with removable roof, plinth H=100mm consisting of four angle pieces, complete with glazed or blind top door + blind bottom door, console, rear panel and box with key. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
<b>Cabinet with glazed upper door with console</b>					
1800	600	400	ES1864LK	1/1	
		500	ES1865LK	1/1	
		600	ES1866LK *	1/1	
		800	ES1868LK	1/1	
800	400	400	ES1884LK	1/1	
		500	ES1885LK *	1/1	
		600	ES1886LK *	1/1	
		800	ES1888LK *	1/1	
<b>Cabinet with blind upper door with console</b>					
1800	600	400	ES1864CK *	1/1	
		500	ES1865CK *	1/1	
		600	ES1866CK *	1/1	
		800	ES1868CK *	1/1	
800	400	400	ES1884CK *	1/1	
		500	ES1885CK *	1/1	
		600	ES1886CK *	1/1	
		800	ES1888CK *	1/1	
<b>Cabinet with blind upper door with console</b>					
2000	600	400	ES2064CK *	1/1	
		500	ES2065CK *	1/1	
		600	ES2066CK *	1/1	
		800	ES2068CK *	1/1	
800	400	400	ES2084CK *	1/1	
		500	ES2085CK *	1/1	
		600	ES2086CK *	1/1	
		800	ES2088CK *	1/1	

For glass dimension, please refer to the table at page 8-20.

\* Available until the end of 2020.

#### PC cabinets IP41

Structure with removable roof, plinth H=100mm consisting of four angle pieces, complete with glazed top door (able to hold monitors up to 17") + blind bottom door, slide-out computer shelf and rear panel. Complete with 4 shelves for monitor, keyboard, printer and paper. To be completed with plinth flanges, cable entry flanges and side panels

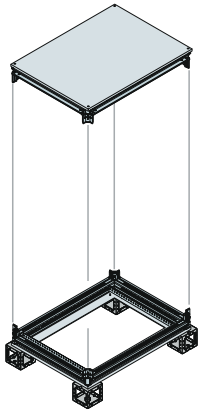
Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1800	600	600	ES1866PCK *	1/1	
		800	ES1868PCK *	1/1	
2000	600	600	ES2066PCK *	1/1	
		800	ES2068PCK *	1/1	

\* Available until the end of 2020.

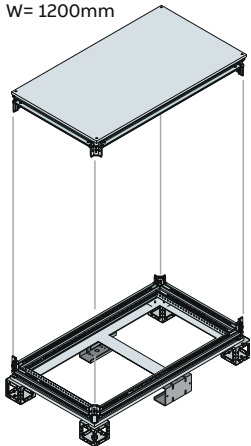
## IS2 Enclosures

### Ordering codes - Kit versions structures

W= 400 ÷ 1000mm



W= 1200mm




W= 300mm



#### Base/Top

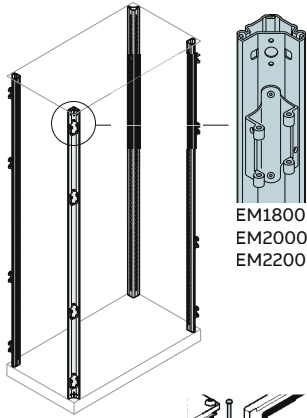
Base, top and plinth angle pieces H=100mm, to be completed with cable entry flanges and plinth flanges. The bases with 1200mm width include the intermediate plinth. The bases W= 300mm are suitable for constructing side container for cable connection and include bottom closure flanges.

Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
W	D			
<b>STRUCTURE - Base/Top</b>				
400	400	EK4040KN	✓	1/1
	500	EK4050KN	✓	1/1
	600	EK4060KN	✓	1/1
	800	EK4080KN	✓	1/1
	1000	EK4010KN	✓	1/1
600	300	1STQ005317B0000	✓	1/1
	400	EK6040KN	✓	1/1
	500	EK6050KN	✓	1/1
	600	EK6060KN	✓	1/1
	800	EK6080KN	✓	1/1
800	1000	EK6010KN	✓	1/1
	300	1STQ005318B0000	✓	1/1
	400	EK8040KN	✓	1/1
	500	EK8050KN	✓	1/1
	600	EK8060KN	✓	1/1
1000	800	EK8080KN	✓	1/1
	1000	EK8010KN	✓	1/1
	300	1STQ005319B0000	✓	1/1
	400	EK1040KN	✓	1/1
	500	EK1050KN	✓	1/1
1200	600	EK1060KN	✓	1/1
	800	EK1080KN	✓	1/1
	1000	EK1010KN	✓	1/1
	400	EK1240KN	✓	1/1
	500	EK1250KN	✓	1/1
EXTERNAL CABLE CONTAINER - Base/Top	600	EK1260KN	✓	1/1
	800	EK1280KN	✓	1/1
	300	EK3040KN	✓	1/1
300	400	EK3040KN	✓	1/1
	500	EK3050KN	✓	1/1
	600	EK3060KN	✓	1/1
	800	EK3080KN	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

# IS2 Enclosures

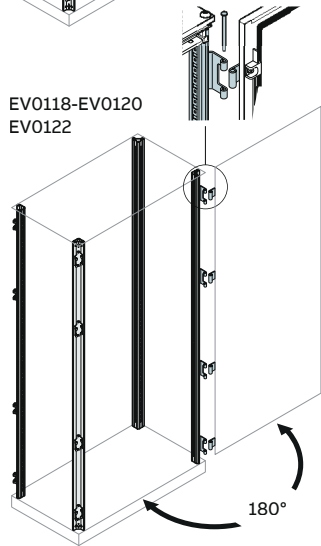
## Ordering codes - Kit versions structures



### Uprights for standard structures

Structure of the closed section type, drilled with 25mm pitch, galvanised, complete with No.4 multi-purpose hinges already mounted.

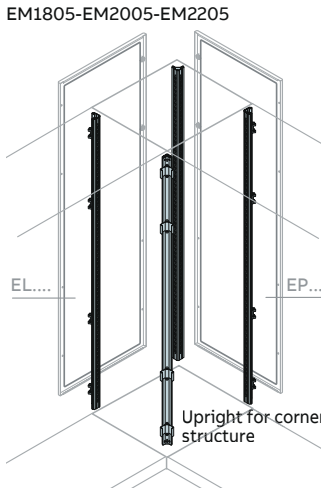
Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Uprights with hinges	1400	EM1400	1/4
Uprights with hinges	1600	EM1600	1/4
Uprights with hinges	1800	EM1800	1/4
Uprights with hinges	2000	EM2000	1/4
Uprights with hinges	2200	EM2200	1/4



### Uprights for structure with hinges for 180° door opening

Mounted on standard base and top, these allow the door to be opened 180° (door to be drilled).

Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Uprights + hinges opening 180°	1800	EV0118	1/4
Uprights + hinges opening 180°	2000	EV0120	1/4
Uprights + hinges opening 180°	2200	EV0122	1/4

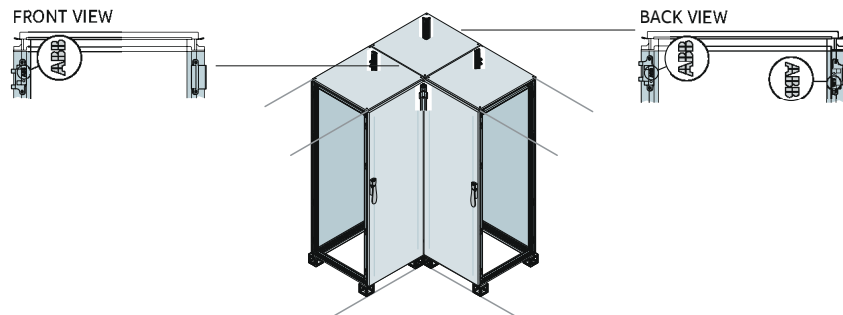


### Uprights for corner structures

Mounted on standard base and top, these allow batteries of corner enclosures to be built.

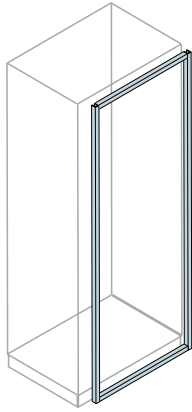
Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Uprights for corner structure + standard uprights	1800	EV0118	1/4
Uprights for corner structure + 3 standard uprights	2000	EV0120	1/4
Uprights for corner structure + 3 standard uprights	2200	EV0122	1/4

For a composition of a corner structure please order: No.1 EK..OK (base/top); No.1 EM..05 (upright for corner structure + 3 standard uprights); No.1 EP... (rear panel); No. 1 EL.... (side panel).



## IS2 Enclosures

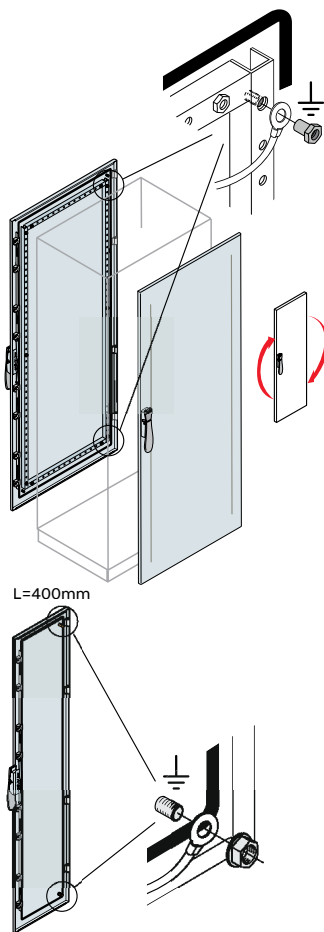
### Ordering codes - Kit versions structures



#### Horizontal/Vertical profiles


Aesthetic profiles. In place of standard doors.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
<b>Aesthetic horizontal profiles</b>				
No.2 aesthetic horizontal profiles	400		EP0400H	1/1
No.2 aesthetic horizontal profiles	600		EP0600H	1/1
No.2 aesthetic horizontal profiles	800		EP0800H	1/1
No.2 aesthetic horizontal profiles	1000		EP1000H	1/1
<b>Aesthetic vertical profiles</b>				
No.2 aesthetic vertical profiles	1800		EP1800V	1/1
No.2 aesthetic vertical profiles	2000		EP2000V	1/1
No.2 aesthetic vertical profiles	2200		EP2200V	1/1



#### IP65 blind front or rear doors

Door made of 2,00mm thick sheet, fitted with polyurethane gasket, complete with handle with double tongue keys (interchangeable with other types of inserts, see page 2-108). Reversible (standard hinging on the right), with 4 closure points and complete with internal reinforcement frame and earthing pins.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Blind door	1400	400	EC1440K		1/1
Blind door		600	EC1460K		1/1
Blind door		800	EC1480K		1/1
Blind door		1000	1STQ005321B0000		1/1
Blind door	1600	400	EC1640K		1/1
Blind door		600	EC1660K		1/1
Blind door		800	EC1680K		1/1
Blind door		1000	EC1610K		1/1
Blind front/rear door external cable container	1800	300	EC1831K <sup>(1)</sup>	✓	1/1
Blind door		400	EC1840K <sup>(1)</sup>	✓	1/1
Blind door		600	EC1860K	✓	1/1
Blind door		800	EC1880K	✓	1/1
Blind door		1000	EC1810K	✓	1/1
Blind front/rear door external cable container	2000	300	EC2031K <sup>(1)</sup>	✓	1/1
Blind door		400	EC2040K <sup>(1)</sup>	✓	1/1
Blind door		600	EC2060K	✓	1/1
Blind door		800	EC2080K	✓	1/1
Blind door		1000	EC2012K	✓	1/1
Blind front/rear door external cable container	2200	300	EC2232K <sup>(1)</sup>	✓	1/1
Blind door		400	EC2240K <sup>(1)</sup>	✓	1/1
Blind door		600	EC2260K	✓	1/1
Blind door		800	EC2280K	✓	1/1
Blind door		1000	EC2210K	✓	1/1

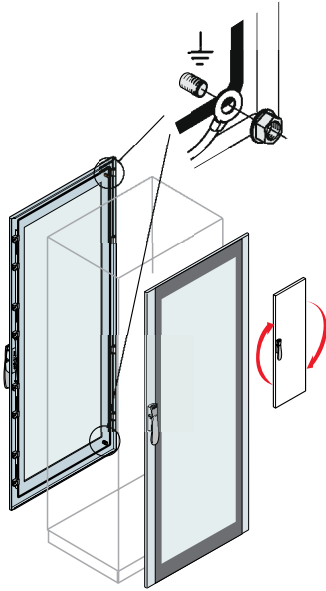
<sup>(1)</sup> The versions with W=300/400mm do not foresee the internal reinforcement frame.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.




## IS2 Enclosures

### Ordering codes - Kit versions structures

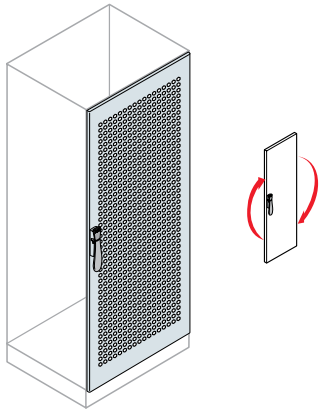


#### IP65 glazed front or rear doors

Door made of 2,00 thick sheet with 4 mm thick safety glass, fitted with polyurethane gasket, complete with handle with double tongue key (interchangeable with other types of inserts, see page 2-108). Reversible (standard hinging on the right) with 4 closing points and complete with earthing pins.


Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Glazed door	1400	600	1STQ005328B0000		1/1
Glazed door		800	1STQ005329B0000		1/1
Glazed door	1600	600	1STQ005330B0000		1/1
Glazed door		800	1STQ005331B0000		1/1
Glazed door	1800	600	ET1860K	✓	1/1
Glazed door		800	ET1880K	✓	1/1
Glazed door		1000	ET1810K	✓	1/1
Glazed door	2000	600	ET2060K	✓	1/1
Glazed door		800	ET2080K	✓	1/1
Glazed door		1000	ET2010K	✓	1/1
Glazed door	2200	600	ET2260K	✓	1/1
Glazed door		800	ET2280K	✓	1/1
Glazed door		1000	ET2211K	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



#### Aerated door IP20

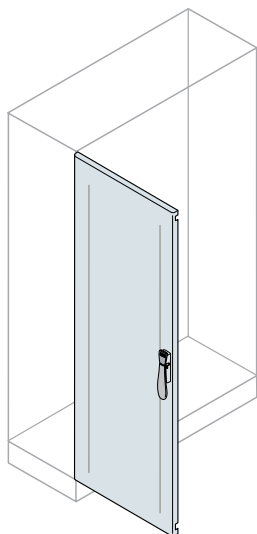
Aerated door made of 1,2mm thick sheet, fitted with polyurethane gasket, complete with handle with double tongue key (interchangeable with other types of inserts, see pag. 2-108). Reversible, with 4 closing points and complete with internal reinforcement frame and earthing pins.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Aerated door for server cabinet	1800	800	EC1882	✓	1/1
Aerated door for server cabinet	2000		EC2082	✓	1/1
Aerated door for server cabinet	2200		EC2282	✓	1/1
Aerated door for server cabinet with 180° opening	1800	800	EC1884	✓	1/1
Aerated door for server cabinet with 180° opening	2000		EC2084	✓	1/1
Aerated door for server cabinet with 180° opening	2200		EC2284	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures


### Ordering codes - Kit versions structures



#### Door with special profile for making cabinets with double doors

The selection of the double door structure in the IS2 enclosures (kit version) can be realised in two different ways:

- without intermediate upright, using one door with a special profile and one door with overlapping closure.
- with intermediate upright, using two doors with special profile closing on intermediate upright.

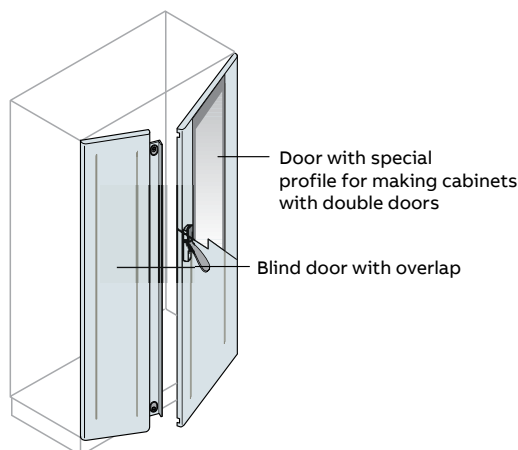
Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Blind door for cable container	1800	200	EC1880VC2K <sup>(1)</sup>		1/1
Blind door for cable container	2000		EC2080VC2K <sup>(1)</sup>		1/1
Blind door for cable container	2200		EC2280VC2K <sup>(1)</sup>		1/1
Blind door for cable container	1800	400	EC1880VC4K <sup>(1)</sup>	✓	1/1
Blind door for cable container	2000		EC2080VC4K <sup>(1)</sup>	✓	1/1
Blind door for cable container	2200		EC2280VC4K <sup>(1)</sup>	✓	1/1
Blind door	1800	500	EC1880FC5K <sup>(1)</sup>	✓	1/1
Blind door	2000		EC2080FC5K <sup>(1)</sup>	✓	1/1
Blind door	2200		EC2280FC5K <sup>(1)</sup>	✓	1/1
Blind door	1400	600	EC1480FC6K		1/1
Blind door	1600		EC1680FC6K		1/1
Blind door	1800		EC1880FC6K	✓	1/1
Blind door	2000		EC2080FC6K	✓	1/1
Blind door	2200		EC2280FC6K	✓	1/1
Blind door	1800	800	EC1880FC8K	✓	1/1
Blind door	2000		EC2080FC8K	✓	1/1
Blind door	2200		EC2280FC8K	✓	1/1
Glazed door	1800	600	EC1880FV6K	✓	1/1
Glazed door	2000		EC2080FV6K	✓	1/1
Glazed door	2200		EC2280FV6K	✓	1/1
Glazed door	1800	800	EC1880FV8K	✓	1/1
Glazed door	2000		EC2080FV8K	✓	1/1
Glazed door	2200		EC2280FV8K	✓	1/1

<sup>(1)</sup> The versions with W=200/300/400/500mm do not foresee the internal reinforcement frame.

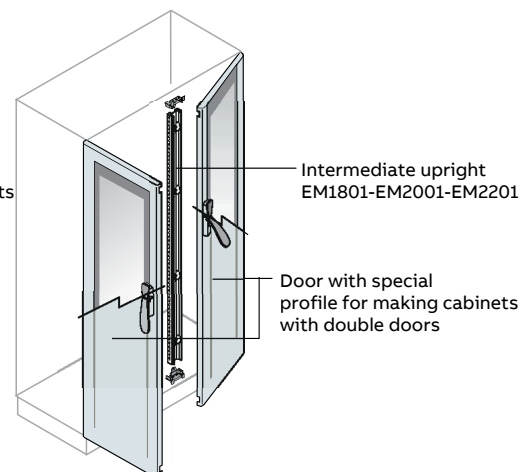
✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

#### Example of double door enclosures

##### Doors with overlapping closure

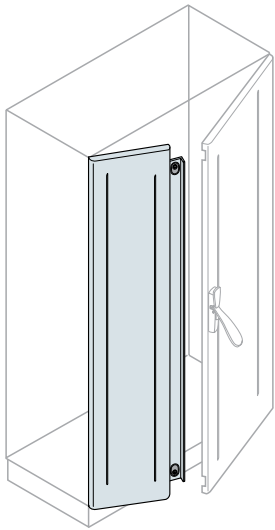


##### Doors closing on intermediate upright




## IS2 Enclosures

### Ordering codes - Kit versions structures



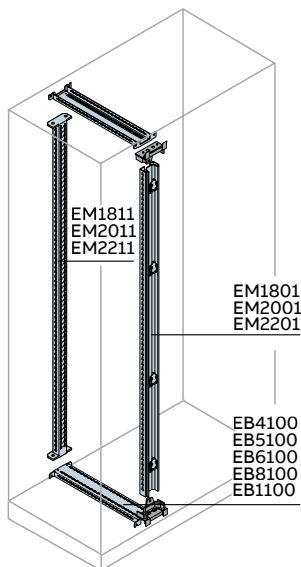
#### Blind door with overlap

Blind door with overlap side by side with other blind or glazed door without overlap. Allows the enclosure with double door to be made without the use of the upright.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
<b>Blind door with overlap for double door version/ replacement rear panel with door</b>					
Blind door with overlap	1400	600	ED1412SK		1/1
Blind door with overlap	1600	600	ED1612SK		1/1
Blind door with overlap	1800	200	ED1802SK <sup>(1)</sup>		1/1
Blind door with overlap		400	ED1804SK <sup>(1)</sup>	ED1808DPKM	1/1
Blind door with overlap		500	ED1810SK <sup>(1)</sup>	ED1810DPKM	1/1
Blind door with overlap		600	ED1812SK	ED1812DPKM	1/1
Blind door with overlap		800	ED1816SK	ED1816DPKM	1/1
Blind door with overlap	2000	200	ED2002SK <sup>(1)</sup>		1/1
Blind door with overlap		400	ED2004SK <sup>(1)</sup>	ED2008DPKM	1/1
Blind door with overlap		500	ED2010SK <sup>(1)</sup>	ED2010DPKM	1/1
Blind door with overlap		600	ED2012SK	ED2012DPKM	1/1
Blind door with overlap		800	ED2016SK	ED2016DPKM	1/1
Blind door with overlap	2200	200	ED2202SK <sup>(1)</sup>		1/1
Blind door with overlap		400	ED2204SK <sup>(1)</sup>	ED2208DPKM	1/1
Blind door with overlap		500	ED2210SK <sup>(1)</sup>	ED2210DPKM	1/1
Blind door with overlap		600	ED2212SK	ED2212DPKM	1/1
Blind door with overlap		800	ED2216SK	ED2216DPKM	1/1

<sup>(1)</sup> The versions with W=200/400/500mm do not foresee the internal reinforcement frame.

The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



#### Intermediate uprights for cable container or double door

These allow the structure to be divided into two parts.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Intermediate upright for structure	1800		EM1801	1/1
Intermediate upright for structure	2000		EM2001	1/1
Intermediate upright for structure	2200		EM2201	1/1
Intermediate rear upright for cable container	1800		EM1811 <sup>(1)</sup>	1/1
Intermediate rear upright for cable container	2000		EM2011 <sup>(1)</sup>	1/1
Intermediate rear upright for cable container	2200		EM2211 <sup>(1)</sup>	1/1

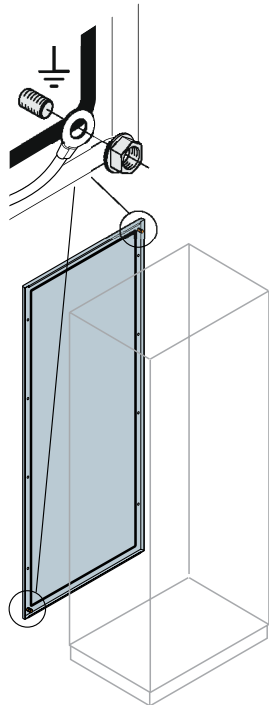
<sup>(1)</sup> To be fixed directly on the structure.

#### To be fixed directly on the structure.

Description	Dimensions (mm)		Package/ No. of pieces
	D		
Pair of crosspieces for base	400		EB4100
Pair of crosspieces for base	500		EB5100
Pair of crosspieces for base	600		EB6100
Pair of crosspieces for base	800		EB8100
Pair of crosspieces for base	1000		EB1100


## IS2 Enclosures

### Ordering codes - Kit versions structures



#### IP65 Rear panels

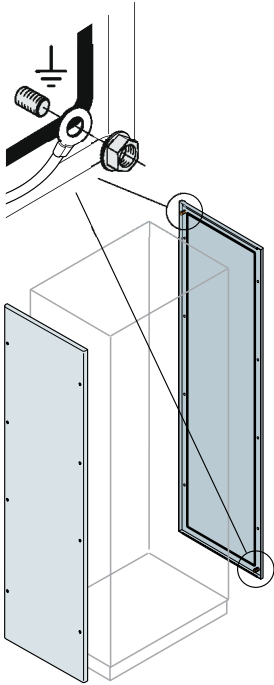
Panel made of 1,5mm thick sheet, fitted with polyurethane basket, complete with earthing pins. Can be replaced with front/rear doors.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Rear panel external cable container	1800	300	EP1830K		1/1
Rear panel external cable container	2000		EP2030K		1/1
Rear panel external cable container	2200		EP2231K		1/1
Rear panel	1400	400	EP1440K		1/1
Rear panel		600	EP1460K		1/1
Rear panel		800	EP1480K		1/1
Rear panel		1000	1STQ005320B0000		1/1
Rear panel		1200	EP1412K		1/1
Rear panel	1600	400	EP1640K	✓	1/1
Rear panel		600	EP1660K	✓	1/1
Rear panel		800	EP1680K	✓	1/1
Rear panel		1000	EP1610K	✓	1/1
Rear panel		1200	EP1612K	✓	1/1
Rear panel	1800	300	EP1830K	✓	1/1
Rear panel		400	EP1840K	✓	1/1
Rear panel		600	EP1860K	✓	1/1
Rear panel		800	EP1880K	✓	1/1
Rear panel		1000	EP1811K	✓	1/1
Rear panel		1200	EP1812K	✓	1/1
Rear panel	2000	300	EP2030K	✓	1/1
Rear panel		400	EP2041K	✓	1/1
Rear panel		600	EP2060K	✓	1/1
Rear panel		800	EP2080K	✓	1/1
Rear panel		1000	EP2010K	✓	1/1
Rear panel		1200	EP2012K	✓	1/1
Rear panel	2200	300	EP2231K	✓	1/1
Rear panel		400	EP2240K	✓	1/1
Rear panel		600	EP2260K	✓	1/1
Rear panel		800	EP2280K	✓	1/1
Rear panel		1000	EP2210K	✓	1/1
Rear panel		1200	EP2212K	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.


## IS2 Enclosures

### Ordering codes - Kit versions structures



#### IP65 Side blind panels

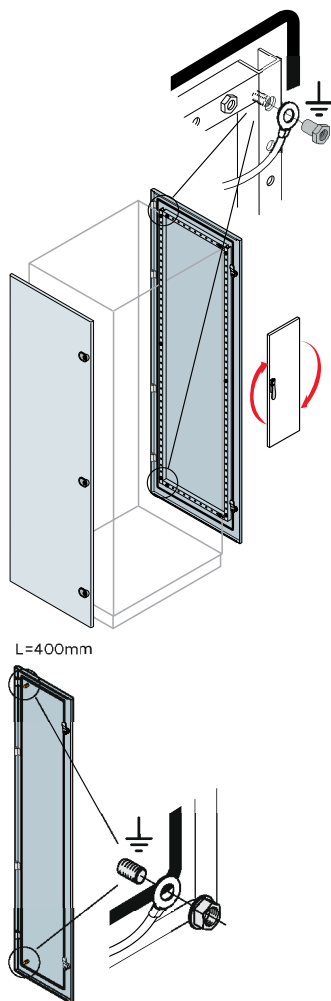
Panel made of 1,5mm thick sheet, fitted with polyurethane gasket, complete with earthing pins. Replaceable with side doors.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
<b>No. 1 panel</b>					
No. 1 Blind side panel	1800	400	EL1841K		1/1
No. 1 Blind side panel		500	EL1851K		1/1
No. 1 Blind side panel		600	EL1861K		1/1
No. 1 Blind side panel		800	EL1881K		1/1
No. 1 Blind side panel		1000	EL1811K		1/1
No. 1 Blind side panel	2000	400	EL2041K		1/1
No. 1 Blind side panel		500	EL2051K		1/1
No. 1 Blind side panel		600	EL2061K		1/1
No. 1 Blind side panel		800	EL2081K		1/1
No. 1 Blind side panel		1000	EL2011K		1/1
No. 1 Blind side panel	2200	400	EL2241K		1/1
No. 1 Blind side panel		500	EL2251K		1/1
No. 1 Blind side panel		600	EL2261K		1/1
No. 1 Blind side panel		800	EL2281K		1/1
No. 1 Blind side panel		1000	EL2211K		1/1
<b>No. 2 panels</b>					
No. 2 Blind side panels	1400	300	1STQ005322B0000		1/2
No. 2 Blind side panels		400	EL1440K		1/2
No. 2 Blind side panels		500	1STQ005323B0000		1/2
No. 2 Blind side panels		600	EL1460K		1/2
No. 2 Blind side panels		800	EL1480K		1/2
No. 2 Blind side panels	1600	300	1STQ005324B0000		1/2
No. 2 Blind side panels		400	1STQ005325B0000		1/2
No. 2 Blind side panels		500	EL1650K		1/2
No. 2 Blind side panels		600	EL1660K		1/2
No. 2 Blind side panels		800	EL1680K		1/2
No. 2 Blind side panels		1000	EL1610K		1/2
No. 2 Blind side panels	1800	400	EL1840K	✓	1/2
No. 2 Blind side panels		500	EL1850K	✓	1/2
No. 2 Blind side panels		600	EL1860K	✓	1/2
No. 2 Blind side panels		800	EL1880K	✓	1/2
No. 2 Blind side panels		1000	EL1810K	✓	1/2
No. 2 Blind side panels	2000	400	EL2040K	✓	1/2
No. 2 Blind side panels		500	EL2050K	✓	1/2
No. 2 Blind side panels		600	EL2060K	✓	1/2
No. 2 Blind side panels		800	EL2080K	✓	1/2
No. 2 Blind side panels		1000	EL2012K	✓	1/2
No. 2 Blind side panels	2200	400	EL2240K	✓	1/2
No. 2 Blind side panels		500	EL2250K	✓	1/2
No. 2 Blind side panels		600	EL2260K	✓	1/2
No. 2 Blind side panels		800	EL2280K	✓	1/2
No. 2 Blind side panels		1000	EL2210K	✓	1/2

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.


## IS2 Enclosures

### Ordering codes - Completion of structures



#### IP65 blind side doors

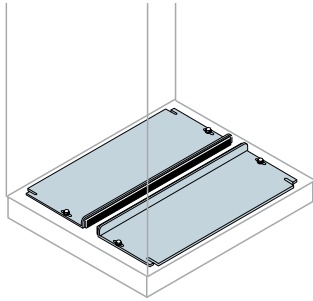
Reversible 1,5mm thick sheet door, fitted with polyurethane gasket, complete with n 2 box with key-with double tongue (interchangeable with other types of inserts, see page 2-108) complete with internal reinforcement frame

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	D			
Blind side door	1800	400	EC1841K	✓	1/1
Blind side door		500	EC1851K	✓	1/1
Blind side door		600	EC1861K	✓	1/1
Blind side door		800	EC1881K	✓	1/1
Blind side door		1000	EC1811K	✓	1/1
Blind side door	2000	400	EC2041K	✓	1/1
Blind side door		500	EC2051K	✓	1/1
Blind side door		600	EC2061K	✓	1/1
Blind side door		800	EC2081K	✓	1/1
Blind side door		1000	EC2011K	✓	1/1
Blind side door	2200	400	EC2241K	✓	1/1
Blind side door		500	EC2251K	✓	1/1
Blind side door		600	EC2261K	✓	1/1
Blind side door		800	EC2281K	✓	1/1
Blind side door		1000	EC2211K	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.


## IS2 Enclosures

### Ordering codes - Completion of structures



#### Sliding cable entry flanges IP40

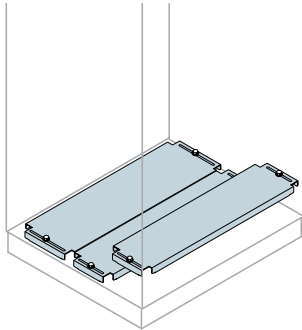
The thickness for the sliding flanges is 2,0 mm.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	W	D			
Sliding cable entry flanges IP40	400	400	EF4040	✓	1/1
Sliding cable entry flanges IP40	600		EF6040	✓	1/1
Sliding cable entry flanges IP40	800		EF8040	✓	1/1
Sliding cable entry flanges IP40	1000		EF1040	✓	1/1
Sliding cable entry flanges IP40	1200		2xEF6040	✓	1/1
Sliding cable entry flanges IP40	1600		2xEF8040	✓	1/1
Sliding cable entry flanges IP40	400	500	EF4050	✓	1/1
Sliding cable entry flanges IP40	600		EF6050	✓	1/1
Sliding cable entry flanges IP40	800		EF8050	✓	1/1
Sliding cable entry flanges IP40	1000		EF1053	✓	1/1
Sliding cable entry flanges IP40	1200		2xEF6050	✓	1/1
Sliding cable entry flanges IP40	1600		2xEF8050	✓	1/1
Sliding cable entry flanges IP40	400	600	EF4060	✓	1/1
Sliding cable entry flanges IP40	600		EF6060	✓	1/1
Sliding cable entry flanges IP40	800		EF8060	✓	1/1
Sliding cable entry flanges IP40	1000		EF1060	✓	1/1
Sliding cable entry flanges IP40	1200		2xEF6060	✓	1/1
Sliding cable entry flanges IP40	1600		2xEF8060	✓	1/1
Sliding cable entry flanges IP40	400	800	EF4080	✓	1/1
Sliding cable entry flanges IP40	600		EF6080	✓	1/1
Sliding cable entry flanges IP40	800		EF8080	✓	1/1
Sliding cable entry flanges IP40	1000		EF1080	✓	1/1
Sliding cable entry flanges IP40	1200		2xEF6080	✓	1/1
Sliding cable entry flanges IP40	1600		2xEF8080	✓	1/1
Sliding cable entry flanges IP40	400	1000	EF4010	✓	1/1
Sliding cable entry flanges IP40	600		EF6010	✓	1/1
Sliding cable entry flanges IP40	800		EF8010	✓	1/1
Sliding cable entry flanges IP40	1000		EF1010	✓	1/1
Sliding cable entry flanges IP40	1200		2xEF6010	✓	1/1
Sliding cable entry flanges IP40	1600		2xEF8010	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.


## IS2 Enclosures

### Ordering codes - Completion of structures



#### Built-up cable entry flanges IP40

The thickness for the built-up flanges is 1,5mm.

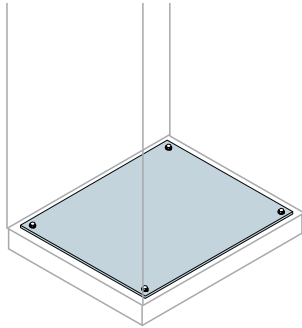
Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	W	D			
Built-up cable entry flanges IP40	400	400	EF4041	✓	1/1
Built-up cable entry flanges IP40	600		EF6041	✓	1/1
Built-up cable entry flanges IP40	800		EF8041	✓	1/1
Built-up cable entry flanges IP40	1000		EF1041	✓	1/1
Built-up cable entry flanges IP40	1200		2xEF6041	✓	1/1
Built-up cable entry flanges IP40	1600		2xEF8041	✓	1/1
Built-up cable entry flanges IP40	400	500	EF4051	✓	1/1
Built-up cable entry flanges IP40	600		EF6051	✓	1/1
Built-up cable entry flanges IP40	800		EF8051	✓	1/1
Built-up cable entry flanges IP40	1000		EF1051	✓	1/1
Built-up cable entry flanges IP40	1200		2xEF6051	✓	1/1
Built-up cable entry flanges IP40	1600		2xEF8051	✓	1/1
Built-up cable entry flanges IP40	400	600	EF4061	✓	1/1
Built-up cable entry flanges IP40	600		EF6061	✓	1/1
Built-up cable entry flanges IP40	800		EF8061	✓	1/1
Built-up cable entry flanges IP40	1000		EF1061	✓	1/1
Built-up cable entry flanges IP40	1200		2xEF6061	✓	1/1
Built-up cable entry flanges IP40	1600		2xEF8061	✓	1/1
Built-up cable entry flanges IP40	400	800	EF4081	✓	1/1
Built-up cable entry flanges IP40	600		EF6081	✓	1/1
Built-up cable entry flanges IP40	800		EF8081	✓	1/1
Built-up cable entry flanges IP40	1000		EF1081	✓	1/1
Built-up cable entry flanges IP40	1200		2xEF6081	✓	1/1
Built-up cable entry flanges IP40	1600		2xEF8081	✓	1/1
Built-up cable entry flanges IP40	400	1000	EF4011	✓	1/1
Built-up cable entry flanges IP40	600		EF6011	✓	1/1
Built-up cable entry flanges IP40	800		EF8011	✓	1/1
Built-up cable entry flanges IP40	1000		EF1011	✓	1/1
Built-up cable entry flanges IP40	1200		2xEF6011	✓	1/1
Built-up cable entry flanges IP40	1600		2xEF8011	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.




## IS2 Enclosures

### Ordering codes - Completion of structures



#### Fixed cable entry flanges IP65

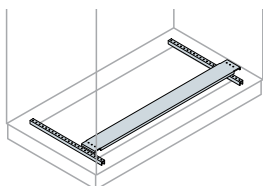
The thickness for the fixed cable entry flanges is 2,0 mm.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	W	D			
Fixed cable entry flanges IP65	600		1STQ005426B0000		1/1
Fixed cable entry flanges IP65	800		1STQ005427B0000		1/1
Fixed cable entry flanges IP65	1000		1STQ005428B0000		1/1
Fixed cable entry flanges IP65	400		EF4042	✓	1/1
Fixed cable entry flanges IP65	600		EF6043	✓	1/1
Fixed cable entry flanges IP65	800		EF8042	✓	1/1
Fixed cable entry flanges IP65	1000		EF1042	✓	1/1
Fixed cable entry flanges IP65	1200		2xEF6043	✓	1/1
Fixed cable entry flanges IP65	1600		2xEF8042	✓	1/1
Fixed cable entry flanges IP65	400		EF4052	✓	1/1
Fixed cable entry flanges IP65	600		EF6052	✓	1/1
Fixed cable entry flanges IP65	800		EF8052	✓	1/1
Fixed cable entry flanges IP65	1000		EF1052	✓	1/1
Fixed cable entry flanges IP65	1200		2xEF6052	✓	1/1
Fixed cable entry flanges IP65	1600		2xEF8052	✓	1/1
Fixed cable entry flanges IP65	400		EF4063	✓	1/1
Fixed cable entry flanges IP65	600		EF6062	✓	1/1
Fixed cable entry flanges IP65	800		EF8062	✓	1/1
Fixed cable entry flanges IP65	1000		EF1062	✓	1/1
Fixed cable entry flanges IP65	1200		2xEF6062	✓	1/1
Fixed cable entry flanges IP65	1600		2xEF8062	✓	1/1
Fixed cable entry flanges IP65	400		EF4082	✓	1/1
Fixed cable entry flanges IP65	600		EF6082	✓	1/1
Fixed cable entry flanges IP65	800		EF8082	✓	1/1
Fixed cable entry flanges IP65	1000		EF1082	✓	1/1
Fixed cable entry flanges IP65	1200		2xEF6082	✓	1/1
Fixed cable entry flanges IP65	1600		2xEF8082	✓	1/1
Fixed cable entry flanges IP65	400		EF4012	✓	1/1
Fixed cable entry flanges IP65	600		EF6012	✓	1/1
Fixed cable entry flanges IP65	800		EF8012	✓	1/1
Fixed cable entry flanges IP65	1000		EF1012	✓	1/1
Fixed cable entry flanges IP65	1200		2xEF6012	✓	1/1
Fixed cable entry flanges IP65	1600		2xEF8012	✓	1/1

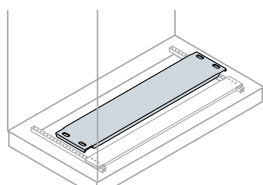
✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures

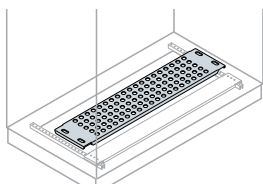
### Ordering codes - Completion of structures



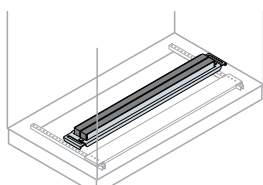
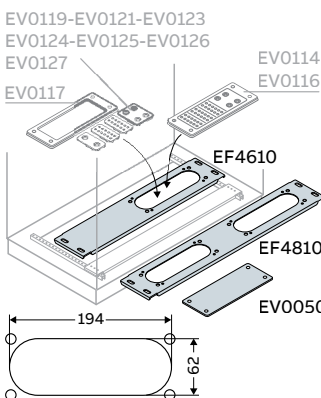
EV0132-EV0133-EV0134  
EV0135-EV0136-EV0137



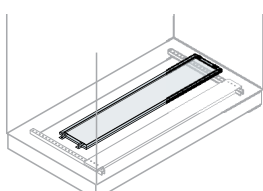
EF2610-EF2810-EF2620-EF2820



EF3610-EF3810



EF6610-EF6810



EF9620-EF9820

#### Modular base plates

Using the modular plates it is possible change the configuration of the base of the enclosure, favoring a high level of customization.

Different solutions are available:

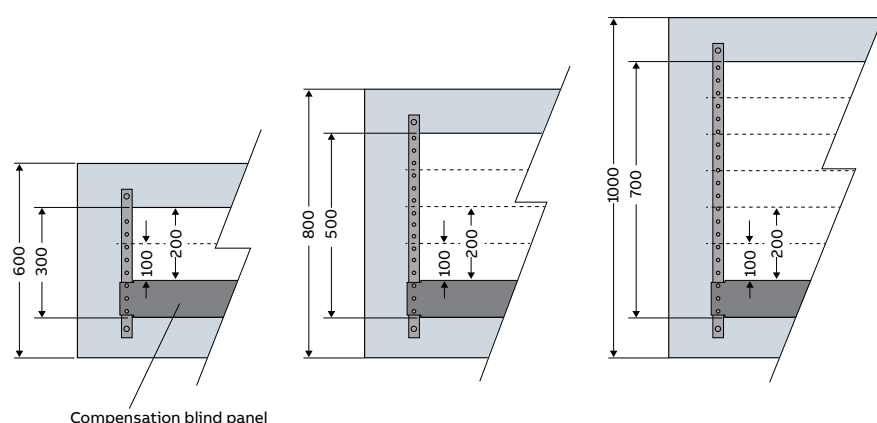
- single blind plate
- single aerated plate
- single plate with plastic cable entry flange
- single plate with gasket for cable entry

To complete the IS2 base with single modular plates it is necessary order the fixing profiles, that are made up of two profile and a compensation blind plate.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
<b>Kit for mounting single modular plate</b>				
Kit for fixing bottom plate	600	600	EV0132	1/1
Kit for fixing bottom plate		800	EV0133	1/1
Kit for fixing bottom plate		1000	EV0134	1/1
Kit for fixing bottom plate	800	600	EV0135	1/1
Kit for fixing bottom plate		800	EV0136	1/1
Kit for fixing bottom plate		1000	EV0137	1/1
<b>Single blind bottom plate</b>				
Single blind bottom plate	600	100	EF2610	1/1
Single blind bottom plate	800		EF2810	1/1
Single blind bottom plate	600	200	EF2620	1/1
Single blind bottom plate	800		EF2820	1/1
<b>Single aerated bottom plate</b>				
Single aerated bottom plate	600	100	EF3610	1/1
Single aerated bottom plate	800		EF3810	1/1
<b>Single bottom plate for cable entry flange</b>				
Single plate 1 cable entry flange	600	100	EF4610	1/1
Single plate 2 cable entry flanges	800		EF4810	1/1
No.1 closure plate			EV0050	1/1
<b>Single bottom plate with gasket</b>				
Single bottom plate with gasket	600	100	EF6610	1/1
Single bottom plate with gasket	800		EF6810	1/1
<b>Single filter bottom plate</b>				
Single filter bottom plate	600	200	EF9620	1/1
Single filter bottom plate	800		EF9820	1/1

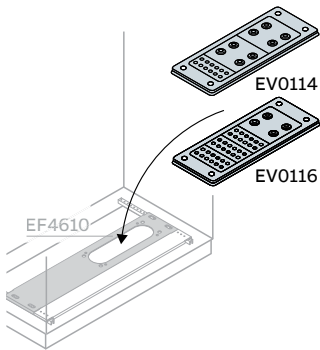
#### Useful space in the base of enclosure

Example: base 600x600mm (LxP): order No.1 kit for mounting single modular plate EV0132 + No.1 EF2610 + No.1 EF4610.



## IS2 Enclosures

### Ordering codes - Completion of structures



#### Modular preconfigured cable entry flange IP65

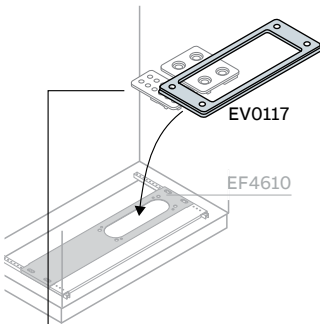
The cable glands allow to install several cables and ensure the protection of the components within the enclosures.

The inserts are equipped with a membrane that can be easily perforated by the cable.

There is the possibility of installing cable glands and flange with clamp.

Colour gray RAL 7035, operating temperature from -20 ° C to +125 ° C, IP65 according to EN 60529 specifications.

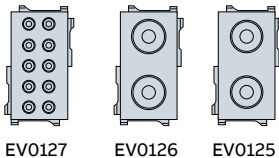
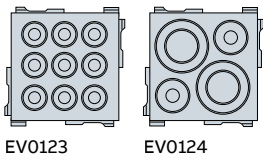
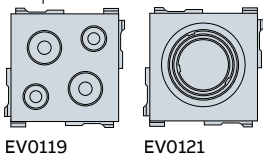
Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
No.10 preconfigured cable entry flanges for 28 cables Ø min/max 7/14 and 10 cables Ø min/max 4/10mm	214	90	EV0114	1/10
No.10 preconfigured cable entry flanges for 28 cables Ø min/max 7/14 and 10 cables Ø min/max 4/10mm	214	90	EV0116	1/10



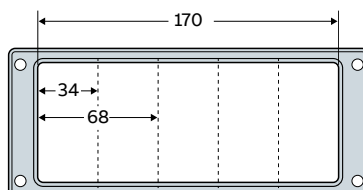
#### Cable entry flanges configurable with single inserts IP65

Thanks to the frame and to the inserts available, it is possible to customize the flange according to the size, quantity of the cables to be installed. The inserts are equipped with a membrane that can be easily perforated by the cable without the need to use any tool. There is the possibility of installing cable frames and cable with clamp. Colour gray RAL 7035, operating temperature from -20 ° C to +125 ° C, IP 65 according to EN 60529 specifications.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
<b>Configurable modular flange</b>				
No.1 Cable entry gland frame to configure with single insert	214	90	EV0117	1/1
<b>Inserts for configurable modular flange</b>				
No.10 inserts 68x68mm for entry No.4 cables, 2 cables M25 (Ø min/max 8/17mm) 2 Cables M16 (Ø min/max 5/10mm)	68	68	EV0119	1/10
No.10 inserts 68x68mm for entry No.1 cable M32 / M40 / M50	68	68	EV0121	1/10
No.10 inserts 68x68mm for entry No.9 cables (Ø min/max 7/14mm)	68	68	EV0123	1/10
No.10 inserts 68x68mm for entry No.4 cables, 2 Ø min/max 10/20 e 2 Ø min/max 20/30mm	68	68	EV0124	1/10
No.10 inserts 34x68mm for entry No.2 cables Ø min/max 8/17mm	34	68	EV0125	1/10
No.10 inserts 34x68mm for entry No.2 cables Ø min/max 6/13mm	34	68	EV0126	1/10
No.10 inserts 34x68mm for entry No.10 cables Ø min/max 4/10mm	34	68	EV0127	1/10

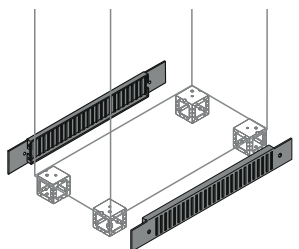
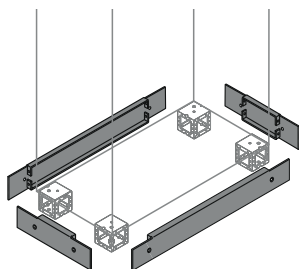


#### Useful space for inserts



## IS2 Enclosures

### Ordering codes - Completion of structures

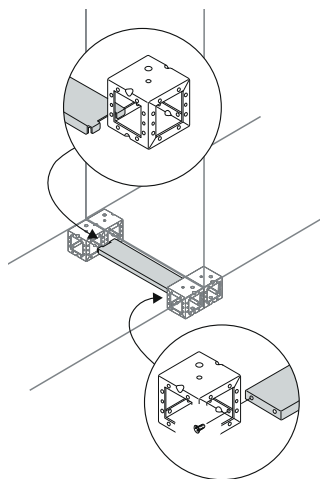


#### Flanges front/rear H=100mm

Removable flanges made of 1,5mm sheet painted orange peel RAL 7012 colour (not self-supporting).

Description	Dimensions (mm)		Code	Package/No. of pieces
	H	W		
<b>Blind flanges</b>				
Pair of side flanges	100	300	ZN3000	1/2
Pair of side flanges		400	ZN4000	1/2
Pair of side flanges		500	ZN5000	1/2
Pair of flanges, front/back		600	ZN6000	1/2
Pair of flanges, front/back		800	ZN8000	1/2
Pair of flanges, front/back		1000	ZN1000	1/2
Pair of flanges, front/back		1200	ZN1200	1/2
Pair of flanges, front/back		1200	2xZN6000*	1/2
Pair of flanges, front/back		1600	2xZN8000*	1/2
<b>Aerated flanges</b>				
Pair of aerated flanges, front/back	100	600	ZN0006	1/2
Pair of aerated flanges, front/back		800	ZN0008	1/2
Pair of aerated flanges, front/back		1000	ZN0010	1/2
Pair of aerated flanges, front/back		1200	2xZN0006*	1/2
Pair of aerated flanges, front/back		1600	2xZN0008*	1/2

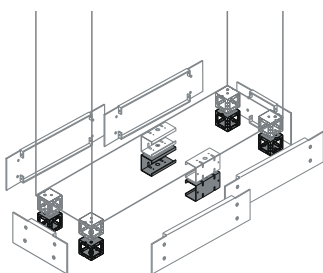
\* IS2 structures W=1200/1600mm are provided with intermediate plinth.



#### Flange in depth for cable supporting and structure reinforcement.

The flange in depth for cable supporting and structure reinforcement has the purpose of holding the cables from the ground in the enclosure batteries during handling and to create a link between the front plinth and rear plinth of the batteries, in order to reinforce the structure.

Description	Dimensions (mm)		Package/No. of pieces
	W	Code	
Support flange for cable	400	ZN4001	1/1
Support flange for cable	500	ZN5001	1/1
Support flange for cable	600	ZN6001	1/1
Support flange for cable	800	ZN8001	1/1
Support flange for cable	1000	ZN1001	1/1



#### Additional Plinth

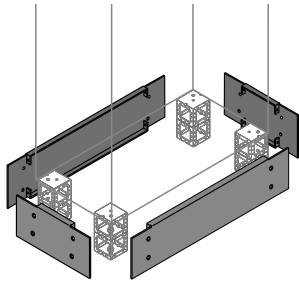
To obtain a plinth 200mm high, order a kit of angle pieces H=100mm to be added to the angle pieces already present on the structure. Complete with 2 covering flanges (H=100mm) for each side of the structure.

Description	Dimensions (mm)		Custom Made Service	Package/No. of pieces
	H	Code		
No. 4 angle pieces 2,5mm thickness	100	ZN1010	✓	1/4
No. 2 angle pieces 2,5mm thickness for intermediate plinth	100	ZN1020	✓	1/2

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures

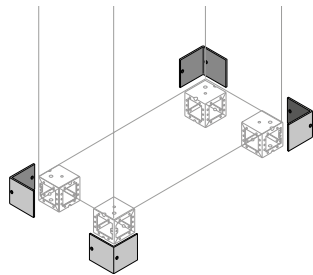
### Ordering codes - Completion of structures



#### Plinth Covering Flanges H=200mm

Removable flanges made of 1,5mm thick sheet painted orange peel RAL 7012 colour (not self-supporting).

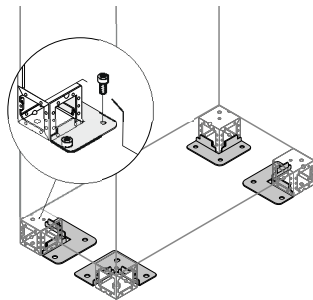
Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
<b>Blind flanges H=200mm for additional plinth</b>				
Pair of flanges, front/back/side	200	400	ZN4002	1/2
Pair of flanges side		500	ZN5002	1/2
Pair of flanges, front/back/side		600	ZN6002	1/2
Pair of flanges, front/back/side		800	ZN8002	1/2
Pair of flanges, front/back/side		1000	ZN1002	1/2
Pair of flanges, front/back		1200	2xZN6002	1/2
Pair of flanges, front/back		1600	2xZN8002	1/2



#### Covers "L" shaped for single plinth

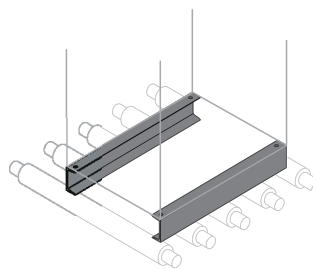
It allows to cover the sides of the plinth in case of non-use of plinth flanges.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
No.4 cover for plinth	100		ZN1040	1/4



#### Brackets for floor fixing

Description	Code	Package/ No. of pieces



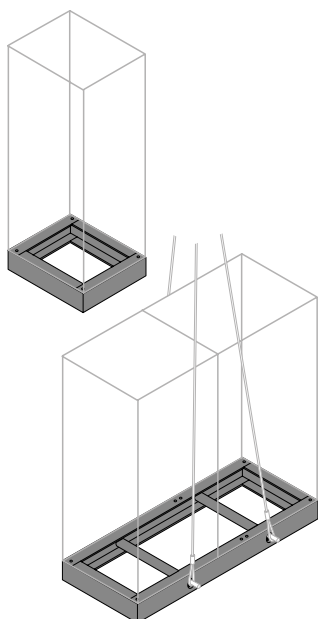
#### Reinforced plinth H=100mm

Shaped steel beam, to be mounted in replacement of the angle pieces. Allows handling by means of rollers. The lateral covering flanges cannot be mounted. Grey RAL 7012 colour and with 2,5mm thickness.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
No.2 steel beams H=100mm	400	100	EZ4001	1/2
No.2 steel beams H=100mm	600	100	EZ6001	1/2
No.2 steel beams H=100mm	800	100	EZ8001	1/2
No.2 steel beams H=100mm	1000	100	EZ1001	1/2
No.2 steel beams H=100mm	1200	100	EZ1201	1/2
No.2 steel beams H=100mm	1600	100	EZ1601	1/2

## IS2 Enclosures

### Ordering codes - Completion of structures




#### Single plinth for side by side enclosures

Plinth in a single piece fitted with reinforcement tubes mounted in depth, allows lifting of side-by-side enclosures and those fitted with particularly heavy accessory components. Height: 100/200mm, length up to 6 metres.

Grey RAL 7012 colour orange peel.

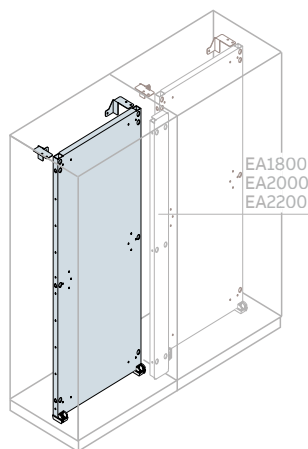
The number of reinforcement tubes depends on the width of the battery (see page 8-38). 2,5mm thickness.

Available also for single structures but without reinforcement profiles.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H				
Single plinth	100		ZU1100		1/1
Single plinth	200		ZU2100		1/1
Single plinth	100		ZU1101	✓	1/1
Single plinth	200		ZU2101	✓	1/1


- The drawing of the front view of the enclosure battery must always be enclosed, specifying the width, depth and sequence of the enclosure for each column.
- Unit of measurement for the order: METRE.
- Maximum length of 6m.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



#### Standard back plates

Galvanised 2,5mm steel plate, can be inserted from the front (standard) or from the side with tracks (to be ordered separately). Complete with supports for sliding and fixing. Possibility of being placed side by side and further to the rear by means of the special kits.

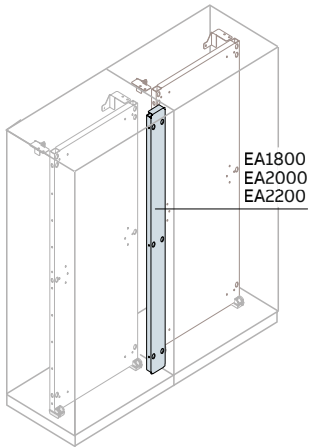
Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Mounting plate	1400	400	EA1440		1/1
Mounting plate		600	EA1460		1/1
Mounting plate		800	EA1480		1/1
Mounting plate		1000	EA1411		1/1
Mounting plate		1200	EA1412		1/1
Mounting plate	1600	400	EA1640		1/1
Mounting plate		600	EA1616		1/1
Mounting plate		800	EA1619		1/1
Mounting plate		1000	EA1610		1/1
Mounting plate		1200	EA1612		1/1
Mounting plate	1800	400	EA1841	✓	1/1
Mounting plate		600	EA1860	✓	1/1
Mounting plate		800	EA1880	✓	1/1
Mounting plate		1000	EA1810	✓	1/1
Mounting plate		1200	EA1812	✓	1/1
Mounting plate	2000	400	EA2040	✓	1/1
Mounting plate		600	EA2060	✓	1/1
Mounting plate		800	EA2080	✓	1/1
Mounting plate		1000	EA2010	✓ *	1/1
Mounting plate		1200	EA2013	✓	1/1
Mounting plate	2200	400	EA2240	✓	1/1
Mounting plate		600	EA2260	✓	1/1
Mounting plate		800	EA2280	✓ *	1/1
Mounting plate		1000	EA2210	✓ *	1/1
Mounting plate		1200	EA2212	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

\* Available until the end of 2020.

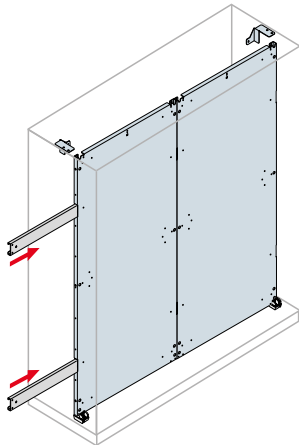
## IS2 Enclosures

### Ordering codes - Completion of structures



#### Kit for joining plates

Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Kit for joining plates	1800	EA1800	1/1
Kit for joining plates	2000	EA2000	1/1
Kit for joining plates	2200	EA2200	1/1

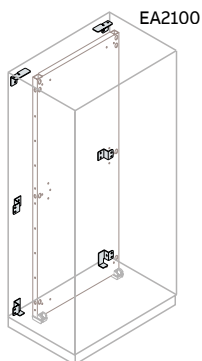


#### Back plates for structure W=1600mm

In order to obtain a standard plate W=1600mm order No.2 plates W=800mm and relative reinforcement kit as per the drawing.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
No.1 plate for plate construction W=1600mm	1800	800	1STQ006248B0000	1/1
No.1 plate for plate construction W=1600mm	2000	800	1STQ006249B0000	1/1
N°1 piastra per realizzazione piastra L=1600	2200	800	1STQ006250B0000	1/1
Reinforcement profile + accessories + screws plate for 800+800 backplate*			1STQ006251B0000	1/1

\* Mandatory in order to fix both parts for all the three heights.  
Remember to order 2x 1STQ...6248/6249/6250 plates w=800mm in order to have both pieces 800+800.



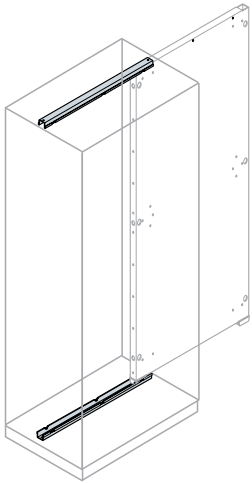
#### Kit for moving back plates back

Description	Code	Package/ No. of pieces
Kit for moving back plates back H=1400-1600-1800-2000-2200mm	EA2100*	1/1
Kit for mounting back plates at reduced height	EA2102**	1/1
No.6 intermediate reinforcements for fixing back plate	EA2117	1/1

\*This kit can be used to fix the standard mounting plate on the side of the enclosure.  
\*\*For mounting of partial back plates it's necessary to order EB...crosspieces (see page 2-70).

## IS2 Enclosures

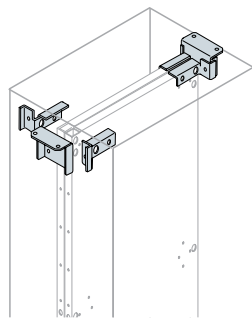
### Ordering codes - Completion of structures



#### Tracks for plate insertion

These allow lateral insertion of the standard and oversized mounting plates. They consist of two sections (one top and one bottom one).

Description	Dimensions (mm)		Package/ No. of pieces
	W	Code	
Tracks for plate insertion	400	EA0400	1/2
Tracks for plate insertion	600	EA0600	1/2
Tracks for plate insertion	800	EA0802	1/2
Tracks for plate insertion	1000	EA1000	1/2
Tracks for plate insertion	1200	EA1200	1/2
Tracks for plate insertion	1600	EA1602	1/2



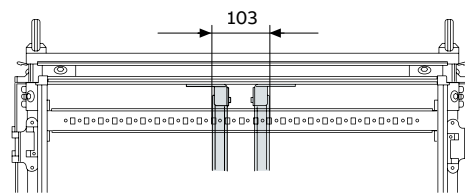
#### Kit back to back

This kit allows to pair two standard plates with a small footprint.

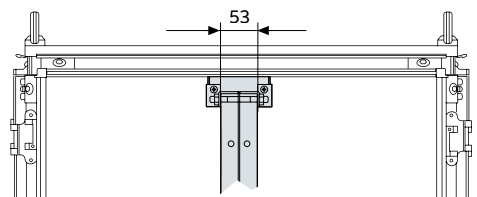
Description	Code	Package/ No. of pieces
Kit standard plates back to back	EA2118	1/1

#### Back to back application

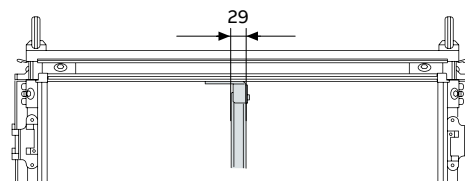
Traditional side by side: standard plate + standard plate.



Side by side with EA2118 : standard plate + standard plate + kit EA2118.



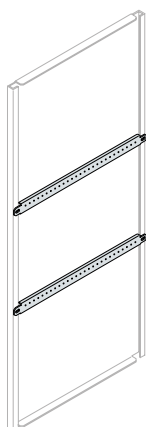
#### Single standard plate + opposed mounting plate






## IS2 Enclosures

### Ordering codes - Completion of structures

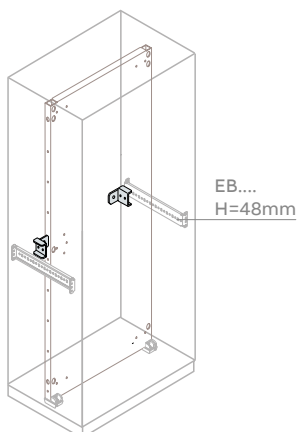


#### Back plate reinforcement sections

Galvanised 2,00mm thick sections to be used as reinforcement on the standard back plates, recommended in the case of particularly heavy components fixed onto the back plate.

Description	Dimensions (mm)		 Custom Made Service	Package/ No. of pieces
	W	Code		
No.2 plate horizontal reinforcement	600	EA6003	✓	1/2
No.2 plate horizontal reinforcement	800	EA8003	✓	1/2
No.2 plate horizontal reinforcement	1000	EA1003	✓	1/2
No.2 plate horizontal reinforcement	1200	EA1203	✓	1/2
No.2 plate horizontal reinforcement	1600	EA1603	✓	1/2
No.6 plate fixing intermediate reinforcement		EA2117		1/2

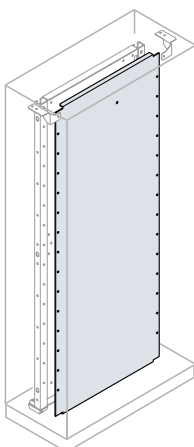
✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



#### Kit for fixing back plate in the middle

This allows further fixing of the back plate in the middle as well, in addition to side crosspieces H=48mm (see page 2-63).

Description	Code	Package/ No. of pieces
Kit for fixing standard back plate	EA2115	1/1



#### Opposed mounting plate

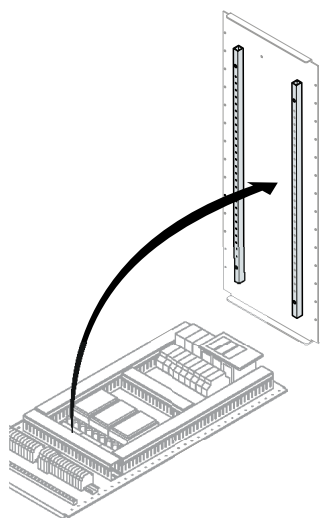
Mounting plate with extremely small depth dimensions, able to mount the components on both sides (front and rear). Made of 2,5mm galvanized steel they can be inserted in the front and/or in the rear. Complete with supports for sliding and fixing.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Opposed mounting plate	1400	600	EA5461	1/1
Opposed mounting plate		800	EA5480	1/1
Opposed mounting plate		1000	EA5413	1/1
Opposed mounting plate	1600	600	EA5616	1/1
Opposed mounting plate		800	EA5620	1/1
Opposed mounting plate		800	EA5610	1/1
Opposed mounting plate	1800	600	EA5861	1/1
Opposed mounting plate		800	EA5883	1/1
Opposed mounting plate		1000	EA5811	1/1
Opposed mounting plate		1200	EA5822	1/1
Opposed mounting plate	2000	600	EA5063	1/1
Opposed mounting plate		800	EA5083	1/1
Opposed mounting plate		1000	EA5011	1/1
Opposed mounting plate		1200	EA5022	1/1
Opposed mounting plate	2200	600	EA5360	1/1
Opposed mounting plate		800	EA5380 *	1/1
Opposed mounting plate		1000	EA5310 *	1/1
Opposed mounting plate		1200	EA5322	1/1

\* Available until the end of 2020.

## IS2 Enclosures

### Ordering codes - Completion of structures

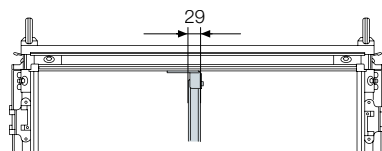


#### Opposed mounting plate reinforcement sections

The reinforcement sections allow both vertical and horizontal opposite mounting plate cabling. The sections are fixed to the plate using special pressure pins, without drilling it.

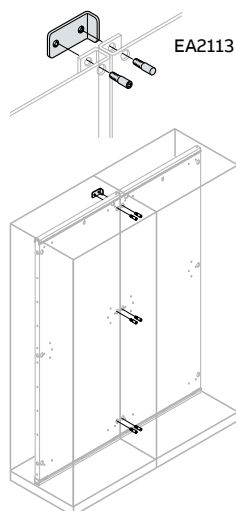
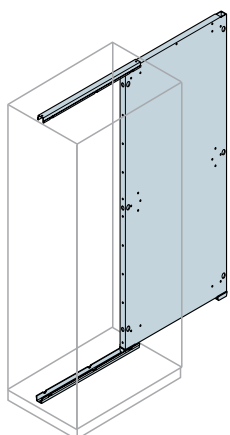
Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
No.2 reinforcements for opposed plate	1800	EA0018	1/2
No.2 reinforcements for opposed plate	2000	EA0020	1/2
No.2 reinforcements for opposed plate	2200	EA0022	1/2


#### Single standard plate + opposite mounting plate



#### Oversized mounting plates

Galvanised 2,5mm steel plate, can only be inserted laterally by sliding, by means of balls with tracks included in the Kit. Possibility of being placed side by side by means of the special Kit.



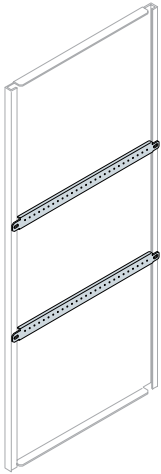
Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Oversized mounting plates+tracks	1400	400	EA1540		1/1
Oversized mounting plates+tracks		600	EA1560		1/1
Oversized mounting plates+tracks		800	EA1580		1/1
Oversized mounting plates+tracks		1200	EA1512		1/1
Oversized mounting plates+tracks	1600	500	EA1740		1/1
Oversized mounting plates+tracks		600	EA1760		1/1
Oversized mounting plates+tracks		800	EA1780		1/1
Oversized mounting plates+tracks		1000	EA1710		1/1
Oversized mounting plates+tracks		1200	EA1712		1/1
Oversized mounting plates+tracks	1800	400	EA1940	✓	1/1
Oversized mounting plates+tracks		600	EA1960	✓	1/1
Oversized mounting plates+tracks		800	EA1981	✓	1/1
Oversized mounting plates+tracks		1000	EA1910	✓	1/1
Oversized mounting plates+tracks		1200	EA1912	✓	1/1
No. 2 oversized mounting plates + track + joining kit		1600	EA1916	✓	1/1
Oversized mounting plates+tracks	2000	400	EA2140	✓	1/1
Oversized mounting plates+tracks		600	EA2161	✓	1/1
Oversized mounting plates+tracks		800	EA2180	✓*	1/1
Oversized mounting plates+tracks		1000	EA2110	✓	1/1
Oversized mounting plates+tracks		1200	EA2112	✓*	1/1
No. 2 oversized mounting plates + track + joining kit		1600	EA2116	✓	1/1
Oversized mounting plates+tracks	2200	400	EA2340	✓	1/1
Oversized mounting plates+tracks		600	EA2360	✓	1/1
Oversized mounting plates+tracks		800	EA2380	✓	1/1
Oversized mounting plates+tracks		1000	EA2310	✓	1/1
Oversized mounting plates+tracks		1200	EA2312	✓	1/1
No. 2 oversized mounting plates + track + joining kit		1600	EA2316	✓	1/1
Kit for joining oversized plates			EA2113		1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

\* Available until the end of 2020.


## IS2 Enclosures

### Ordering codes - Completion of structures

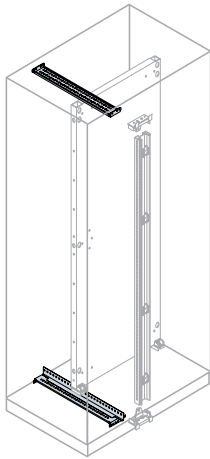


#### Overized back plate reinforcement sections

Galvanised 2,00 thick sections to be used as reinforcement on the standard back plates, recommended in the case of particularly heavy components fixed onto the back plate.

Description	Dimensions (mm)		 Custom Made Service	Package/ No. of pieces
	W	Code		
No.2 oversized plate horizontal reinforcement	600	EA6002	✓	1/2
No.2 oversized plate horizontal reinforcement	800	EA8002	✓	1/2
No.2 oversized plate horizontal reinforcement	1000	EA1002	✓	1/2
No.2 oversized plate horizontal reinforcement	1200	EA1202	✓	1/2

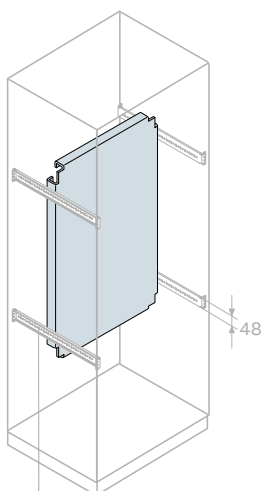
✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



#### Sliding guides for insertion of back plate with partial width

These allow insertion from the front of the standard back plate in structures with cable container or in the case of partial use of the structure with double door by means of a special sliding track inserted into the bottom crosspiece.

Description	Dimensions (mm)		Package/ No. of pieces
	D	Code	
No.1 sliding guide and No.1 crosspiece of back plate	400	EB4101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	500	EB5101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	600	EB6101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	800	EB8101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	1000	EB1101	1/2



EB0400-EB0500-EB0600-EB0800  
EB1000-EB1200

#### Partial back plates

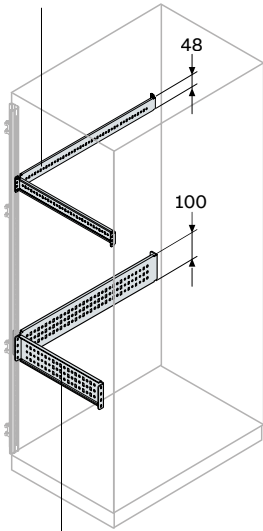
Galvanised 2,5mm thick back plates. These are fixed onto the crosspieces H=48mm. (EB....).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Partial back plate	200	600	EA2062	1/1
Partial back plate	300		EA3061	1/1
Partial back plate	400		EA4061	1/1
Partial back plate	500		EA5061	1/1
Partial back plate	600		EA6061	1/1
Partial back plate	800		EA8061	1/1
Partial back plate	1000		EA1061	1/1
Partial back plate	200	800	EA2081	1/1
Partial back plate	300		EA3081	1/1
Partial back plate	400		EA4081	1/1
Partial back plate	500		EA5081	1/1
Partial back plate	600		EA6081	1/1
Partial back plate	800		EA8081	1/1
Partial back plate	1000		EA1081	1/1
Kit for moving partial back plates back			EA2101	1/1

## IS2 Enclosures

### Ordering codes - Completion of structures


EB0400-EB0500-EB0600-EB0800  
EB1000-EB1200



EB0440-EB0550-EB0660-EB0880  
EB1010-EB1220

#### Crosspieces for fixing accessories and partial plate

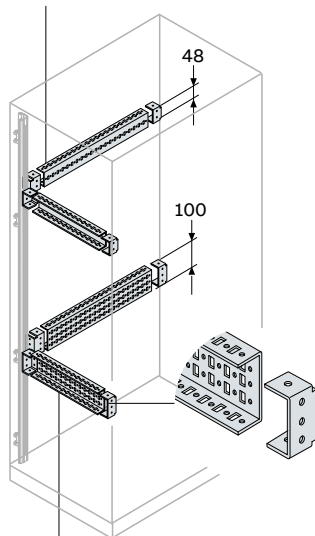
Multi-purpose galvanised 2,00mm thick sheet crosspieces, these are fixed between the up-rights and allow the partial back plates and busbar holders for flat and shaped section bus-bars (to be drilled).

Description	Dimensions (mm)		 Custom Made Service	Package/ No. of pieces
	W/D	Code		
<b>Crosspieces H=48mm for fixing accessories and partial plate</b>				
No.2 crosspieces back/side	400	EB0400	✓	1/2
No.2 crosspieces back	500	EB0500	✓	1/2
No.2 crosspieces back/side	600	EB0600	✓	1/2
No.2 crosspieces back/side	800	EB0800 <sup>(1)</sup>	✓	1/2
No.2 crosspieces back/side	1000	EB1000	✓	1/2
No.2 crosspieces back	1200	EB1200	✓	1/2
<b>Crosspieces H=100mm for fixing accessories and partial plate</b>				
No.2 crosspieces back/side	400	EB0440	✓	1/2
No.2 crosspieces back	500	EB0550	✓	1/2
No.2 crosspieces back/side	600	EB0660	✓	1/2
No.2 crosspieces back/side	800	EB0880 <sup>(1)</sup>	✓	1/2
No.2 crosspieces back/side	1000	EB1010	✓	1/2
No.2 crosspieces back	1200	EB1020	✓	1/2

<sup>(1)</sup> For structures W=1600mm, order 2 pieces

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

EB4860-EB4880-EB4810



EB1060-EB1080-EB1011

#### Crosspieces "C" shaped\*

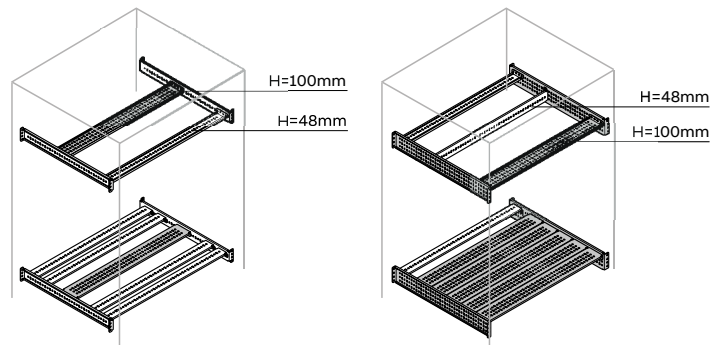
Multi-purpose galvanised 2,00mm thick sheet crosspieces with 3 fixing plane, these are fixed between the uprights and allow the partial back plates and busbar holders for flat and shaped section busbars (to be drilled).

Description	Dimensions (mm)		Package/ No. of pieces
	W/D	Code	
<b>Crosspieces "C" shaped H=48mm for fixing accessories and partial plate</b>			
No.2 crosspieces "C" front/side	600	EB4860 <sup>(1)</sup>	1/2
No.2 crosspieces "C" front/side	800	EB4880 <sup>(2)</sup>	1/2
No.2 crosspieces "C" front/side	1000	EB4810	1/2
<b>Crosspieces "C" shaped H=100mm for fixing accessories and partial plate</b>			
No.2 crosspieces "C" front/side	600	EB1060 <sup>(1)</sup>	1/2
No.2 crosspieces "C" front/side	800	EB1080 <sup>(2)</sup>	1/2
No.2 crosspieces "C" front/side	1000	EB1011	1/2

<sup>(1)</sup> For structures W=1200mm, order 2 pieces.

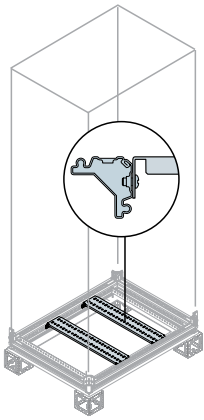
<sup>(2)</sup> For structures W=1600mm, order 2 pieces.

#### Example of using crosspieces H=48/100mm



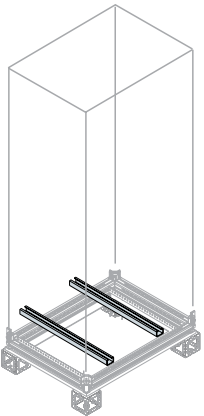
## IS2 Enclosures

### Ordering codes - Completion of structures



#### Crosspieces for fixing heavy accessories (mounted in depth)

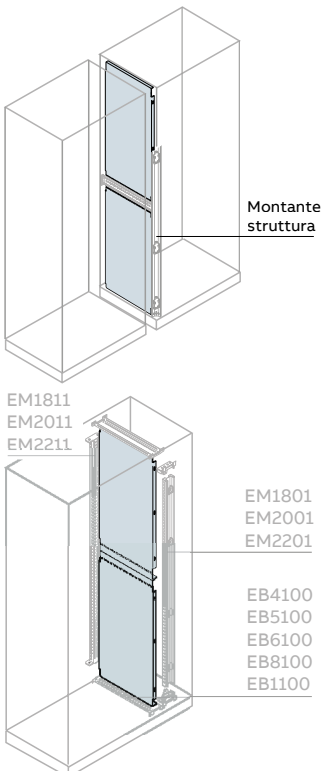
Description	Dimensions (mm)		Package/ No. of pieces
	D	Code	
No. 2 crosspieces mounted for base	400	EB4100	1/2
No. 2 crosspieces mounted for base	500	EB5100	1/2
No. 2 crosspieces mounted for base	600	EB6100	1/2
No. 2 crosspieces mounted for base	800	EB8100	1/2
No. 2 crosspieces mounted for base	1000	EB1100	1/2



#### Transformer holder crosspieces

Transformer holder crosspieces made of 3,5mm steel treated with white galvanization, complete with No.4 fixing screw M12, M12x60.).

Description	Dimensions (mm)		Package/ No. of pieces
	D	Code	
Pair of transformer holder crosspieces	600	EB6102	1/2
Pair of transformer holder crosspieces	800	EB8102	1/2
Pair of transformer holder crosspieces	1000	EB1102	1/2



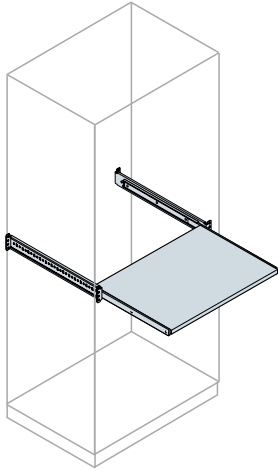
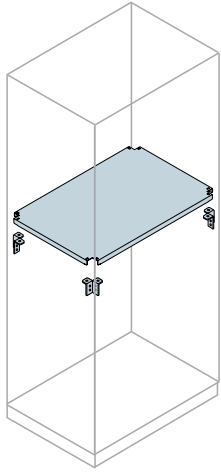
#### Vertical partition panels for side-by-side structures

Panel made of 1,2mm thick galvanised steel sheet divided into two parts. When there is the lateral crosspiece H=48mm, use pre-shearing.

Description	Dimensions (mm)			Package/ No. of pieces
	H	D	Code	
Vertical partition panels	1800	400	EE1841	1/1
Vertical partition panels		500	EE1851	1/1
Vertical partition panels		600	EE1861	1/1
Vertical partition panels		800	EE1881	1/1
Vertical partition panels		1000	EE1811	1/1
Vertical partition panels	2000	400	EE2041	1/1
Vertical partition panels		500	EE2051	1/1
Vertical partition panels		600	EE2061	1/1
Vertical partition panels		800	EE2081	1/1
Vertical partition panels		1000	EE2011	1/1
Vertical partition panels	2200	400	EE2241	1/1
Vertical partition panels		500	EE2251	1/1
Vertical partition panels		600	EE2261	1/1
Vertical partition panels		800	EE2281	1/1
Vertical partition panels		1000	EE2211	1/1

## IS2 Enclosures

### Ordering codes - Completion of structures



#### Horizontal partition panels

Panel made of 1,5mm thick galvanised steel sheet. This allows horizontal separation of the different components inside the structure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
<b>Horizontal fixed partition panels</b>				
Horizontal fixed partition panels	400	400	EE4041	1/1
Horizontal fixed partition panels	600		EE6041	1/1
Horizontal fixed partition panels	800		EE8041	1/1
Horizontal fixed partition panels	1000		EE1041	1/1
Horizontal fixed partition panels	400	500	EE4051	1/1
Horizontal fixed partition panels	600		EE6051	1/1
Horizontal fixed partition panels	800		EE8051	1/1
Horizontal fixed partition panels	1000		EE1051	1/1
Horizontal fixed partition panels	600	600	EE6061	1/1
Horizontal fixed partition panels	800		EE8061	1/1
Horizontal fixed partition panels	1000		EE1061	1/1
Horizontal fixed partition panels	800		EE8081	1/1
Horizontal fixed partition panels	1000		EE1081	1/1
Horizontal fixed partition panels	1000	1000	EE1011	1/1
<b>Horizontal sliding partition panels<sup>(1)</sup></b>				
Horizontal sliding partition panels	600	600	EE1003K *	1/1
Horizontal sliding partition panels		800	EE1001K *	1/1
Horizontal sliding partition panels	800	600	EE1004K *	1/1
Horizontal sliding partition panels		800	EE1002K *	1/1

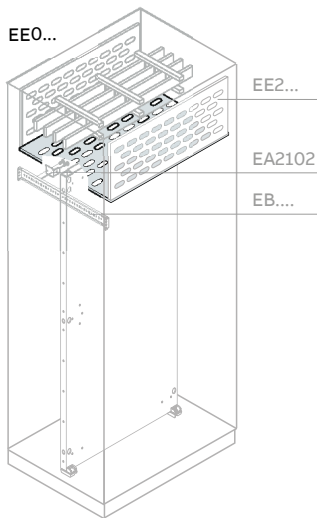
<sup>(1)</sup> Including the crosspieces for fixing and relative accessories.

Can not be mounted with double door in structures W=800/1000/1200/1600mm with overlapping doors closing.

\* Available until the end of 2020.

## IS2 Enclosures

### Ordering codes - Completion of structures

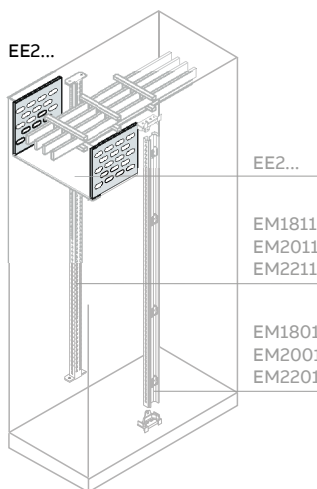


#### Horizontal busbar segregations

Drilled sheet panels (IP20) in 1,5mm sheet thickness. Allow segregation of the busbar system. Cannot be mounted in cabinets with compartments, or with DIN frame.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
<b>Internal cable container<sup>(1)</sup></b>				
Horizontal busbar segregation	200	400	EE0240	1/1
Horizontal busbar segregation		500	EE0250	1/1
Horizontal busbar segregation		600	EE0260	1/1
Horizontal busbar segregation		800	EE0280	1/1
Horizontal busbar segregation	400	400	EE0440	1/1
Horizontal busbar segregation		500	EE0450	1/1
Horizontal busbar segregation		600	EE0460	1/1
Horizontal busbar segregation		800	EE0480	1/1
<b>External cable container</b>				
Horizontal busbar segregation	300	400	EE0340	1/1
Horizontal busbar segregation		500	EE0355	1/1
Horizontal busbar segregation		600	EE0360	1/1
Horizontal busbar segregation		800	EE0380	1/1
<b>Structure</b>				
Horizontal busbar segregation	600	400	EE0640	1/1
Horizontal busbar segregation		500	EE0650	1/1
Horizontal busbar segregation		600	EE0660	1/1
Horizontal busbar segregation		800	EE0680	1/1
Horizontal busbar segregation	800	400	EE0840	1/1
Horizontal busbar segregation		500	EE0850	1/1
Horizontal busbar segregation		600	EE0860	1/1
Horizontal busbar segregation		800	EE0880	1/1
Horizontal busbar segregation	1000	400	EE1040	1/1
Horizontal busbar segregation		500	EE1050	1/1
Horizontal busbar segregation		600	EE1060	1/1
Horizontal busbar segregation		800	EE1080	1/1

<sup>(1)</sup> To be used with rear upright EM..11.



#### Vertical busbar segregations

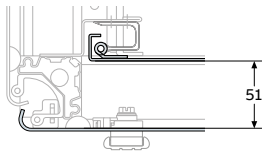
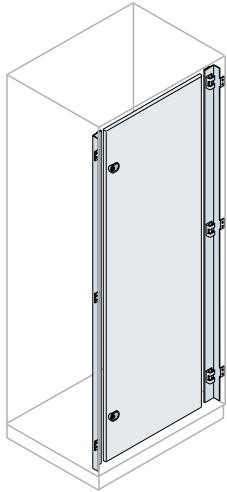
Drilled sheet panels (IP20) in 1,5mm sheet thickness. Allow segregation of the busbar system.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
<b>Internal cable container<sup>(1)</sup></b>				
Vertical busbar segregation	200	200	EE2020	1/2
Vertical busbar segregation		400	EE2040	1/2
<b>External cable container</b>				
Vertical busbar segregation	200	300	EE2030	1/2
<b>Structure</b>				
Vertical busbar segregation	200	600	EE2600	1/2
Vertical busbar segregation		800	EE2800	1/2
Vertical busbar segregation		1000	EE2100	1/2

<sup>(1)</sup> Its necessary to use the intermediate upright


## IS2 Enclosures

### Ordering codes - Completion of structures



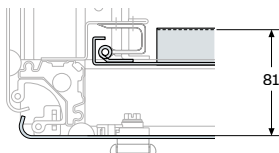
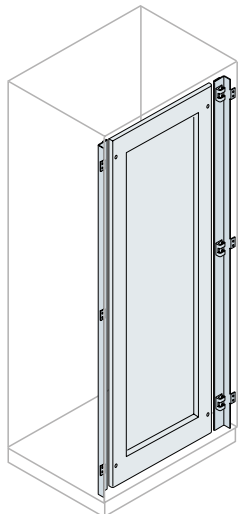
#### Inner doors IP20

Internal door IP20 made of 1,5mm thick galvanised steel sheet, complete with reinforcement tube, frame, hinges and No.2 boxes with double tongue key interchangeable with inserts (see page 2-108). Maximum opening angle of 100°.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Internal inner door	1800	600	EE1860K	✓	1/1
Internal inner door		800	EE1880K	✓	1/1
Internal inner door		1000	EE1810K	✓	1/1
Internal inner door	2000	600	EE2060K	✓	1/1
Internal inner door		800	EE2080K	✓	1/1
Internal inner door		1000	EE2010K	✓	1/1
Internal inner door	2200	600	EE2260K	✓	1/1
Internal inner door		800	EE2280K	✓	1/1
Internal inner door		1000	EE2210K	✓	1/1


For H=1400 and 1600 mm inner doors, please contact ABB.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



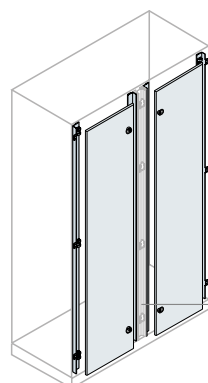
#### Recessed inner doors

Internal door made of 1,5mm thick steel sheet, complete with frame, hinges and No.2 boxes with double tongue key interchangeable with inserts (see page 2-108). Maximum opening angle of 100°.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Recessed inner door	1800	600	EE1906K	✓	1/1
Recessed inner door		800	EE1908K	✓	1/1
Recessed inner door		1000	EE1910K	✓	1/1
Recessed inner door	2000	600	EE2106K	✓	1/1
Recessed inner door		800	EE2108K	✓	1/1
Recessed inner door		1000	EE2110K	✓	1/1
Recessed inner door	2200	600	EE2306K	✓	1/1
Recessed inner door		800	EE2308K	✓	1/1
Recessed inner door		1000	EE2310K	✓	1/1

For structures W=1200/1600mm, mount two inner doors with W=600mm and W=800mm respectively plus intermediate upright EM... as overlap.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

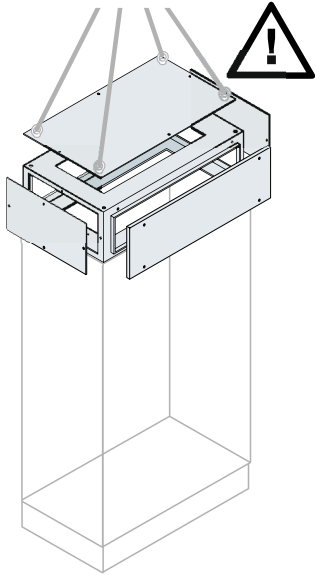


EM1801  
EM2001  
EM2201



## IS2 Enclosures

### Ordering codes - Completion of structures

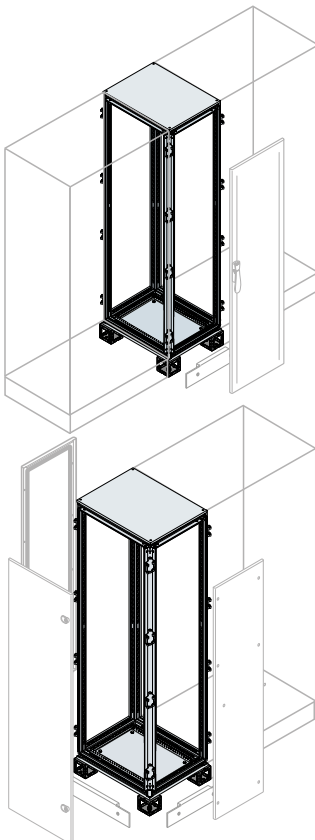


#### Top container for cable connection (not for handling)

This is a completely segregated container H=200mm to be mounted on the roof of the structure, dedicated to circulation of conductors. Fully accessible from all sides. Degree of protection IP41.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
<b>Height 200mm</b>				
Top container for cable connection	400	400	ER4040K	1/1
Top container for cable connection	600		ER6040K <sup>(1)</sup>	1/1
Top container for cable connection	800		ER8040K <sup>(1)</sup>	1/1
Top container for cable connection	1000		ER1041K	1/1
Top container for cable connection	400	500	ER4050K	1/1
Top container for cable connection	600		ER6050K <sup>(1)</sup>	1/1
Top container for cable connection	800		ER8050K <sup>(1)</sup>	1/1
Top container for cable connection	1000		ER1050K	1/1
Top container for cable connection	400	600	ER4060K	1/1
Top container for cable connection	600		ER6060K <sup>(1)</sup>	1/1
Top container for cable connection	800		ER8061K <sup>(1)</sup>	1/1
Top container for cable connection	1000		ER1060K	1/1
Top container for cable connection	400	800	ER4080K	1/1
Top container for cable connection	600		ER6080K <sup>(1)</sup>	1/1
Top container for cable connection	800		ER8080K <sup>(1)</sup>	1/1
Top container for cable connection	1000		ER1080K	1/1
Top container for cable connection	400	1000	ER4011K	1/1
Top container for cable connection	600		ER6010K <sup>(1)</sup>	1/1
Top container for cable connection	800		ER8010K <sup>(1)</sup>	1/1
Top container for cable connection	1000		ER1010K	1/1
Kit for placing cable connection container at side			ER1000	1/1

<sup>(1)</sup> For structures with W=1200/1600mm, order two pieces with W=600 and W=800mm respectively plus relative joining Kit ER1000.



#### Container for external cable connection W=300mm

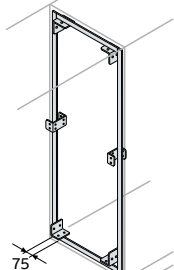
Structure to be completed with blind door placed frontally or laterally, front and rear panel, plinth and relative flanges. Can be placed side-by-side with the basic structure by means of side-by-side positioning Kit EV0002-EV0003-EV0006.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
<b>Width 300mm</b>				
Container for external cable container	1800	400	ER3040K	1/1
Container for external cable container		500	ER3050K	1/1
Container for external cable container		600	ER3060K	1/1
Container for external cable container		800	ER3080K	1/1
Container for external cable container		1000	ER3010K	1/1
Container for external cable container	2000	400	ER3041K	1/1
Container for external cable container		500	ER3051K	1/1
Container for external cable container		600	ER3061K	1/1
Container for external cable container		800	ER3081K	1/1
Container for external cable container		1000	ER3011K	1/1
Container for external cable container	2200	400	ER3042K	1/1
Container for external cable container		500	ER3052K	1/1
Container for external cable container		600	ER3062K	1/1
Container for external cable container		800	ER3082K	1/1
Container for external cable container		1000	ER3012K	1/1

## IS2 Enclosures


### Ordering codes - Completion of structures

EV0002



#### Kit for placing structures side by side

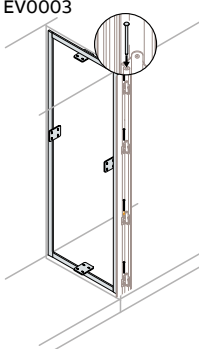
Adhesive high density polyurethane gasket – guarantees the degree of protection on several columns side by side. Columns can be coupled side by side or back to back.

Description	Code	 Custom Made Service	Package/ No. of pieces
Corner joining and reinforcement kit for lifting	EV0002 <sup>(*)</sup>		1/1
Cabinet joining kit	EV0003	✓	1/1
Internal cabinet joining kit	EV0006 <sup>(*)</sup>	✓	1/1
No.8 small pins for placing structures side by side	EV0008		1/8

<sup>(\*)</sup> Can be fitted with EV0008 accessory

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

EV0003

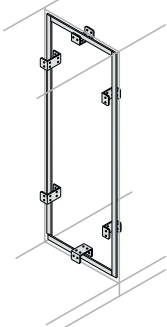


#### EV0003 internal external enclosure joining Kit

The kit is made up of 4 squares, adhesive gasket and 8 small pins. Joining takes place:

- from the inside using the 4 squares which can be mounted the whole height or depth of the enclosures
- from the outside using the 8 small pins inserted in the hinges (they require the rear panel to be dismantled).

EV0006



#### Internal enclosure joining Kit

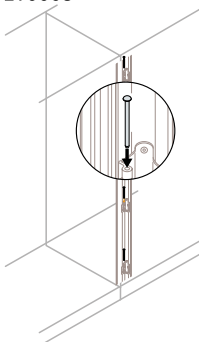
##### EV0006

The kit is made up of 6 squares and an adhesive gasket. Joining takes place from the inside using the 6 squares which can be mounted the whole height or depth of the enclosure.

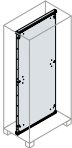
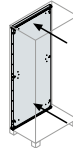
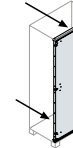

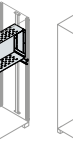
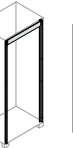
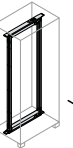
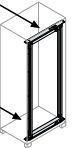
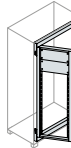
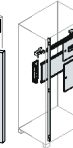









##### EV0002

The kit is made up of 6 squares (4 "L"-shaped and two "C"-shaped) and an adhesive gasket. Joining takes place from the inside using the 4 "L"-shaped squares which can be mounted in the corners and the 2 "C"-shaped squares for the whole height of the enclosure. Does not allow maximum moving back of the standard and oversized back plate (75mm less).

EV0008

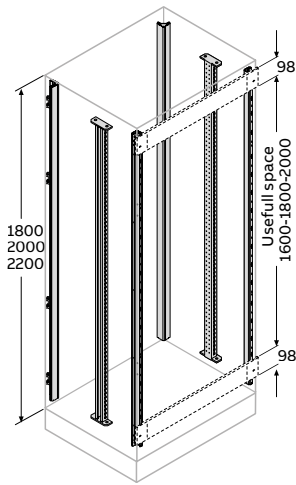


#### Mounting possibilities

										
EV0003	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
EV0002	OK	OK		OK	OK	OK		OK	OK	OK
EV0006	OK		OK			OK				

## IS2 Enclosures

### Ordering codes - Completion of structures



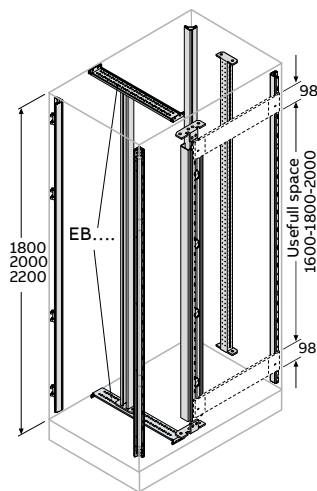
#### Configuration with compartments

##### Uprights for configuration with compartments

Uprights made of galvanised steel, consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and partial doors. Can be assembled on base and top (see page 2-48). The useful dimension is always 200mm less than the total height of the enclosure.

Description	Dimensions (mm)		Package/No. of pieces
	H	Code	
Uprights for configuration with compartments	1800	EM1802	1/6
Uprights for configuration with compartments	2000	EM2002	1/6
Uprights for configuration with compartments	2200	EM2202	1/6

Order compensation panels H=100mm (EH6010/EH8010). See page 2-75.  
Examples of configuration and technical characteristics at page 2-114.



##### Uprights for configuration with compartments + internal cable container

No.7 uprights made of galvanized steel, consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and internal cable container W=200/400 mm. The useful dimension is always 200mm less than the total height of the enclosure.

Description	Dimensions (mm)		Package/No. of pieces
	H	Code	
Uprights for configuration with compartments + int. cable container	1800	EM1803	1/7
Uprights for configuration with compartments + int. cable container	2000	EM2003	1/7
Uprights for configuration with compartments + int. cable container	2200	EM2203	1/7

For the version with cable container, both the code of the crosspieces (EB...) and the code of the uprights (EM1803- EM2003-EM2203) must be ordered.  
Order compensation panels H=100mm (EH6010K/EH8010K). See page 2-79.

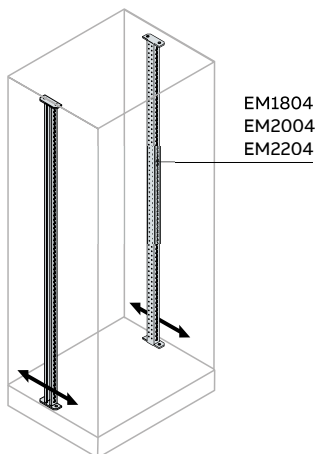
#### Crosspieces for intermediate uprights (mounted depth-wise)

Description	Dimensions (mm)		Package/No. of pieces
	D	Code	
<b>Width 300mm</b>			
Couple of crosspieces for base	400	EB4100	1/2
Couple of crosspieces for base	500	EB5100	1/2
Couple of crosspieces for base	600	EB6100	1/2
Couple of crosspieces for base	800	EB8100	1/2
Couple of crosspieces for base	1000	EB1100	1/2

For the version with cable container, both the code of the crosspieces (EB...) and the code of the uprights (EM1803- EM2003-EM2203) must be ordered.

## IS2 Enclosures

### Ordering codes - Completion of structures

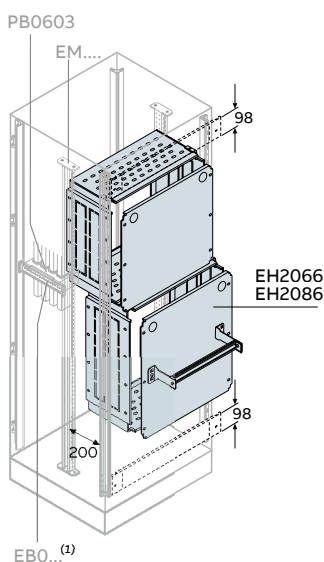


#### Configuration with compartments

##### Intermediate uprights (mounted in depth)


No.2 uprights made of galvanized steel, consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Pair of uprights for mounting compartment cubicles in depth	1800		EM1804	1/2
Pair of uprights for mounting compartment cubicles in depth	2000		EM2004	1/2
Pair of uprights for mounting compartment cubicles in depth	2200		EM2204	1/2



##### Compartment cubicle

Made of 1,5mm galvanised sheet, able to construct Form 3 segregations, it is pre-sheared on the sides and bottom for use as conductor passage. Complete with withdrawable back plate for bench assembly of the apparatus, reversible, to obtain 2 different depths. The useful dimension is always 200mm less than the total height of the enclosure.

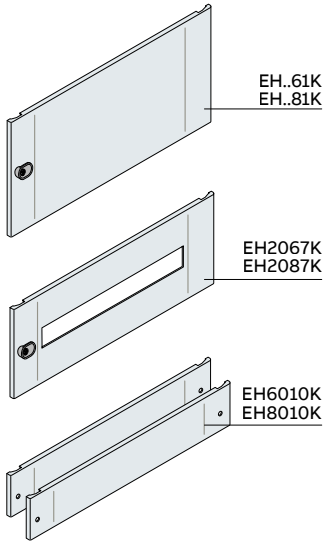
Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Compartment cubicle			EH2060	✓	1/1
Compartment cubicle			EH3060	✓	1/1
Compartment cubicle			EH4063	✓	1/1
Compartment cubicle			EH5060	✓	1/1
Compartment cubicle			EH6060	✓	1/1
Compartment cubicle			EH8060	✓	1/1
Compartment cubicle			EH1060	✓	1/1
Compartment cubicle			EH2180	✓	1/1
Compartment cubicle			EH3080	✓	1/1
Compartment cubicle			EH4080	✓	1/1
Compartment cubicle			EH5080	✓	1/1
Compartment cubicle			EH6080	✓	1/1
Compartment cubicle			EH8080	✓	1/1
Compartment cubicle			EH1080	✓	1/1
Compartment cubicle with DIN rail, adjustable in depth			EH2066		1/1
Compartment cubicle with DIN rail, adjustable in depth			EH2086		1/1

<sup>(1)</sup> The dimension of the crosspieces EBO... (see page 2-70) is always 200mm less than the total height of the enclosure. Examples of configuration and technical characteristics at page 2-120.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures


### Ordering codes - Completion of structures



#### Configuration with compartments

##### Front panels for compartments

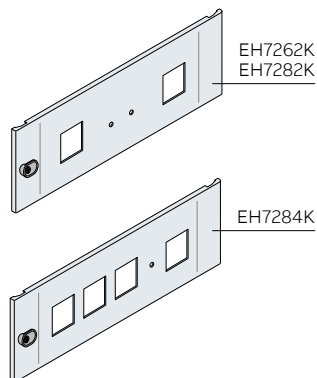
Made of 2,00mm complete with box with double tongue key interchangeable with inserts (see page 2-108). The front panels are fitted with a horizontal profile which keeps the IP41 degree of protection.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	H	W			
Panels for compartment cubicle	200	600	EH2061K	✓	1/1
Panels for compartment cubicle	300		EH3061K	✓	1/1
Panels for compartment cubicle	400		EH4061K	✓	1/1
Panels for compartment cubicle	500		EH5061K	✓	1/1
Panels for compartment cubicle	600		EH6061K	✓	1/1
Panels for compartment cubicle	800		EH8062K	✓	1/1
Panels for compartment cubicle	1000		EH1061K	✓	1/1
Panels for compartment cubicle	200	800	EH2081K	✓	1/1
Panels for compartment cubicle	300		EH3081K	✓	1/1
Panels for compartment cubicle	400		EH4081K	✓	1/1
Panels for compartment cubicle	500		EH5081K	✓	1/1
Panels for compartment cubicle	600		EH6083K	✓	1/1
Panels for compartment cubicle	800		EH8081K	✓	1/1
Panels for compartment cubicle	1000		EH1081K	✓	1/1
No.2 compensation panels		600	EH6010K <sup>(1)</sup>		1/2
No.2 compensation panels		800	EH8010K <sup>(1)</sup>		1/2
Single front panel for compartment cubicle with DIN rail (18 mod.DIN)		600	EH2067K		1/1
Single front panel for compartment cubicle with DIN rail (29 mod.DIN)		800	EH2087K		1/1

<sup>(1)</sup> Service only valid for factory pre-assembled enclosure

Examples of configuration and technical characteristics at page 2-120.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



##### Panels for square measuring instruments

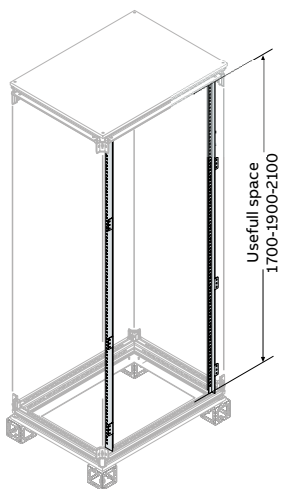
Made of 2,00mm painted steel colour RAL 7035, complete with box with double tongue key interchangeable with inserts (see page 2-108).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
No.2 72x72mm instrument panels for compartments	200	600	EH7262K	1/1
No.2 72x72mm instrument panels for compartments	200	800	EH7282K	1/1
No.2 72x72mm instrument panels for compartments	200	800	EH7284K	1/1

Examples of configuration and technical characteristics at page 2-120.

## IS2 Enclosures

### Ordering codes - Completion of structures



#### Structures for modular apparatus

##### Uprights for modular panels

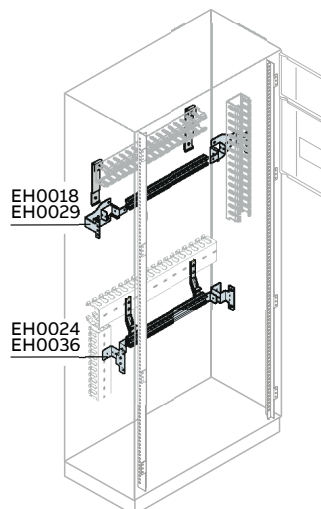
Uprights made of in galvanised steel drilled with 50mm pitch, preset for mounting apparatus holder blind plates, DIN rails and front panels. To be fixed onto the front uprights of the structure. The useful dimension is always 100mm less than the total height of the enclosure.

Description	Dimensions (mm) H	No.DIN rows/centre dist. mm	Code	Package/ No. of pieces
No.2 uprights	1400	6/200 o 8/150	1STQ005326B0000	1/1
No.2 uprights	1600	7/200 o 9/150	1STQ005327B0000	1/1
No.2 uprights	1800	8/200 o 11/150	EH1800	1/1
No.2 uprights	2000	9/200 o 12/150	EH2000	1/1
No.2 uprights	2200	10/200 o 14/150	EH2200	1/1

Examples of configuration and technical characteristics at page 2-122.  
IP20 solution only with front panel completed with modular blind panels.

##### DIN rail Kit with front wiring duct

Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for front fixing of the wiring duct (max. 60x80mm). It is fixed directly onto the uprights EH1800, EH2000 or EH2200. The useful dimension is always 100mm less than the total height of the enclosure.



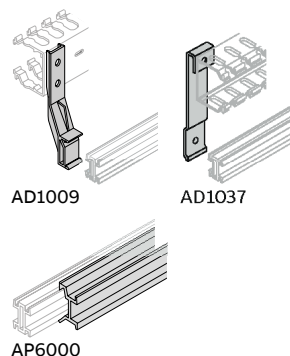
Description	Dimensions (mm) H	Code	Package/ No. of pieces
DIN rail and fixing supports (18 DIN mod.)	600	EH0018	1/1
DIN rail and fixing supports (29 DIN mod.)	800	EH0029	1/1

##### DIN rail Kit with rear wiring duct

Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for rear fixing of the wiring duct (W≥40mm) and total exploitation of the space for apparatus. It is fixed directly onto the uprights EH1800, EH2000 or EH2200. The useful dimension is always 100mm less than the total height of the enclosure.

Description	Dimensions (mm) W	Code	Package/ No. of pieces
DIN rail and fixing supports (24 DIN mod.)	600	EH0024	1/1
DIN rail and fixing supports (36 DIN mod.)	800	EH0036	1/1

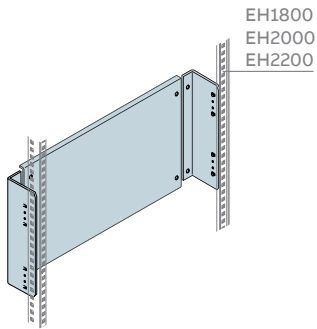
##### Accessories for DIN rail



Description	Code	Package/ No. of pieces
No. 4 plastic supports for horizontal wiring ducts	AD1009	1/4
No. 4 metal supports for horizontal wiring ducts	AD1037	1/4
No.1 depth adapter W=600mm	AP6000	1/4

## IS2 Enclosures

### Ordering codes - Completion of structures

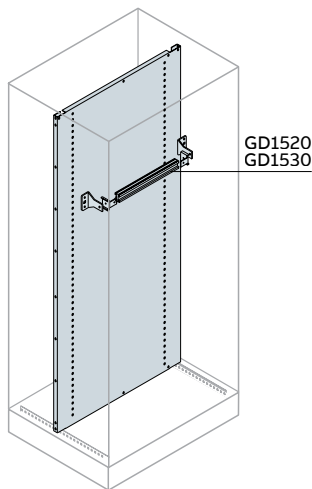


#### Structures for modular apparatus

##### Blind apparatus holder back plates

Blind apparatus holder back plate, 1,5mm thickness. It is fixed directly onto the uprights EH1800, EHD2000, EH2200. The useful dimension is always 100mm less than the total height of the enclosure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind apparatus holder back plate	200	600	EH2065	1/1
Blind apparatus holder back plate	300		EH3065	1/1
Blind apparatus holder back plate	400		EH4065	1/1
Blind apparatus holder back plate	200	800	EH2085	1/1
Blind apparatus holder back plate	300		EH3085	1/1
Blind apparatus holder back plate	400		EH4085	1/1



##### DIN rail Kit on back plate (bench cabling)

Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for fixing the wiring duct Kit. The useful dimension is always 100mm less than the total height of the enclosure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
DIN rail and fixing supports (24 DIN mod.)	600		GD1520	1/1
DIN rail and fixing supports (36 DIN mod.)	800		GD1530	1/1

For all the components which cannot be mounted on DIN rails, e.g. T3, T4, OT and OETL, mounting is made directly on a plate.

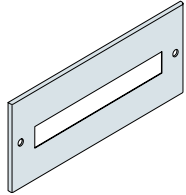
##### Back plate for bench cabling

Back plate drilled with 25mm pitch for direct fixing of the GD1520, GD1530 DIN rails. Insertion takes place from the front of the enclosure and the position in depth is also adjustable at a pitch of 25mm. The centre distance between the DIN rails can be either 150 or 200mm. This solution is completed with the front panels with 24 and 36 modules for W=600mm and 800mm respectively.

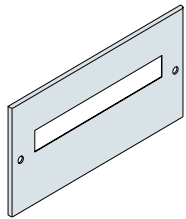
Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Back plate for bench cabling	1800	600	EX1860	1/1
Back plate for bench cabling	2000		EX2060	1/1
Back plate for bench cabling	2200		EX2260	1/1
Back plate for bench cabling	1800	800	EX1880	1/1
Back plate for bench cabling	2000		EX2080	1/1
Back plate for bench cabling	2200		EX2280	1/1

## IS2 Enclosures

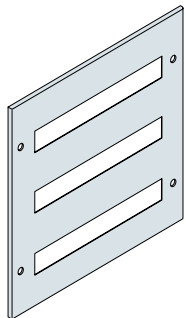
### Ordering codes - Completion of structures



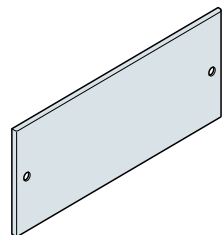
EH1518K-EH2018K-EH1529K  
EH2029K-EH1524K-EH2024K  
EH1536K-EH2036K



EH3018K-EH3029K



EH6018K-EH6029K-EH6025K  
EH6036K



### Structures for modular apparatus

#### Panels for modular apparatus

Panel with modular cut-out in sheet 1,2mm (W=600mm) painted RAL7035 colour with quick fixing, suitable for hinges EH1889 (accessory). The useful dimension of the enclosure is always 100mm less than the total height of the enclosure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Panel 18 DIN mod.	150	600	EH1518K	1/1
Panel 18 DIN mod.	200	600	EH2018K	1/1
Panel 18 DIN mod. off-centre	300	600	EH3018K	1/1
Panel 54 DIN mod. (3 rows x 18 DIN mod.)	600	600	EH6018K	1/1
Panel 29 DIN mod.	150	800	EH1529K	1/1
Panel 29 DIN mod.	200	800	EH2029K	1/1
Panel 29 DIN mod. off-centre	300	800	EH3029K	1/1
Panel 87 DIN mod. (3 rows x 29 DIN mod.)	600	800	EH6029K	1/1
Panel 24 DIN mod.	150	600	EH1524K	1/1
Panel 24 DIN mod.	200	600	EH2024K	1/1
Panel 72 DIN mod. (3 rows x 24 DIN mod.)	600	600	EH6025K	1/1
Panel 36 DIN mod.	150	800	EH1536K	1/1
Panel 36 DIN mod.	200	800	EH2036K	1/1
Panel 108 DIN mod. (3 rows x 36 DIN mod.)	600	800	EH6036K	1/1

#### Blind panels for apparatus

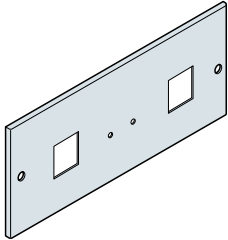
Blind panel in 1,2mm (W=600mm) painted RAL7035 colour with quick fixing, suitable for hinges EH1889 (accessory). The useful dimension of the enclosure is always 100mm less than the total height of the enclosure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind panel	50	600	EH0562K	1/1
Blind panel	100		EH1062K	1/1
Blind panel	150		EH1562K	1/1
Blind panel	200		EH2062K	1/1
Blind panel	300		EH3063K	1/1
Blind panel	400		EH4062K	1/1
Blind panel	500		EH5062K	1/1
Blind panel	600		EH6062K	1/1
Blind panel	50	800	EH0582K	1/1
Blind panel	100		EH1082K	1/1
Blind panel	150		EH1582K	1/1
Blind panel	200		EH2082K	1/1
Blind panel	300		EH3082K	1/1
Blind panel	400		EH4082K	1/1
Blind panel	500		EH5082K	1/1
Blind panel	600		EH6082K	1/1

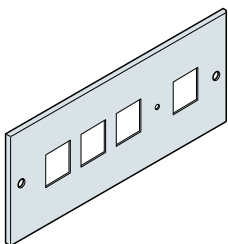


## IS2 Enclosures

### Ordering codes - Completion of structures



EH2272K-EH2297K-EH3272K  
EH3296K



EH2472K-EH3472K-EH3496K

### Structures for modular apparatus

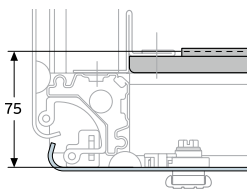
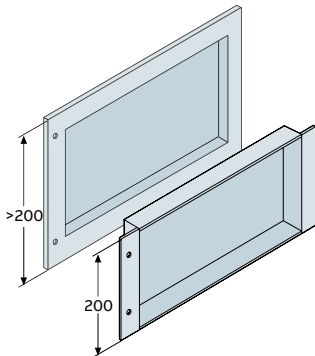
#### Panel for square measuring instruments

Panel with cut-outs for measuring instruments made of 1,2mm sheet painted RAL7035 colour with quick fixing, suitable for hinges EH1889 (accessory). The useful dimension of the enclosures is always 100mm less than the total height of the enclosures.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Panel No. 2 instruments 72x72mm	200	600	EH2272K	1/1
Panel No. 4 instruments 72x72mm	200		EH2472K	1/1
Panel No. 2 instruments 96x96mm	200		EH2297K	1/1
Panel No. 2 instruments 72x72mm	200	800	EH3272K	1/1
Panel No. 2 instruments 96x96mm	200		EH3296K	1/1
Panel No. 2 instruments 72x72mm	200		EH3472K	1/1
Panel No. 2 instruments 96x96mm	200		EH3496K	1/1

#### Blind panels for apparatus

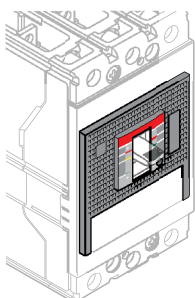
Blind panel in sheet 1,2mm (W=600mm) painted RAL7035 colour with quick fixing, suitable for EH1889 hinges (accessory). The useful dimension of the enclosure is always 100mm less than the total height of the enclosure.



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Recessed blind panel	200	600	EH2063K	1/1
Recessed blind panel		800	EH2083K	1/1
Recessed blind panel	300	600	EH3064K	1/1
Recessed blind panel		800	EH3083K	1/1
Recessed blind panel	400	600	EH4064K	1/1
Recessed blind panel		800	EH4083K	1/1
Recessed blind panel	500	600	EH5063K	1/1
Recessed blind panel		800	EH5084K	1/1
Recessed blind panel	600	600	EH6063K	1/1
Recessed blind panel		800	EH6084K	1/1

The panels with a height of 200 or 300mm, can be used for fixed Tmax XT1-XT2-XT3 with front terminals with direct rotary handle operating mechanism, where the panels with a height of 400-500-600mm can be used for OT switchdisconnectors from 1000 to 1600 A.

#### Polished flange for DIN-Rail mounting



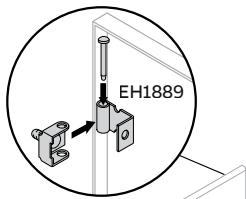
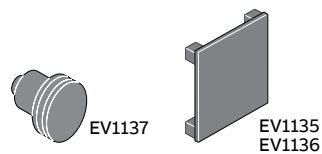
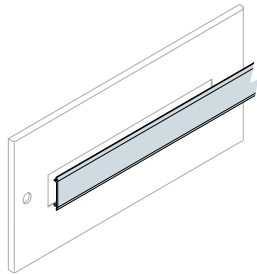
AD3301  
AD3302  
AD3303  
AD3304

Description	Code	Package/ No. of pieces
Polished flange for XT1 3P mounted on DIN rail	AD3301	1/1
Polished flange for XT1 4P mounted on DIN rail	AD3302	1/1
Polished flange for XT3 3P mounted on DIN rail	AD3303	1/1
Polished flange for XT3 4P mounted on DIN rail	AD3304	1/1

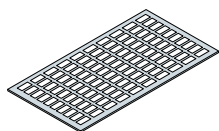
Already supplied in the DIN-Rail mounting kit for breakers in MCCBs catalogue

## IS2 Enclosures

### Ordering codes - Completion of structures



AD1101-AD1102  
AD1103-AD1104



EH2118-EH2129  
AD1600-AD1800

### Structures for modular apparatus

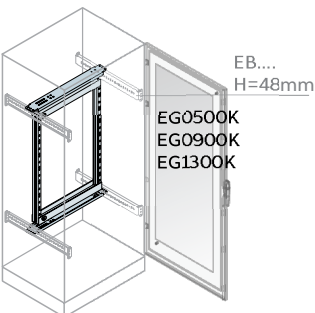
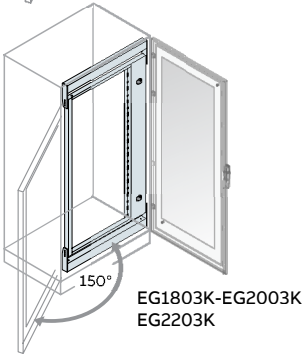
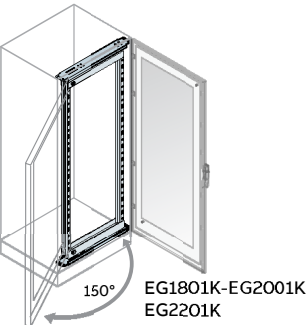
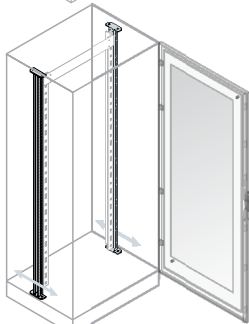
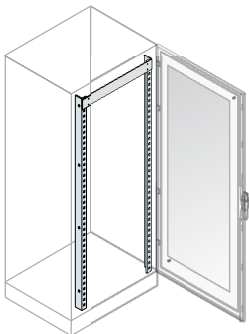
#### Accessoris for modular panel

Description	Code	Package/ No. of pieces
<b>Hole covering strip RAL7035 colour</b>		
No.10 hole covers W=2000mm, grey	AD1086	1/10
No.3 hole covers 24 DIN modules W=600mm	AD1088	1/3
No.3 hole covers 36 DIN modules W=800mm	AD1089	1/3
<b>Closing plug for instrument holder panels</b>		
No.10 closing plug for instrument holder panels 72x72mm	EV1135	1/10
No.5 closing plug for instrument holder panels 96x96mm	EV1136	1/5
No.50 tappi di chiusura per pulsanti Ø22mm	EV1137	1/50
<b>Adhesive name label holders</b>		
No. 20 label holders 18 DIN mod - Lenght 325mm	EH2118	1/20
No. 20 label holders 29 DIN mod- Lenght 525mm	EH2129	1/20
No. 20 label holders 24 DIN mod- Lenght 432mm	AD1600	1/20
No. 20 label holders 36 DIN mod- Lenght 634mm	AD1800	1/20
<b>Labels can be written using compatible Grafoplast system</b>		
No. 288 labels 1 DIN mod.	AD1101	1/288
No. 192 labels 2 DIN mod.	AD1102	1/192
No. 96 labels 3 DIN mod.	AD1103	1/96
No. 96 labels 4 DIN mod.	AD1104	1/96
<b>Hinges and quick closures for panels</b>		
No. 10 hinges for panels	EH1889 <sup>(1)</sup>	1/10
No. 5 quick closures for front panels	EH1890	1/5

<sup>(1)</sup> Use No.2 hinges for panel H=150/200/300/400mm, No.3 hinges for panel H=500/600mm.

# IS2 Enclosures


## Ordering codes - Completion of structures



### 19" rack structure

#### 19" rack structure

The 19" uprights "L" shaped are made of 2,00mm galvanized steel. No.1 compensation panel included.

Description	Dimensions			Code	 Custom Made Service	Package/ No. of pieces
	No.	(mm)				
<b>"L" shaped uprights for 19" fixed frame</b>						
No.2 "L" shaped	38	1800	600	EG1800	✓	1/2
No.2 "L" shaped	42	2000		EG2000	✓*	1/2
No.2 "L" shaped	47	2200		EG2200 *	✓	1/2
No.2 "L" shaped	38	1800	800	EG1880 *		1/2
No.2 "L" shaped	42	2000		EG2080 *		1/2
No.2 "L" shaped	47	2200		EG2280		1/2
<b>Upright for depth adjustment of the fixed rack frame "L" shaped (25mm pitch)</b>						
No.2 uprights for depth adjustment of the fixed rack frame		1800		EM1804		1/2
No.2 uprights for depth adjustment of the fixed rack frame		2000		EM2004		1/2
No.2 uprights for depth adjustment of the fixed rack frame		2200		EM2204		1/2


Examples of configuration and technical characteristics at page 2-124

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

\* Available until the end of 2020.

### 19" Swing rack frame

The centred and decentralized swing frames are made of 2,00mm galvanised steel painted RAL 7035 and are complete with handle and lock with double tongue key.

Description	Dimensions			Code	 Custom Made Service	Package/ No. of pieces
	No.	(mm)				
Centred swing rack frame	36	1800	600	EG1801K *	✓	1/1
Centred swing rack frame	40	2000		EG2001K *	✓	1/1
Centred swing rack frame	45	2200		EG2201K *	✓	1/1
Decentralized swing rack frame	33	1800	800	EG1803K *	✓	1/1
Decentralized swing rack frame	38	2000		EG2003K	✓*	1/1
Decentralized swing rack frame	42	2200		EG2203K *	✓	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

\* Available until the end of 2020.

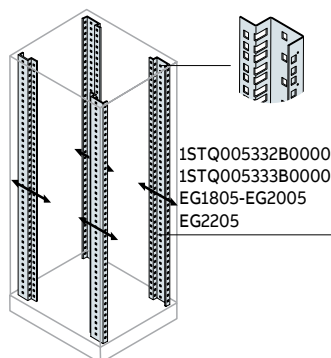
### Partial swing rack frame

Description	Dimensions			Code	Package/ No. of pieces
	No.	(mm)			
Partial swing rack frame 19"		500	600	EG0500K *	1/1
Partial swing rack frame 19"		900		EG0900K *	1/1
Partial swing rack frame 19"		1300		EG1300K *	1/1

\* Available until the end of 2020.

## IS2 Enclosures

### Ordering codes - Completion of structures



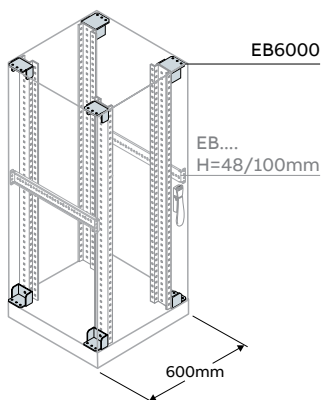
#### 19" rack structure

##### 19" cranked shaped uprights

Cranked shaped uprights are made of 2,00mm galvanized steel sheet and are fixed by brackets or crosspieces and are adjustable in depth (25mm pitch).

Description	No.	Dimensions (mm)		Code	Package/ No. of pieces
		HE	H		
No.2 19" cranked shaped uprights	32	1400		1STQ005332B0000 *	1/2
No.2 19" cranked shaped uprights	36	1600		1STQ005333B0000 *	1/2
No.2 19" cranked shaped uprights	40	1800		EG1805 *	1/2
No.2 19" cranked shaped uprights	44	2000		EG2005	1/2
No.2 19" cranked shaped uprights	49	2200		EG2205	1/2

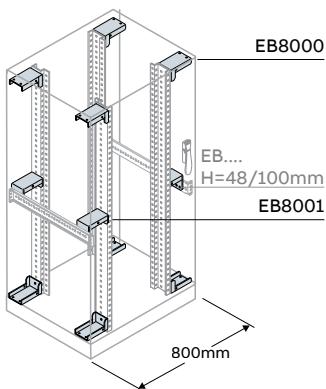
\* Available until the end of 2020.



##### Brackets for fixing 19" cranked shaped uprights (top bottom position)

Description	No.	Dimensions (mm)		Code	Package/ No. of pieces
		W	H		
No.4 brackets for fixing total/partial cranked shaped uprights	600			EB6000 <sup>(1)</sup>	1/4
No.4 brackets for fixing total/partial cranked shaped uprights	800			EB8000	1/4

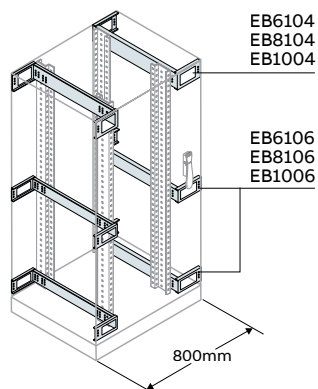
<sup>(1)</sup> In enclosures 600 mm wide, the cranked shaped rack uprights can be fixed in the middle height of the enclosures by means of standard crosspieces EB.... see page 2-65.



##### Brackets for fixing 19" cranked shaped uprights (intermediate position)

Description	No.	Dimensions (mm)		Code	Package/ No. of pieces
		W	H		
No.2 intermediate brackets for fixing total/partial cranked shaped uprights	600/800			EB8001 <sup>(1)</sup>	1/2

<sup>(1)</sup> To be combined with the standard cross EB.... see page 2-70.

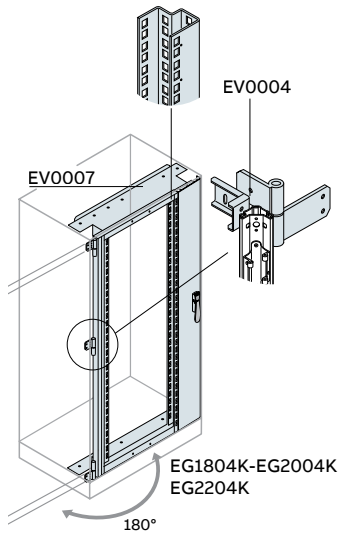


##### Crosspieces for fixing 19" cranked shaped uprights

Description	No.	Dimensions (mm)		Code	Package/ No. of pieces
		W	D		
No.2 top crosspieces	800	600		EB6104	1/2
No.2 top crosspieces		800		EB8104	1/2
No.2 top crosspieces		1000		EB1004	1/2
No.2 central/bottom crosspieces		600		EB6106	1/2
No.2 central/bottom crosspieces		800		EB8106	1/2
No.2 central/bottom crosspieces		1000		EB1006	1/2

## IS2 Enclosures

### Ordering codes - Completion of structures



#### 19" rack structure

##### 19" Swing rack frame with "C" shaped profile

The decentralized swing frames are made of 2,00mm galvanised steel painted RAL 7035 and are complete with handle and lock with double tongue key. EV0007 assembling kit to be used in order to mount the frame.

Description	No.	Dimensions (mm)		Code	Package/ No. of pieces
		HE	H		
Swing "C" shaped rack frame	36	1800	800	EG1804K *	1/1
Swing "C" shaped rack frame	41	2000		EG2004K	1/1
Swing "C" shaped rack frame	45	2200		EG2204K *	1/1
180° opening hinge for swing rack frame and braket				EV0004	1/1
kit for fixing swing rack frame "C" shaped				EV0007 <sup>(1)</sup>	1/1

<sup>(1)</sup> To be ordered always with new off-center swing rack frame with "C" shaped uprights EG1804K, EG2004K, EG2204K..

\* Available until the end of 2020.

#### Screws and nuts parts

Description	Code	Package/ No. of pieces
No.50 screws M6 x 13mm cross rounded head	EV6130	1/50
No.50 cage nut M6 for square hole 9,2 x 9,2mm	EV6131	1/50
No.20 cage nut M5 for square hole 9,2 x 9,2mm	EV0102	1/50
No.20 Torx M5 screws with nylon washer L=16mm	EV0103	1/20
No.20 Torx M6 screws with nylon washer L=16mm	EV0104	1/20

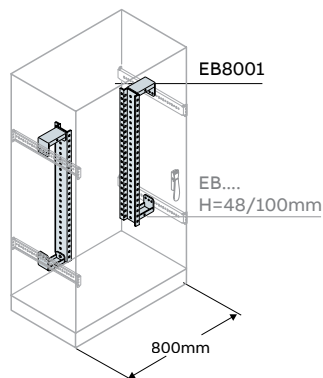
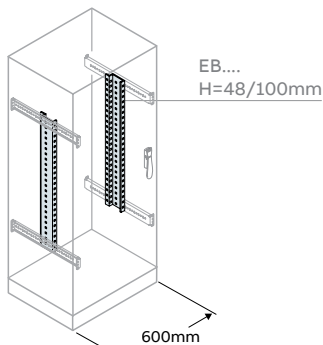
## IS2 Enclosures

### Ordering codes - Completion of structures

EG1500K-EG1900K-EG1130K

#### 19" rack structure

##### Partial 19" cranked shaped uprights

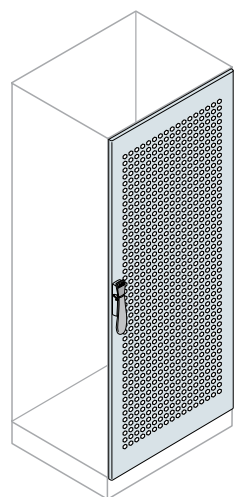


Description	No. HE	Dimensions (mm)		Code	Package/ No. of pieces
		H	W		
Partial shaped uprights	9	500	600/	EG1500K <sup>(1)</sup> *	1/1
Partial shaped uprights	18	900	800	EG1900K <sup>(1)</sup> *	1/1
Partial shaped uprights	27	1300		EG1130K <sup>(1)</sup> *	1/1
No.2 brackets for fixing total/partial cranked shaped uprights			800	EB8001 <sup>(2)</sup>	1/2

<sup>(1)</sup> In enclosures 600 mm wide, the cranked shaped rack uprights can be fixed in the middle height of the enclosures by means of standard crosspieces EB.... see page 2-70.

<sup>(2)</sup> To be combined with the standard cross EB.... see page 2-70.

\* Available until the end of 2020.



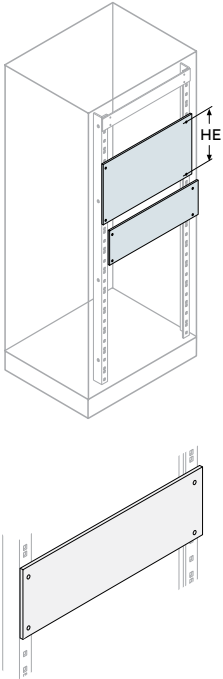
#### Aerated door IP20

Aerated door made of RAL 7035 colour 1,2mm thick sheet, fitted with polyurethane gasket, complete with handle with double tongue key (interchangeable with other types of inserts, see pag. 5-104). Reversible (hinged on the right as standard) with 4 closing points and complete with internal reinforcement frame and earthing pins.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Aerated door for server cabinet	1800	800	EC1882	1/1
Aerated door for server cabinet	2000		EC2082	1/1
Aerated door for server cabinet	2200		EC2282	1/1
Aerated door for server cabinet with 180° opening	1800	800	EC1884	1/1
Aerated door for server cabinet with 180° opening	2000		EC2084	1/1
Aerated door for server cabinet with 180° opening	2200		EC2284	1/1

## IS2 Enclosures

### Ordering codes - Completion of structures



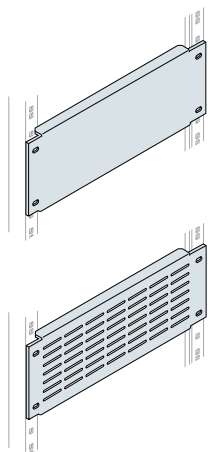
#### Equipment for 19" rack frame

##### Panel for 19" rack frames aluminium

Panels made of 3,00 Aluminium

Description	No. HE	Dimensions (mm)		Code	Package/ No. of pieces
		H			
Blind aluminium panel	1HE	44,45		EG1991	1/1
Blind aluminium panel	2HE	89		EG1902	1/1
Blind aluminium panel	3HE	133		EG1903	1/1
Blind aluminium panel	4HE	177,5		EG1904	1/1
Blind aluminium panel	5HE	222		EG1905	1/1
Blind aluminium panel	6HE	266,5		EG1906	1/1
Blind aluminium panel	7HE	311		EG1907	1/1
Blind aluminium panel	8HE	355,5		EG1908	1/1
Blind aluminium panel	9HE	400		EG1909	1/1
Blind aluminium panel	10HE	444,5		EG1910	1/1
Blind aluminium panel	11HE	488		EG1911 *	1/1
Blind aluminium panel	12HE	533		EG1912	1/1
Blind aluminium panel	13HE	577,5		EG1913 *	1/1
Blind aluminium panel	14HE	622		EG1914 *	1/1
Blind aluminium panel	15HE	666		EG1915 *	1/1
Blind aluminium panel	16HE	711		EG1916	1/1
Blind aluminium panel	17HE	755,5		EG1917	1/1
Blind aluminium panel	18HE	800		EG1918	1/1
Blind aluminium panel	19HE	844,5		EG1999 *	1/1
Blind aluminium panel	20HE	889		EG1920 *	1/1

\* Available until the end of 2020.



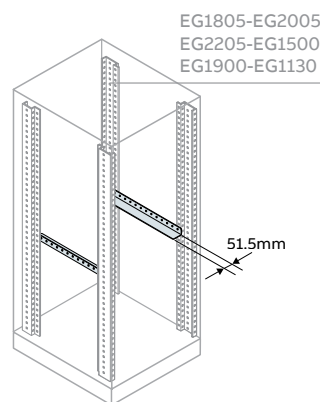
##### Blind and aerated panel in steel sheet 1,5mm for 19" rack frame RAL 7035

Description	No. HE	Dimensions (mm)		Code	Package/ No. of pieces
		H			
Blind panel RAL 7035	1HE	44,45		EG0119	1/1
Blind panel RAL 7035	2HE	89		EG0219	1/1
Blind panel RAL 7035	3HE	133		EG0319	1/1
Blind panel RAL 7035	4HE	177,5		EG0419	1/1
Blind panel RAL 7035	5HE	222		EG0519	1/1
Blind panel RAL 7035	6HE	266,5		EG0619	1/1
Blind panel RAL 7035	7HE	311		EG0719	1/1
Blind panel RAL 7035	9HE	400		EG0919	1/1
Blind panel RAL 7035	10HE	444,5		EG1019	1/1
Blind panel RAL 7035	12HE	533		EG1219	1/1
Blind panel RAL 7035	14HE	622		EG1419	1/1
Blind panel RAL 7035	15HE	666		EG1519	1/1
Blind panel RAL 7035	16HE	711		EG1619	1/1
Blind panel RAL 7035	18HE	800		EG1819	1/1
Blind panel RAL 7035	20HE	889		EG2019	1/1
Aerated panel RAL 7035	1HE	44,45		EH1991 *	1/1
Aerated panel RAL 7035	2HE	89		EH1992	1/1
Aerated panel RAL 7035	3HE	133		EH1993	1/1

\* Available until the end of 2020.

## IS2 Enclosures

### Ordering codes - Completion of structures



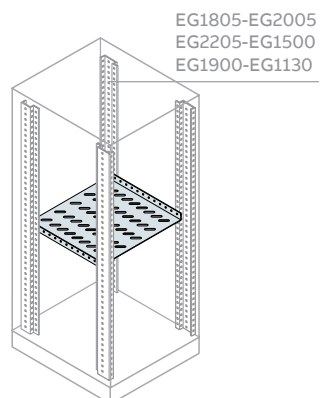
#### Equipment for 19" rack frame

##### "L" shaped accessories support for 19" cranked shaped upright

"L" shaped accessories support couple in galvanized sheet 2,00mm, fixing at 25mm pitch in depth on front and rear uprights..

Description	D (mm) Structure	Code	Package/ No. of pieces
"L" support couple - W=500mm	600	EV0020	1/1
"L" support couple - W=600mm	800	EV0021	1/1
"L" support couple - W=800mm	1000	EV0022	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

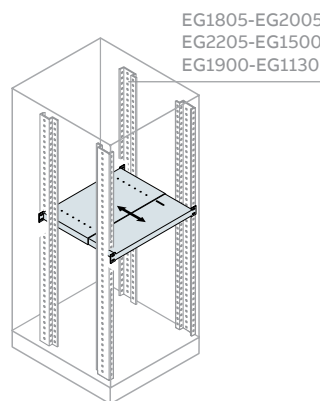


##### Universal shelves for 19" cranked shaped uprights

Universal shelves in galvanized sheet 2,00mm, fixing at 25mm pitch in depth. Mounting on front and rear uprights.

Description	D (mm) Structure	Code	Package/ No. of pieces
Universal fixed shelf- 450x400mm (WxD)	600	EV0400	1/1
Universal fixed shelf- 450x600mm (WxD)	800	EV0600	1/1
Universal fixed shelf- 450x800mm (WxD)	1000	EV0800	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

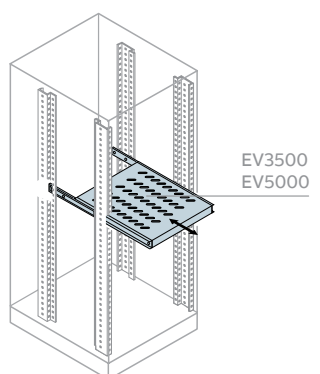


##### Adjustable in depth shelf for 19" cranked shaped uprights

Adjustable in depth shelf 1 HE in galvanized sheet 2,00mm, RAL 7035. Mounting on front and rear uprights.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Adjustable in depth shelf 1HE (distance between fixing plans 440-665mm)	450	450	EV0041	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.



##### Withdrawable shelves for cranked and "C" shaped uprights profile

Withdrawable shelves for equipments. Fixing on the front and rear fixed uprights.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	D			
Withdrawable shelf D=350mm with telescopic slides and 2HE fixing elements	350		EV3500*	1/1
Withdrawable shelf D=500mm with telescopic slides and 1HE fixing elements	500		EV5000**	1/1

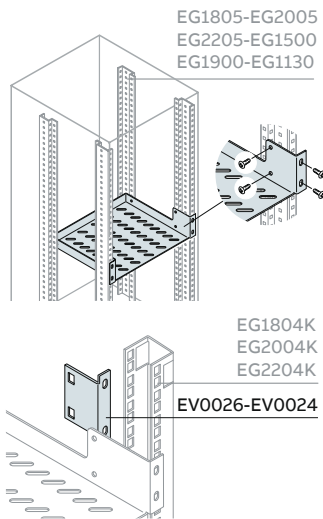
\* For cranked shaped uprights and "C" shaped swing frame.

\*\* Only for cranked shaped uprights.



## IS2 Enclosures

### Ordering codes - Completion of structures



#### Equipment for 19" rack frame

##### Fixed shelf for apparatus

Fixed shelves 2HE and 1HE to be mounted at the front (rear upright are not necessary, only for additional fixing point) on 19" cranked shaped uprights and on "C" shaped swing frames with 2 adaptation brackets (EV0026/EV0024).

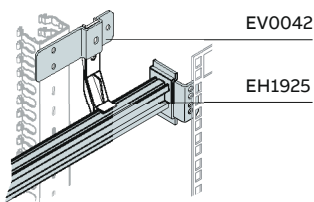
Description	Dimensions (mm)		Package/ No. of pieces
	D	Code	
1 fixed shelf 1HE front/back	385	EV1385 *	1/1
1 fixed shelf 2HE front/back	385	EV2385	1/1
No.2 brackets for 1HE shelf on "C" shaped swing frame		EV0026 *	1/2
No.2 brackets for 1HE shelf on "C" shaped swing frame		EV0024	1/2

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

\* Available until the end of 2020.

##### DIN rail and support for cable duct

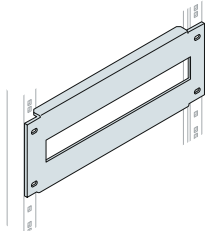
DIN rail and support for cable duct for cranked shaped upright and on "C" shaped swing frame.



Description	Code	Package/ No. of pieces
DIN rail for rack 19" frame 25 mod. and fixing brackets	EH1925	1/4
Horizontal/vertical support for cable duct	EV0042	1/4

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

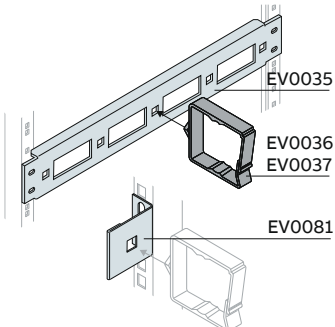
##### Steel panels for modular apparatus 19" rack frame RAL 7035



Description	Dimensions (mm)		Package/ No. of pieces	
	No. HE	H		
DIN panel	3HE	133	EH0003	1/1
DIN panel	4HE	177,5	EH0004	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

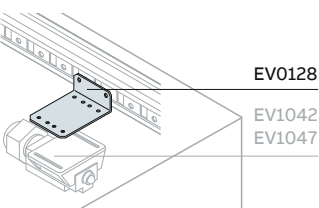
##### Universal cable holder panel



Description	Code	Package/ No. of pieces
Cable holder panel 1 HE RAL 7035	EV0035	1/1
No.5 bracket for cable holder	EV0081	1/5
No.5 cable holder D=28,5mm	EV0036	1/5
No.5 cable holder D=55mm	EV0037	1/5

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

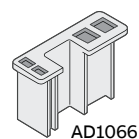
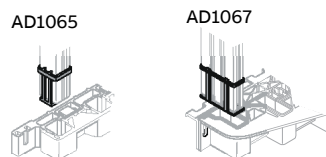
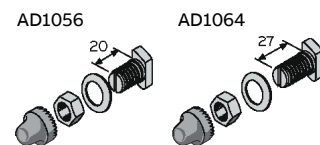
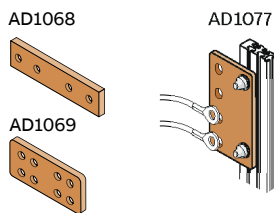
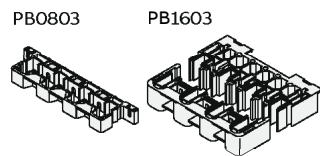
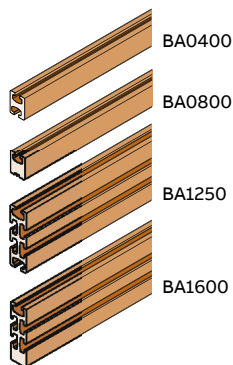
##### Limit kit switch for swing frame



Description	Code	Package/ No. of pieces
Limit kit switch for swing frame	EV0128	1/1

## IS2 Enclosures

### Ordering codes - Completion of structures



### Distribution and earthing system

#### Distribution busbars with shaped section

Description	Length (mm)	Code	Package/ No. of pieces
Busbar In=400A	1730	BA0400	1/1
Busbar In=800A	1730	BA0800	1/1
Busbar In=1250A	1730	BA1250	1/1
Busbar In=1600A	1730	BA1600	1/1

#### Busbars holder for busbar with shaped section

To be used with crosspieces H 48mm to be drilled (see page 2-63).

Description	Code	Package/ No. of pieces
Linear busbar holder In=800A - 35kA	PB0803	1/1
Linear busbar holder In=1600A - 65kA	PB1603	1/1

#### Joints for busbars

Description	Code	Package/ No. of pieces
No.4 800A joints for busbars with shaped section (with 800/1250/1600A busbars)	AD1068	1/4
No.4 1250/1600A joints for busbars with shaped section with 1250/1600A busbars)	AD1069	1/4
No.4 copper 400A branch joints	AD1077	1/4

#### Hammer seal screws

Description	Code	Package/ No. of pieces
No.12 screws M8 - W=20mm for cable terminal	AD1056	1/12
No.12 screws M8 - W=27mm for flats up to 10 mm, complete with screwcovering cap	AD1064	1/12

#### Resting bases

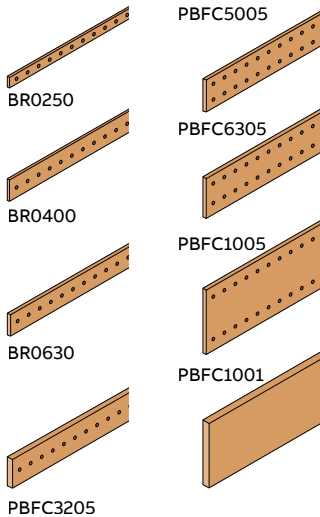
Description	Code	Package/ No. of pieces
No.4 400/800A busbar resting bases	AD1065	1/4
No.4 1250/1600A busbar resting bases	AD1067	1/4

#### Adapters for busbars

Description	Code	Package/ No. of pieces
No.4 adapters for busbars In =400/800A with busbar holder (PB1603)	AD1066	1/4

## IS2 Enclosures

### Ordering codes - Completion of structures

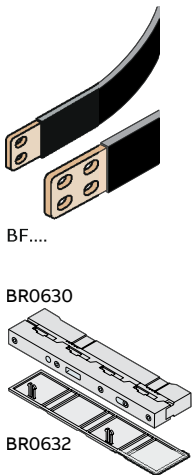


### Distribution and earthing system

#### Flat busbars

Description	Lenght (mm)	Code	Package/ No. of pieces
No.2 busbars In=250A section: 15x5mm	1750	BR0250	1/2
No.2 busbars In=400A section: 25x5mm	1750	BR0400	1/2
No.2 busbars In=630A section: 30x10mm	1750	BR0630	1/2
No.1 busbars In=400A, section: 32x5mm	1750	PBFC3205	1/1
No.1 busbars In=630A, section: 50x5mm	1750	PBFC5005	1/1
No.1 busbars In=800A, section: 63x5mm	1750	PBFC6305	1/1
No.1 busbars In=1250A, section: 100x5mm	1750	PBFC1005	1/1
No.1 busbars In=1600A, section: 100x10mm	1750	PBFC1001	1/1

#### Flexible busbars

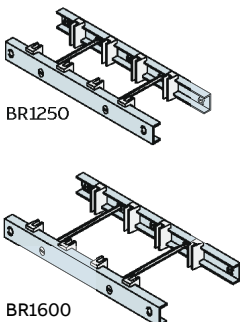


Description	Lenght (mm)	Code	Package/ No. of pieces
No.2 flexible busbars, section 20x3 In=250A	2000	BF1602	1/2
No.2 flexible busbars, section 20x5 In=400A	2000	BF2502	1/2
No.2 flexible busbars, section 20x6 In=500A	2000	BF4002	1/2
No.2 flexible busbars, section 32x5 In=630A	2000	BF4012 <sup>(1)</sup>	1/2
No.2 flexible busbars, section 40x8 In=1000A	2000	BF6302	1/2
No.2 flexible busbars, section 50x10 In=1250A	2000	BF8002	1/2

<sup>(1)</sup> Only for circuit-breakers with extended front terminals or rear terminals.

#### Busbar holder

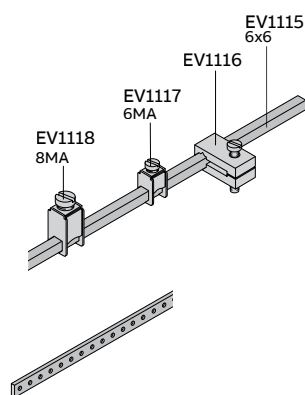
To use with crosspieces H=48mm to drill (see page 2-63)



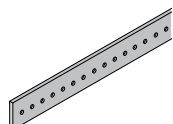
Description	Code	Package/ No. of pieces
No.2 linear busbar holders In=630A - 32kA	BP0630	1/2
No.2 terminal covers for linear busbar holders BP0630	BP0632	1/2
No.2 busbar holder for busbars 5mm thickness	BP1250	1/2
No.2 busbar holder for busbars 10mm thickness	BP1600	1/2

## IS2 Enclosures

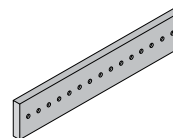
### Ordering codes - Completion of structures



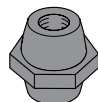
EV1119



EV1120

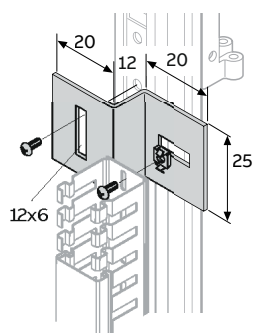


EV1121

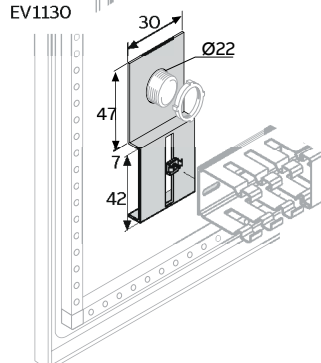


EV1122-EV1123

EV1124-EV1125



EV1130



EV1131

### Distribution and earthing system

#### Cables for earthing

Description	Dimensions (mm)		Code	Package/No. of pieces
	H	L		
No.5 earthing cables sect. 16mm	17	200	AA6840	1/5
No.5 earthing cables sect. 16mm	17	300	AA6850	1/5
No.5 earthing cables sect. 25mm	22	200	AA6880	1/5
No.5 earthing cables sect. 25mm	22	300	AA6890	1/5

#### Neutral/earthing copper busbars

Description	Code	Package/No. of pieces
Neutral/earthing busbar 6x6mm W=2000mm	EV1115	1/1
No. 50 insulators for neutral/earthing busbar for EV1115	EV1116	1/50
No. 100 terminals for cable ø0.5-16mm <sup>2</sup> for EV1115	EV1117	1/100
No. 100 terminals for cable ø4-35mm <sup>2</sup> for EV1115	EV1118	1/100
No. 2 drilled and threaded 20x5mm busbars M6 W=2000mm	EV1119	1/2
No. 2 drilled and threaded 25x5mm busbars M6 W=2000mm	EV1120	1/2
No. 2 drilled and threaded 50x5mm busbars M6 W=2000mm	EV1121	1/2
No.50 hexagonal insulators 30x30mm M6	EV1122	1/50
No.50 hexagonal insulators 30x30mm M8	EV1123	1/50
No.25 hexagonal insulators 36x50mm M6	EV1124	1/25
No.25 hexagonal insulators 36x50mm M8	EV1125	1/25

#### Wiring duct support brackets

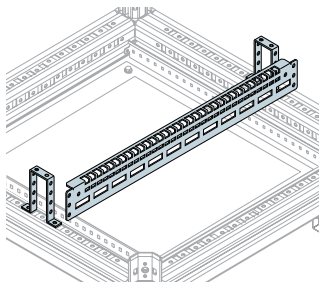
Description	Code	Package/No. of pieces
No. 100 wiring duct support brackets on upright structure	EV1130	1/100
No. 100 wiring duct support brackets on pushbuttons ø 22	EV1131	1/100

#### Screws for apparatus

Description	Code	Package/No. of pieces
No.1000 perforating screws 4.2x13mm cross slotted head	EV1100	1/1000
No.1000 perforating screws 4.2x19mm cross slotted head	EV1101	1/1000
No.50 trilobed screws M6 L=10mm	AD1033	1/50

## IS2 Enclosures

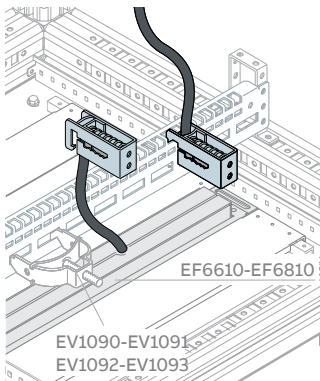
### Ordering codes - Completion of structures



#### Distribution and earthing system

##### Bracket for EMC clamps and anchor cables

Description	Dimensions (mm)		Package/No. of pieces
	W	Code	
Bracket for EMC clamps and anchor cables	600	EV0068	1/1
Bracket for EMC clamps and anchor cables	800	EV0069	1/1

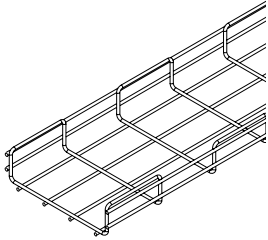


##### EMC clamps

Description	Code	Package/No. of pieces
No.10 EMC clamps for cables Ø min 10 mm max 20 mm	EV0108	1/10
No.10 EMC clamps for cables Ø min 15 mm max 28 mm	EV0109	1/10
No.10 EMC clamps for cables Ø min 4 mm max 15 mm	EV0110	1/10
No.10 EMC clamps for cables Ø min 3 mm max 10 mm	EV0111	1/10
No.10 EMC clamps for cables Ø min 20 mm max 37 mm	EV0112	1/10

## IS2 Enclosures

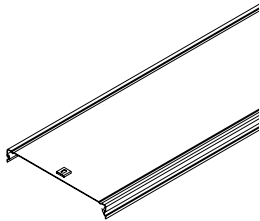
Ordering codes - Completion of structures



Distribution and earthing system

### Steel wire sendzimir painted trays W=3000mm

Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Straight element B 75mm	35	1SL9816A00	24
Straight element B 100mm		1SL9817A00	24
Straight element B 150 mm		1SL9818A00	24
Straight element B 200mm		1SL9819A00	12
Straight element B 300mm		1SL9820A00	12
Straight element B 75mm	50	1SL9836A00	24
Straight element B 100mm		1SL9037A00	24
Straight element B 150 mm		1SL9838A00	24
Straight element B 200mm		1SL9839A00	12
Straight element B 300mm		1SL9840A00	12
Straight element B 400mm		1SL9841A00	6
Straight element B 500mm		1SL9842A00	6
Straight element B 75mm	75	1SL9860A00	24
Straight element B 100mm		1SL9861A00	24
Straight element B 150 mm		1SL9862A00	24
Straight element B 200mm		1SL9863A00	12
Straight element B 300mm		1SL9864A00	12
Straight element B 400mm		1SL9865A00	6
Straight element B 500mm		1SL9866A00	6



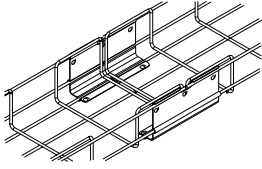
### Sendzimir covers W=3000mm

Description	Code	Package/ No. of pieces
Straight cover B 75mm	07241	24
Straight cover B 100mm	07242	24
Straight cover B 150mm	07243	24
Straight cover B 200mm	07244	12
Straight cover B 300mm	07245	12
Straight cover B 400mm	07246	6
Straight cover B 500mm	07247	6

## IS2 Enclosures

### Ordering codes - Completion of structures

1SL9907A00-1SL9886A0  
1SL9887A000

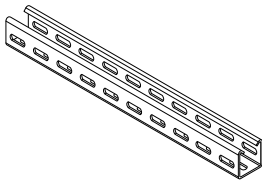


### Distribution and earthing system

#### Straight sendzimir separator sections

Description	Code	Package/ No. of pieces
Separator section W 2000 mm for trays H 35 mm	1SL9904A00	1/20
Separator section W 2000 mm for trays H 50 mm	06652	1/20
Separator section W 2000 mm for trays H 75 mm	07855	1/20

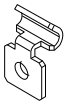
1SL9910A00÷1SL9915A00



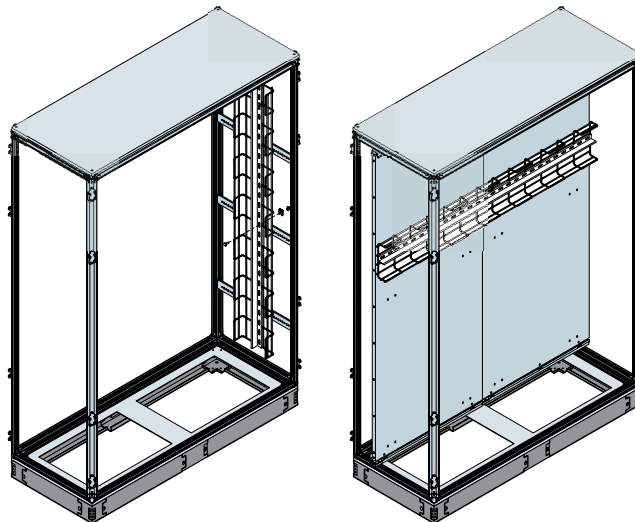
#### Sendzimir accessories

Description	Code	Package/ No. of pieces
Linear joint	1SL9880A00	1/2
Snap-on linear joint for trays H 35mm	1SL9907A00	1/2
Snap-on linear joint for trays H 50mm	1SL9886A00	1/2
Snap-on linear joint for trays H 75mm	1SL9887A00	1/2
Fixing element for shelf complete with screws	1SL9893A00	1/10
Crosspiece L 150mm for trays B 75-100mm	1SL9910A00	1/10
Crosspiece L 200mm for trays B 150mm	1SL9911A00	1/10
Crosspiece L 250mm for trays B 200mm	1SL9912A00	1/10
Crosspiece L 350mm for trays B 300mm	1SL9913A00	1/10
Crosspiece L 450mm for trays B 400mm	1SL9914A00	1/10
Crosspiece L 550mm for trays B 500mm	1SL9915A00	1/10

1SL9893A00

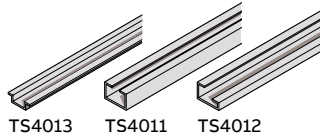


Note: The steel wire trays are also available in the following versions: unpainted sendzimir; electro-galvanisation; hot galvanisation after processing.

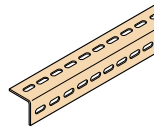


## IS2 Enclosures

### Ordering codes - Completion of structures



TS4013 TS4011 TS4012



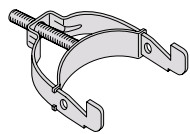
TS4000-TS4001-TS4002  
TS4003-TS4004

### Distribution and earthing system

#### Sections for accessories

Universal sections of different types for mounting any component or for cable locking.

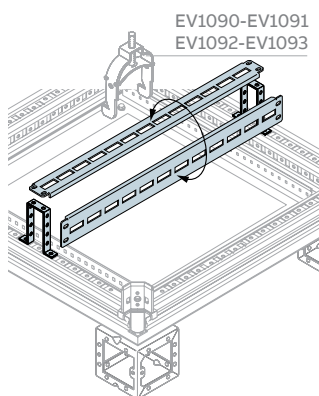
Description	Dimensions (mm)		Package/ No. of pieces
	W	Code	
No. 2 EN sections 5002 C30	2000	TS4011	1/2
No. 2 EN sections G32	2000	TS4012	1/2
No. 2 DIN EN sections 5022 35x7.5	2000	TS4013	1/2
No. 2 sections for structures	600	TS4000	1/2
No. 2 sections for structures	800	TS4001	1/2
No. 2 sections for structures	1000	TS4002	1/2
No. 2 sections for structures	1200	TS4003	1/2
No. 2 sections for structures	1600	TS4004	1/2



#### Brackets for anchoring cables

adjustable cable clamping bracket. Can be mounted on sections with 10mm slot EV1050.

Description	Code	Package/ No. of pieces
No. 10 cable clamping brackets Ø9÷16mm min÷max	EV1090	1/10
No. 10 cable clamping brackets Ø16÷30mm min÷max	EV1091	1/10
No. 5 cable clamping brackets Ø30÷48mm min÷max	EV1092	1/5
No. 5 cable clamping brackets Ø48÷72mm min÷max	EV1093	1/5



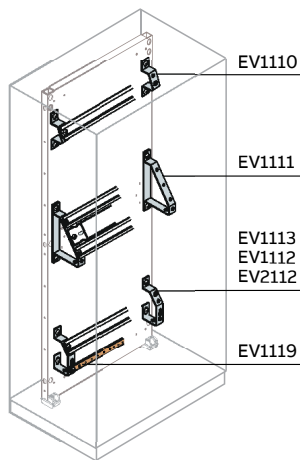
#### Rail for anchoring cables

Description	Dimensions (mm)		Package/ No. of pieces
	W	Code	
Rail for anchoring cables	600	EV0070	1/1
Rail for anchoring cables	800	EV0071	1/1



## IS2 Enclosures

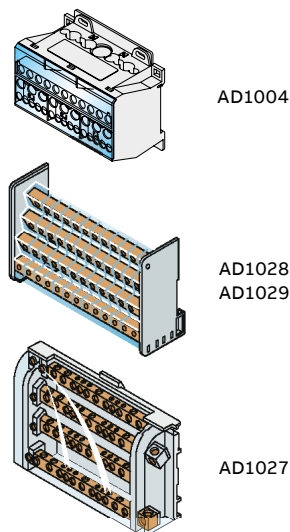
### Ordering codes - Completion of structures



#### Distribution and earthing system

##### Angled supports for terminal boxes and earthing busbars

Description	Code	Package/ No. of pieces
No.50 angled supports 1 row of terminals	EV1110	1/50
No.10 angled supports 1 row of terminals	EV2110	1/10
No.2 angled supports 1 row of terminals + earth	EV1113	1/2
No.50 angled supports 1 row of terminals + earth	EV1112	1/50
No.10 angled supports 1 row of terminals + earth	EV2112	1/10
No.10 angled supports double row of terminals	EV1111	1/10

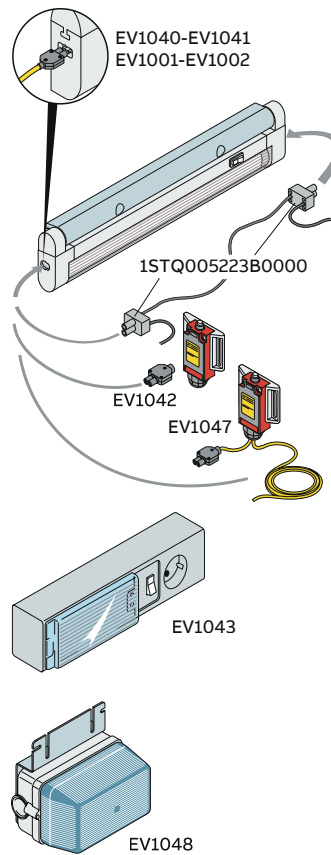


#### Modular dividers

Description	Code	ABB Code	Package/ No. of pieces
<b>Four-pole</b>			
Modular 125A	AD1004	1STQ008291A0000	1/1
Modular 125A - 93x89x48mm (HxWxD)	AD1028	1STQ008295A0000	1/1
Modular 125A - 96x126x48mm (HxWxD)	AD1029	1STQ008296A0000	1/1
Modular 160A - 90x160.5x50mm (HxWxD)	AD1027	1STQ008294A0000	1/1

## IS2 Enclosures

### Ordering codes - Completion of structures



#### Lighting and signalling devices

##### Led electronic lamp/fluorescent lamps

The electronic led lamps 3.6 W and 6.5 W and fluorescent lamps 8 W and 13 W are complete with mounting brackets and can be integrated with devices for voltage indicator.

The lamps have the following characteristics:

- Rotatable 180 degrees on the axis of the aluminum bracket
- Possibility of being mounted in series up to 5 elements (Fig. 1), the chain of lamps can be controlled by a single micro switch simplifying the installation and reducing the number of cables for connecting of the elements.

Moreover, the conformation of the electronic led lamps provides a very wide light emission and an increase of 70% compared to traditional lamps. So a lamp 8W is comparable with a 14W, and 13W with a version from 18/21W.

Description	Code	Package/ No. of pieces
<b>Led electronic lamp</b>		
Led electronic lamp 3,6W-24V AC/DC L=342mm	EV1001	1/1
Led electronic lamp 6,5W-24V AC/DC L=574mm	EV1002	1/1
<b>Fluorescent lamps</b>		
Fluorescent lamp 8W-220/240V L=342mm	EV1040	1/1
Fluorescent lamp 13W-220/240V L=574mm	EV1041	1/1
Fluorescent lamp + socket 11W-230V L=355mm, complete with magnetic support	EV1043	1/1
<b>Lamp holder</b>		
Lamp holder E27 220V max 60W (without lamp)	EV1048	1/1

##### Accessories for lamps

Description	Code	Package/ No. of pieces
System for positioning limit switch + connector (to be cabled) No.2 NC contacts	EV1042	1/1
No.5 universal bipolar power connectors	1STQ005223B0000	1/5
Two-pole cable L=10 metres	EV1045	1/1
Limit switch and cabled two-pole connector	EV1047*	1/1

\* There are two cables L=1900mm and L=380mm in the pack.

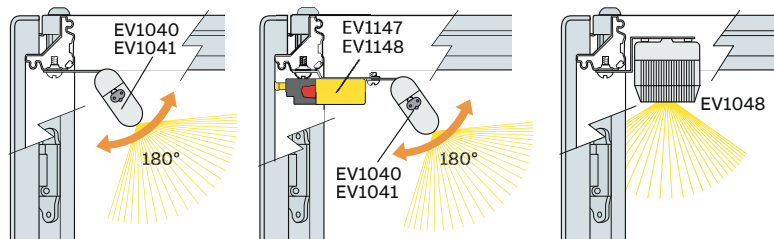
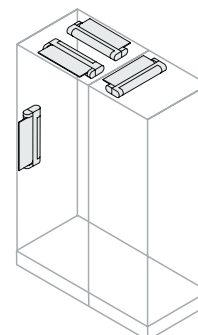
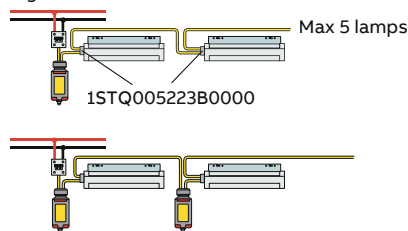
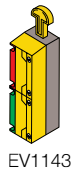
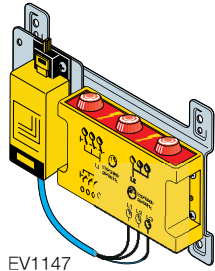
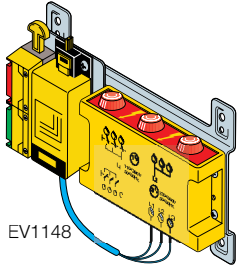


Fig. 1



## IS2 Enclosures

### Ordering codes - Completion of structures



#### Lighting and signalling devices

##### Voltage detector device

Allows the passive safety level to be increased inside the electric enclosure, flashing when the door is opened. The basic version consists of a three-phase flashing light, three-pole limit switch and fixing bracket.

Compared to the basic version, the one with an auxiliary circuit is completed with a mechanical interlock which activates the electric contacts to control the auxiliary circuits. The interlock is always fitted with a NC contact code EV1144 (NO installed with door closed) which allows supply of a current launching coil.

A NC contact EV1144 can be added (NO installed with door closed) to allow opening of an undervoltage coil. It is also possible to supply circuits relative to internal lighting and/or to turn off fans/air conditioners using other contacts 2 NC EV1144, NO installed with door closed).

Order the fixing screws W=46mm code EV1146 separately for any additional contact. NO contact EV1145 (NC installed with door closed) is also available.

Possibility of exclusion during the testing stage with relative automatic recover when the door has been closed. In compliance with EN60947- 5-1 Standards, UL approved, operating temperature from -25 °C to +65 °C.

Flashing: terminal capacity max. 3mm<sup>2</sup>, Ue/Ie auxiliary contact capacity:

110V/6A, 230V/3A, 400V/2A, 600V/1.2A.

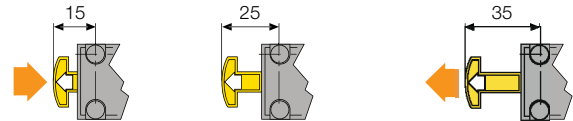
Rated thermal current Ith: 10 A

Max. terminal capacity: 2x1.5mm<sup>2</sup> / 1x3mm<sup>2</sup>

Flashing signalling device:

- Single phase 110-400V DC/AC 50/60Hz power supply voltage
- Three-phase AC 220-690V 50/60Hz

Description	Ue (V)	Ui (V)	Code	Package/ No. of pieces
Voltage detector device	380/600	690	EV1147	1/1
Voltage detector device interlock + 1 NC contact	380/600	690	EV1148	1/1
Interlock + 1 NC contact			EV1143	1/1
1 NC contact			EV1144	1/1
1 NO contact			EV1145	1/1
Screw L=46mm x 2 contacts			EV1146	1/1



	Code	Closed door	Open door	Open door By pass
Position of contacts	EV1144	⋮	⋮ ]	⋮
	EV1145	[	⋮	[

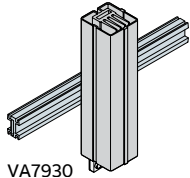
##### Position switch

Conforming to the EN50047 Standard, IP65 degree of protection, UL/CSA approved, can be assembled in all the positions directly on the enclosure structure by means of the accessory supplied. Technical data: Ui=500V Dimensions: 84x30x30mm. Aux. contact In =3A at 230V≈ or 1.8A at 400V≈ (in AC-15 EN 60947-5-1).

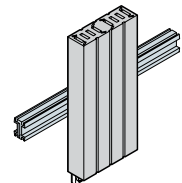
Description	Code	Package/ No. of pieces
Door position device	EV1140	1/1

## IS2 Enclosures

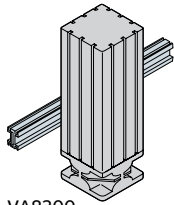
### Ordering codes - Completion of structures



VA7930  
VA7950  
VA7975  
VA7910



VA7915



VA8300

### Temperature management

#### Heater for IP20 electrical switchboards

Their use prevents condensation in the electric cabinets. They consist of a heating element (PTC thermistor) inserted in an aluminium alloy ground plate. The PTC thermistor is a component which modifies its impedance according to the operating temperature. It is intrinsically stable and ensures primary safety features for the heater and service stability.

The main qualities of the heaters using PTC are:

- electrical absorption (or dissipated power) which is almost constant in the range of power supply voltage between 100 and 250V;
- electrical absorption bound by inverse law to the trend of the ambient temperature.
- natural or forced ventilator with incorporated ventilator;
- ambient thermostat integrated in the heater (versions with forced ventilation).

Snap-on assembly on 35 mm DIN rail. Requires a thermostat.

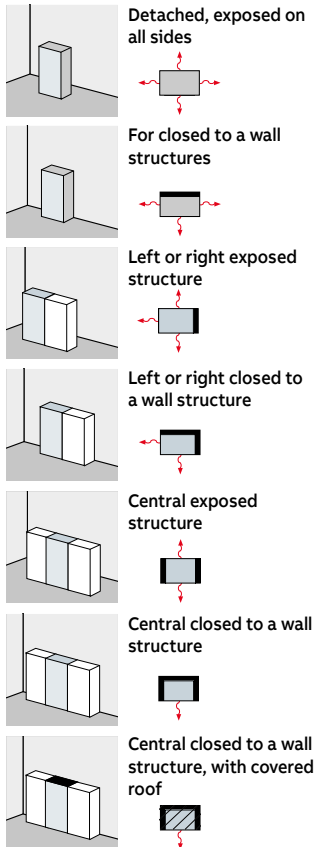
Description	Dimensions (mm)			Weight (kg)	Inrush current (A)	Fuse/ MCB (A)	Code	Package/ No. of pieces
	H	W	D					
Anti-condensation heater 30W, 110-240 Vac-dc	125	125	42	0,30	1.0-1.5	2 / C6	VA7930	1/1
Anti-condensation heater 50W, 110-240 Vac-dc	150	150	42	0,40	1.0-1.5	2 / C6	VA7950	1/1
Anti-condensation heater 75W, 110-240 Vac-dc	150	150	42	0,40	2.0-2.5	2 / C6	VA7975	1/1
Anti-condensation heater 100W, 110-240 Vac-dc	150	150	51	0,45	2.0-3.0	2 / C6	VA7910	
Anti-condensation heater 150W, 110-240 Vac-dc	150	150	51	0,55	5.0-6.0	4 / C10	VA7915	1/1
Anti-condensation heater with fan 300W, 110-240 Vac 50-60H	125	125	91	0,75	8.0-10	4 / C10	VA8300	1/1

All the heaters with PTC absorb a higher power than the rated one on inrush according to a transitory which lasts a few tenths of a second.

If the heaters are to be supplied by means of an auxiliary transformer, its apparent power must be sized taking 1.5 times the rated power of the heaters with natural aeration and twice those with forced ventilation into consideration.

# IS2 Enclosures

## Ordering codes - Completion of structures



### Temperature management

#### IEC 890 method for calculating the effective cooling surface (CEI 17-43 method)

The total power dissipation P of an enclosure is linked to the exchange effective dissipating surface S, the ΔT difference between the inner and outer temperature and the k coefficient of heat exchange relative to the material of the enclosure:

$$P = k * \Delta T * S$$

k = 5,5 for painted steel

$$\Delta T = T1 - T2;$$

T1 = dew point temperature (on average 25°C)

T2 = minimum ambient temperature.

The exchange surface S can be calculated using the following table taken from the CEI 17-43.

Disposition of the cabinet	Calculating the enclosure surface S (mm²)	Dimensions (m)
Detached, exposed on all sides	$S = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$S = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$S = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$S = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$S = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$S = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$S = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

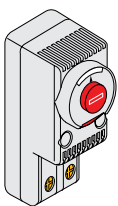
Using a ES1804K enclosure, in "for closed to a wall structures" case we will obtain:  
 $T1 = 25 \text{ °C}$ ,  $T2 = 20 \text{ °C}$ ,  $K = 5,5$ ,  $\Delta T = (25-20) = 5 \text{ °C}$ ,  $S = 4,4\text{m}^2$

The total power dissipation P obtained will be:  
 $P = k * \Delta T * S = 121\text{W}$

The recommended heater is VA7915 (150W).

### IP20 Thermostat

Conforms to EN 60730-1, CE and cURus standards, IP20 degree of protection. Grey RAL 7035 colour; electrical life 100,000 cycles. Dimensions (HxWxD) 68x29x45mm, can be mounted on DIN rail. The version with NO (normally open) contact allows closure of a circuit activating ventilation, air conditioning, or alarms. The version with NC (normally closed) contact allows opening of a circuit, disconnecting any anti-condensation resistances.



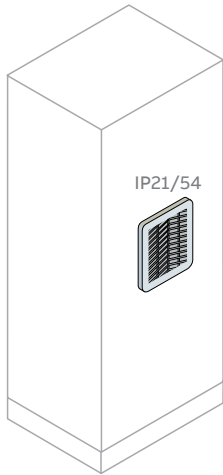
Description	Standard power supply V~/50-60Hz	Code	Package/ No. of pieces
NO ventilation thermostat	12-60 V d.c.; 110-250V a.c.	EN0101K	1/1
NC heating thermostat	12-60 V d.c.; 110-250V a.c.	EN0102K	1/1

### Technical information

Code	Standard power supply V~/50-60Hz	Contact capacity		Temperature scale	Type of contact	Weight
		Load Ω	Load L			
EN0101K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NO	54g
EN0102K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NC	54g

## IS2 Enclosures

### Ordering codes - Completion of structures

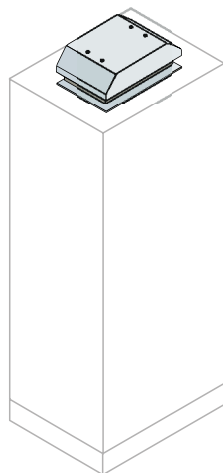


#### Temperature management

##### IP21/54 natural ventilation kit

Gratings made of insulating material (self-extinguishing ABS UL94V-0) RAL7035 colour, complete with high dust collection capacity filter cloth (600g/m<sup>2</sup>), able to reduce maintenance interventions (cleaning by means of washing in water or by beating). Degree of protection IP21 without filter, IP54 with filter according to IEC 60529, Type 1 without filter, Type 12 with filter according to UL approval 508 fitted with pre-assembled gasket seal. CE and cURus approval.

Air entry surface for ventilation		Dimensions (mm)		Code	Package/ No. of pieces
Without filter cm <sup>2</sup>	With filter cm <sup>2</sup>	W	W		
<b>Grille+air passage filter kit</b>					
27	6	105	105	EN0105K	1/1
53	10	150	150	EN0150K	1/1
121	22	204	204	EN0204K	1/1
225	32	250	250	EN0250K	1/1
317	55	325	325	EN0325K	1/1

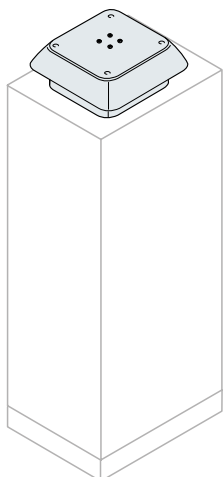


##### IP23 aeration hood

Structure made of steel painted RAL7035 colour, complete with selfadhesive gasket seal. Useful aeration section 128 cm<sup>2</sup>.

Description	Dimensions (mm)			Code	Custom Made Service	Package/ No. of pieces
	W	W	D			
Roof aeration kit	375	295	119	EN0481K	<input checked="" type="checkbox"/>	1/2

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



##### IP54 ventilation hood

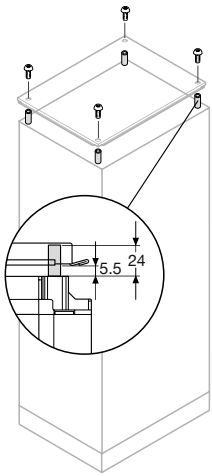
Structure made up of plastic PC/ABS and aluminium (PC/ABS selfextinguishing according to UL 94V-0) painted RAL 7035 with polyuretanic foam gasket. CE and cURus approval.

Description	Dimensions (mm)			Code	Custom Made Service	Package/ No. of pieces
	W	W	D			
Roof aeration kit	324	324	94	EN0483K	<input checked="" type="checkbox"/>	1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures

### Ordering codes - Completion of structures

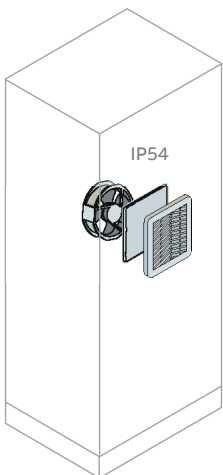


#### Temperature management

##### IP20 natural aeration Kit

Allows the roof of the cabinet to be raised, increasing natural ventilation, keeping the IP20 degree of protection. This Kit must not be mounted when the lifting eyebolts are mounted for handling the enclosure.

Description	Code	Package/ No. of pieces
Roof aeration Kit (IP20)	AE1015	1/1



##### IP54 forced ventilation Kit

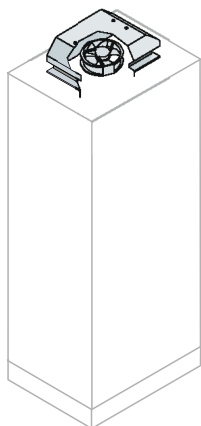
Grilles made of insulating material (ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600g/m<sup>2</sup>), able to reduce maintenance interventions (cleaning by washing with water or beating). IP54 degree of protection with filter according to UL approval 508 fitted with pre-mounted tightness gasket. Operating temperature -10 °C + 50 °C, for noise values see page 8-50. The fans allow reversible flow of air. CE and cURus (see mark) approval.

Air entry surface for ventilation		Dimensions (mm)		Code	Package/ No. of pieces	
Consumption 50/60Hz (W)	Capacity 50/60Hz (m <sup>3</sup> /h)	W	H			
<b>Ventilation filter with IP54 230V ~ fan</b>						
10/8	23/30	105	105		EN1105K	1/1
20/19	57/61	150	150		EN1150K	1/1
17/15	120/135	204	204		EN1204K	1/1
29/29	240/270	250	250		EN1250K	1/1
67/87	520/580	325	325		EN2325K	1/1
<b>Ventilation filter with IP 54 1150V~ fan</b>						
9/7	23/30	105	105		EN2105K	1/1
20/18	57/61	150	150		EN2150K	1/1
17/15	120/135	200	200		EN2204K	1/1
30/30	240/270	250	250		EN2250K	1/1
50/64	520/580	325	325		EN3325K	1/1

In any forced ventilation kit, the fan wheel is balanced. In the larger sizes (cod. EN2325K and cod. EN3325K) there is the balancing clip. The balanced fan wheel ensures less noise and absorption.

## IS2 Enclosures


### Ordering codes - Completion of structures



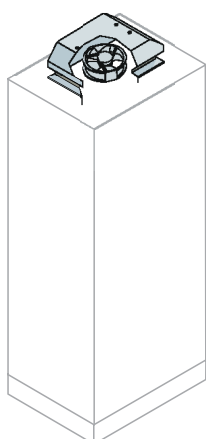
#### Temperature management

##### IP23 forced ventilation hood

Allows suction from the roof of the cabinet. RAL 7035 colour, complete with self-adhesive gasket; consumption 58/78W, capacity 550/590m<sup>3</sup>/h. Operating temperature from -20 °C to + 60 °C, noise 68/71dB(A).


Description	Dimensions (mm)			Code		Custom Made Service	Package/ No. of pieces
	W	W	D				
Ventilation hoods 230V - 50/60Hz	375	295	119	EN0480K	✓		1/1
Ventilation hoods 115V - 50/60Hz	375	295	119	EN0482K	✓		1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

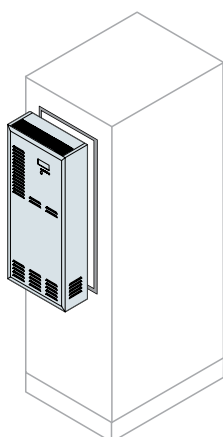


##### IP54 Forced ventilation hood

This hood allows the aspiration of the heat from the roof of the cabinet. Structure made up of plastic PC/ABS (PC/ ABS self-extinguishing according to UL 9V-0), with the top part in aluminium, painted RAL 7035 with polyuretanic foam gasket. CE omologation.

Description	Dimensions (mm)			Code		Custom Made Service	Package/ No. of pieces
	W	W	D				
Cappa di ventilazione 115V - 50/60Hz	324	324	94	EN0484K	✓		1/1
Cappa di ventilazione 230V - 50/60Hz	324	324	94	EN0485K	✓		1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



##### IP54 air conditioners for wall mounting

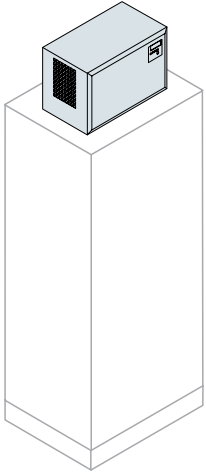
Dimensions (mm)			Refrigerating yield (W)	Capacity (m <sup>3</sup> /h)		Assorbedpower (W)	Code	Package/ No. of pieces
H	W	D		Evaporat.	Condens.			
<b>Wall mounting - Power supply 230V AC</b>								
1025	380	198	605	380	400	330	VZ1550K	1/1
1025	380	198	810	350	400	400	VZ1850K	1/1
<b>Wall mounting+switchboard - Power supply 230V AC</b>								
1025	380	198	1300	350	600	650	VZ1400K	1/1
1200	380	230	1926	500	950	800	VZ2000K	1/1

The filters are not included.



## IS2 Enclosures

### Ordering codes - Completion of structures

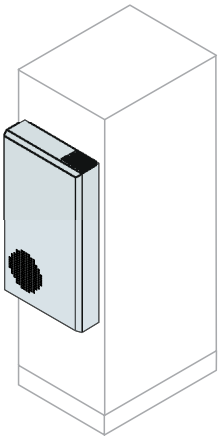


#### Temperature management

##### IP54 air conditioners for roof mounting

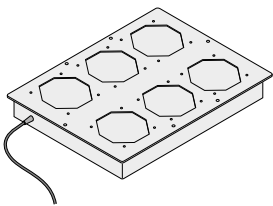
Dimensions (mm)			Refrigerating yield (W)	Capacity (m <sup>3</sup> /h)		Code	Package/ No. of pieces
H	W	D		Evaporat.	Condens.		
<b>Roof mounting- Power supply 230V AC</b>							
350	600	400	810	350	400	VZ8501K	1/1
<b>Roof mounting+switchboard- Power supply 230V AC</b>							
350	600	400	1300	350	600	VZ1401K	1/1

Not suitable for enclosure W=600 mm  
Filters are not included.



##### IP54 heat exchangers (air-air) for wall mounting

Dimensions (mm)			Refrigerating yield (W)	Capacity (m <sup>3</sup> /h)	Code	Package/ No. of pieces
H	W	D		External		
<b>Wall mounting- Power supply 230V AC</b>						
710	370	130	35	200	VS4235K	1/1
900	435	175	85	300	VS6285K	1/1



##### Ventilation roof module

The ventilation roof module is composed of a galvanized steel sheet base 2,00mm and a steel painted cover RAL7035, that hosts the fans.

There are two available products:

Empty ventilation module, that has a pre-cut in order to accommodate the fans

Ventilation module with 3 fans powered by 48V dc

Each figure has an internal pre-wired terminal block for wiring the fans and a power cord L=2.5 m. The increase of the air flow is possible through the addition of a ventilation kit (Code EV0061); each ventilation kit has the tools for the wiring and installation in the ventilation roof module.

Description	Code	Package/ No. of pieces
Ventilation empty roof module	EV0058	1/1
No.1 fan 230V a.c. 50/60 Hz wiring material	EV0061	1/1

##### Technical characteristics

###### EV0061

Standard power supply: 230V 50/60 Hz

Total power consumption: 15W

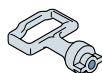
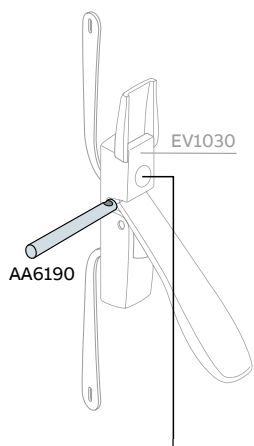
Capacity air of the fan: 150 m<sup>3</sup>/h

Noise: 37-41 dB (A)

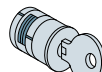
Drilling template 8-45.

## IS2 Enclosures

### Ordering codes - Completion of structures



AD1058

AA6200  
AA8004PIRH0455  
PIRH2432  
PIRH1242  
PIRH0405

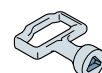
AA6160



AA1570



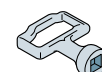
AA6120



AA1560



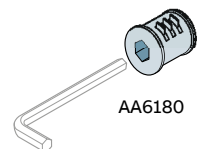
AA6140



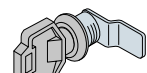
AA6141



EV1039



AA6180



AA8003




EV1008

EV1036  
EV1037

## Accessories

### Closing systems

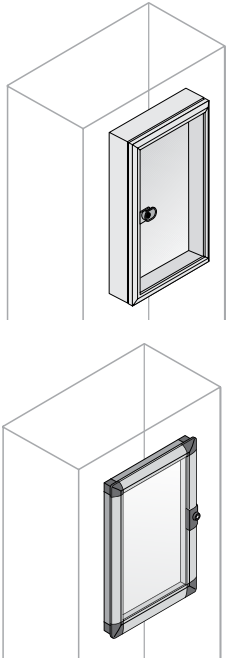
Inserts interchangeable with the double tongue ones supplied as standard, complete with relative key.

Description	Code	 Custom Made Service	Package/ No. of pieces
<b>Spare parts and accessories for EV1030 handle</b>			
No. 10 plastic covers for IS2 handle	EV0101		1/1
Handle complete with lock	EV1030		1/1
Zamak (Zn+Al+Mg) alloy key for double tongue insert, for external door, single door version	AD1058		1/1
Yale insert and key for external door, single door version	AA6200	✓	1/1
Ronis E739 insert and key for external door, single door version	AA8004	✓	1/1
Ronis insert 455 and key	PIRH0455		1/1
Ronis insert 2432E and key	PIRH2432		1/1
Ronis insert 1242E and key	PIRH1242		1/1
Ronis insert 405 and key	PIRH0405		1/1
FIST (FIAT) insert for external door, single door version	AA6160	✓	1/1
FIAT key for external door, single door version	AA1570		1/1
Triangular insert, 6.4 male on Ø7.6, for external door, single door version	AA6120	✓	1/1
Key for triangular insert for external door, single door version	AA1560		1/1
Square insert, 7 male, for external door, single door version	AA6140	✓	1/1
Key for square insert for external door, single door version	AA6141		1/1
Hexagonal insert, 8mm socket type; key not available; for external door, single door version	AA6180	✓	1/1
Double tongue insert without key for handle	EV1039		1/1
Accessory for handle locking with external padlock (not provided)	AA6190		1/1
<b>Spare parts and accessories for EV1008 box</b>			
Box with double tongue insert made in plastic with key for inner door	EV1008		1/1
Single code Yale insert for inner door	EV1036		1/1
Ronis 455 insert for inner door	EV1037		1/1
Double tongue insert with plastic key for box	AA6100		1/1

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures

### Ordering codes - Completion of structures



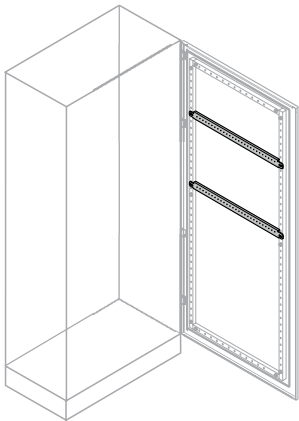
#### Accessories

##### IP20 and IP54 protective windows with glass with or without frame

Made of aluminium, complete with pre-assembled gasket and closure box with interchangeable double tongue key. Can hold components with 38 and 69mm depth. The dimension of the frame 30mm. 140° door opening.


Dimensions (mm)				Code	Package/ No. of pieces
H	W	Usable D			
<b>Protection windows IP20 with frame</b>					
400	400	79		EV1081 *	1/1
600	200	48		EV1082 *	1/1
600	200	79		EV1083 *	1/1
600	400	79		EV1085 *	1/1
600	600	79		EV1087 *	1/1
<b>Protection windows IP54 without frame</b>					
400	400	26		EV8880 *	1/1
600	600	26		EV8881 *	1/1
600	400	26		EV8882 *	1/1

\* Available until the end of 2020.

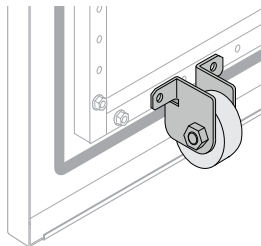


##### Horizontal reinforcement profiles for door

Crosspieces made of galvanised sheet with 25 mm pitch drilling, allow accessories to be fixed inside the blind doors. They are fixed onto the door reinforcement tube.

Description	Dimensions (mm)		Code	 Custom Made Service	Package/ No. of pieces
	W	H			
No.2 horizontal profiles H=35mm	600		EB1041	✓	1/2
No.2 horizontal profiles H=35mm	800		EB1042	✓	1/2
No.2 horizontal profiles H=35mm	1000		EB1043	✓	1/2

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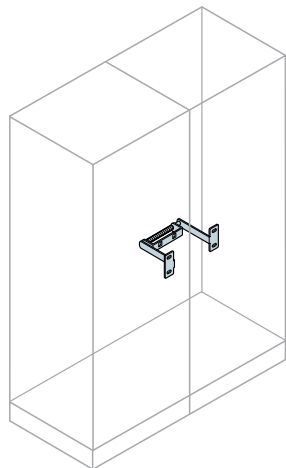
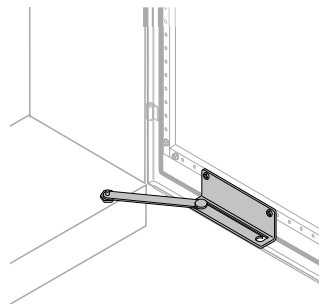
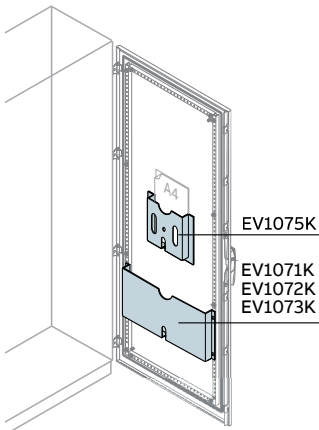
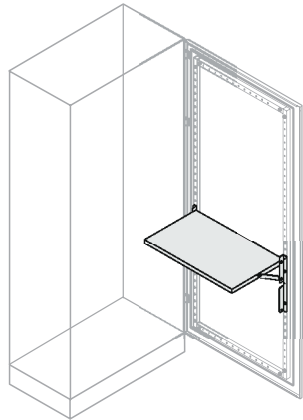
##### Door supporting wheel

Use in case of heavy loads on blind doors (e.g. air conditioner).

Description	Code	Package/ No. of pieces
Supporting wheel for door W≥600mm	EV1000	1/1

## IS2 Enclosures

### Ordering codes - Completion of structures



### Accessories

#### Folding shelves for door

Description	Dimensions (mm)		Package/ No. of pieces
	W	Code	
Shelf 280x250mm (WxD) for door	600	EV1060K *	1/1
Shelf 480x250mm (WxD) for door	800	EV1061K *	1/1

\* Available until the end of 2020.


#### Document pockets RAL 7035

Fixed inside the door by means of adhesive parts in the case of the plastic version EV1075K, or directly by means of screws to the sections of the door for the metal versions. Both versions are RAL 7035 colour.

Description	Dimensions (mm)		Package/ No. of pieces
	W	Code	
Metal document pocket for door	600	EV1071K	1/1
Metal document pocket for door	800	EV1072K	1/1
Metal document pocket for door	1000	EV1073K	1/1
Plastic document pocket for A4		EV1075K	1/1

#### Door anti-closure and locking device

Device which can only be mounted in the versions with blind door; in the case of double door versions, two devices are needed. Keeps the door in the open position.


Description	Code	 Custom Made Service	Package/ No. of pieces

For blind doors W≥600mm. Cannot be mounted with glazed doors, with inner door and with modular panel installed in the last available position.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

#### Door lock

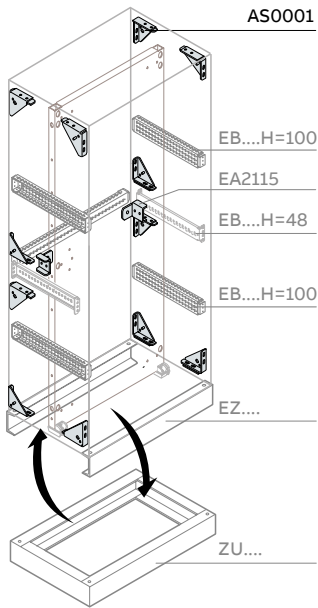
In the case of several cabinets side by side, this prevents a door being opened before the adjacent door has been opened. It is therefore possible to bind opening the doors of an entire battery of cabinets side by side to opening of a single door. Can be mounted on doors with the same opening direction.

Description	Code	 Custom Made Service	Package/ No. of pieces

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

# IS2 Enclosures

## Ordering codes - Completion of structures



### Accessories

#### Antiseismic tests

Tests constitute a reference base for similar structures for dimensions and for load. IS2 enclosures 2000x800x800mm (HxWxD) with uniform distributed load of 435 kg. Enclosures have been tested according to the Standards CEI EN 60068-2-6 and IEC 60068-2-57 "Environmental testing Part. 2: Tests method. Vibration - Time history method" and to the Standard IEEE Std 693 "Recommended Practice for Seismic Design of Substation".

#### Similar application fields\*

##### Enclosure without specific accessories

According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
Shock level test up to 0.5 g	Zone 4	7	9

##### Enclosure with specific accessories AS0001+crosspieces+reinforced plinth

According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
Shock level test up to 0.75 g	Zone 4	7,5	10

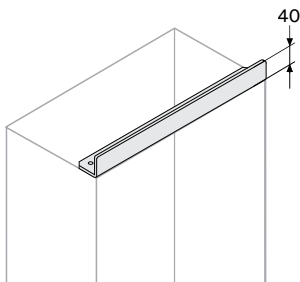
\* Values of different scales are indicative.

#### Codes of structures for seismic zone

Antiseismic kit is made of n.12 reinforced angles to be mounted on the side and in the corners of structure and in correspondence of the crosspieces... H=100mm to be ordered. Enclosure must be completed with other crosspieces EB....H=48mm and with the reinforced plinth or the single plinth.

Description	Code	Package/ No. of pieces
No.12 reinforced antiseismic angles	AS0001	1/12
Crosspieces H=48mm (see pag. 2-70) C-shaped profile	EB....	
Crosspieces H=100mm (see pag. 2-70) C-shaped profile	EB....	
Reinforced plinth H=100mm (see pag. 2-70)	EZ....	
Single plinth H=100mm (see pag. 2-64)	ZU....*	

\* Maximum length of 6m.  
For single cabinet use reinforced plinth.



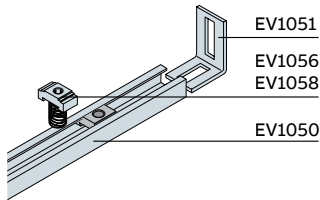
#### Dust guard trim in metal sheet 1,5mm RAL 7035

Dust guard trim avoids the deposit of dust on the upper edge of the door and between the door and the roof of the cabinet. On the dust guard trim is possible fix labels, buttons or lights.

Description	Dimensions (mm)		Package/ No. of pieces
	W	Code	
Metal dust guard trim RAL 7035	600	EV0063	1/1
Metal dust guard trim RAL 7035	800	EV0064	1/1

## IS2 Enclosures

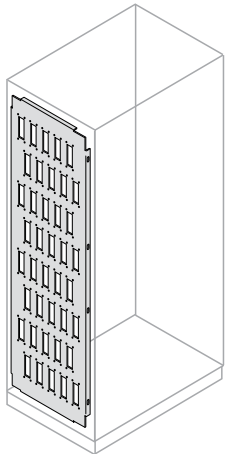
### Ordering codes - Completion of structures



### Accessories

#### Sliding aluminium rails for general purposes

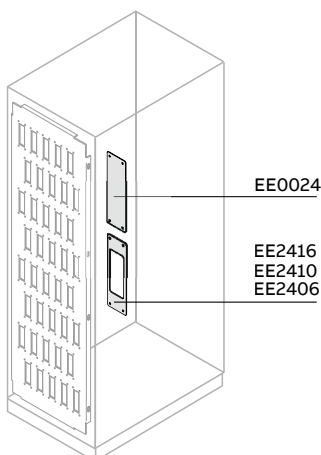
Description	Code	Package/ No. of pieces
No. 10 aluminium section 30x15x1,8 - L=2000mm	EV1050	1/10
No. 25 fixing brackets for EV1050	EV1051	1/25
No. 100 M6 aluminium nuts for EV1050	EV1056	1/100
No. 100 M8 aluminium nuts for EV1050	EV1058	1/100



#### Connector holder panel

Panel made of 2,00mm thick galvanised steel sheet prepared with drillings for 24-pole connectors.

Dimensions (mm)					Package/ No. of pieces
H	D	Total No.holes	No. lines/holes	Code	
1800	500	36 holes	9/4	EE1852	1/1
	600	45 holes	9/5	EE1862	1/1
2000	500	40 holes	10/4	EE2052	1/1
	600	50 holes	10/5	EE2062	1/1
2200	500	48 holes	12/4	EE2252	1/1
	600	60 holes	12/5	EE2262	1/1



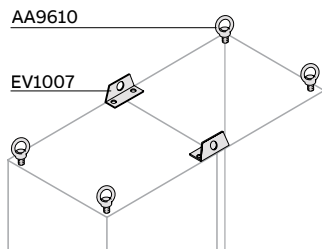
#### Connector plates

These allow closure of the unused holes on the connector holder panels.

Description	Code	Package/ No. of pieces
No.10 24-pole connector closure plates	EE0024	1/10
No.5 plates for reducing connectors from 24 to 16 poles	EE2416	1/5
No.5 plates for reducing connectors from 24 to 10 poles	EE2410	1/5
No.5 plates for reducing connectors from 24 to 6 poles	EE2406	1/5

## IS2 Enclosures


### Ordering codes - Completion of structures



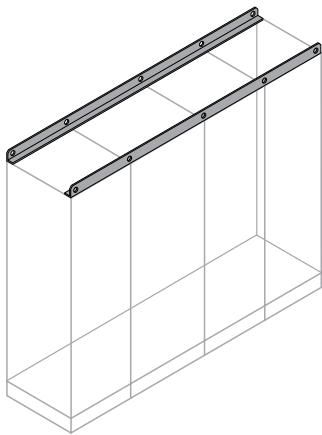
### Accessories

#### Lifting eyebolts and lifting reinforcements

These allow the cabled enclosures to be handled. The lifting eyebolts are made of steel treated with white passivated galvanisation, the lifting reinforcements are painted grey RAL 7012 colour.


Description	Code	 Custom Made Service	Package/ No. of pieces
No.4 lifting eyebolts M12	AA9610	✓	1/4
No.2 lifting reinforcements	EV1007	✓	1/2

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



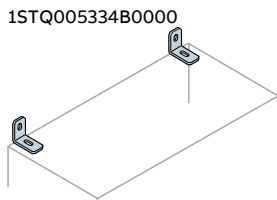
#### Lifting beams

The beam is prepared with holes for lifting tools. Length up to 6 metres. Grey RAL 7012 colour orange peel.

Description	Code	 Custom Made Service	Package/ No. of pieces
A pair of lifting beams for enclosures side by side	TU1000	✓	1/2
A pair of lifting beams for enclosures side by side - Assembled	TU1001	✓	1/2

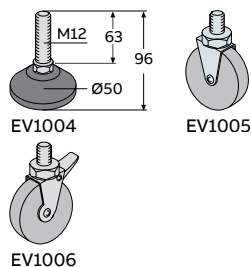
- Service only valid for factory pre-assembled enclosures.
- The drawing of the front view of the enclosure battery must always be enclosed, specifying the width, depth and sequence of the enclosures for each column.
- Unit of measurement for the order: METRE.
- Maximum width of 6m.

✓ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



#### Fixing brackets for IS2 H=1400 or H=1600mm

Description	Code	Package/ No. of pieces
Fixing brackets for H=1400/1600mm	1STQ005334B0000	1/2




#### Feet and wheels

Description	Code	Package/ No. of pieces
No.4 M12 levelling feet (500kg each)	EV1004	1/4
No.4 Ø 80mm free wheels (70kg each)	EV1005 *	1/4
No.4 Ø 80mm braked wheels (70kg each)	EV1006	1/4

\* Available until the end of 2020.

#### Hinges opening 180°

Made of 2,5mm thick sheet, allow the door to be opened 180° also for battery assembled enclosures.

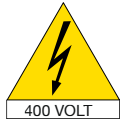
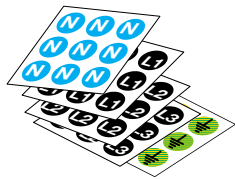
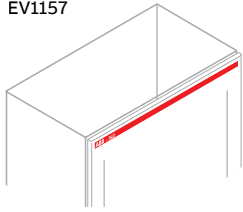
Description	Code	 Custom Made Service	Package/ No. of pieces
No.4 hinges opening 180°	CR0181	CR0180M*	1/4

\*The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

## IS2 Enclosures

### Ordering codes - Completion of structures

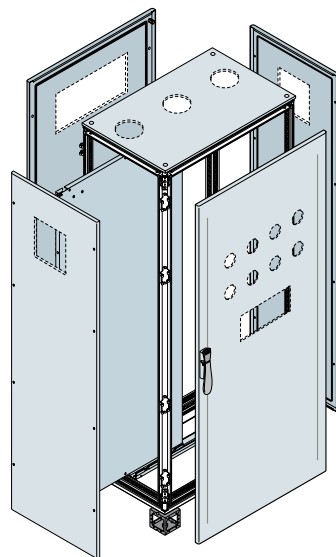
EV1157



### Accessories

#### Marking

Description	Code	Package/ No. of pieces
No.5 adhesive labels ABB-IS2 W=1000mm	EV1157	1/5
No.490 adhesive labels Ø 12mm N symbol	EV1150	1/490
No.490 adhesive labels Ø 12mm L1symbol	EV1151	1/490
No.490 adhesive labels Ø 12mm L2 symbol	EV1152	1/490
No.490 adhesive labels Ø 12mm L3 symbol	EV1153	1/490
No.490 adhesive labels Ø 12mm T symbol	EV1154	1/490
No.10 triangular adhesive labels 125mm with 400V lightning arrow symbol	EV1155	1/10
No.100 triangular adhesive labels 50mm with lightning arrow symbol	EV1156	1/100



Custom  
Made  
Service

#### Special Painting Service

Special painting service has to be managed contacting your local sales network. It is necessary to specify the required color in the order. For any other component or further information, please contact your local sales network.

#### Special Drilling Service

Special drilling service has to be managed contacting your local sales network. It is necessary to attach the drawing of the drillings (in .dwg format) along with the order. For any other component or further information, please contact your local sales network.



## IS2 Enclosures

### Ordering codes - Completion of structures

#### Spare parts and mounting hardware

Description	Code	Package/ No. of pieces
Top 400x400mm (WxD)	EK4040RK	1/1
Top 400x500mm (WxD)	EK4050RK	1/1
Top 400x600mm (WxD-DxW)	EK4060RK	1/1
Top 400x800mm (WxD-DxW)	EK4080RK	1/1
Top 400x1000mm (WxD-DxW)	EK4010RK	1/1
Top 600x500mm (WxD)	EK6050RK	1/1
Top 600x600mm (WxD)	EK6060RK	1/1
Top 600x800mm (WxD-DxW)	EK6080RK	1/1
Top 600x1000mm (WxD-DxW)	EK6010RK	1/1
Top 800x500mm (WxD)	EK8050RK	1/1
Top 800x800mm (WxD)	EK8080RK	1/1
Top 800x1000mm (WxD-DxW)	EK8010RK	1/1
Top 1000x500mm (WxD)	EK1050RK	1/1
Top 1000x1000mm (WxD)	EK1010RK	1/1
Top 1200x400mm (WxD)	EK1240RK	1/1
Top 1200x500mm (WxD)	EK1250RK	1/1
Top 1200x600mm (WxD)	EK1260RK	1/1
Top 1200x800mm (WxD)	EK1280RK	1/1
Door closing lever mechanisms H=1800mm	EV1802 *	1/1
Door closing lever mechanisms H=2000mm	EV2002 *	1/1
Door closing lever mechanisms H=2200mm	EV2202 *	1/1
Door closing box complete with double tongue insert	EV1030	1/1
3mm double tongue insert	AA6100	1/1
Standard handle complete with double tongue insert (without tab)	EV1008	1/1
Double tongue insert for EV1030	EV1039	1/1
Zn + Al + Mg alloy double tongue key	AD1058	1/1

\* The code contains no.8 plastic guide blocks and no.2 locking rods.

## IS2 Enclosures

### Ordering codes - Completion of structures

#### Spare parts and mounting hardware

Description	Code	Package/ No. of pieces
Blind side panel 1800x400 (HxW)	EL1841K	1/1
Blind side panel 1800x500 (HxW)	EL1851K	1/1
Blind side panel 1800x600 (HxW)	EL1861K	1/1
Blind side panel 1800x800 (HxW)	EL1881K	1/1
Blind side panel 1800x1000 (HxW)	EL1811K	1/1
Blind side panel 2000x400 (HxW)	EL2041K	1/1
Blind side panel 2000x500 (HxW)	EL2051K	1/1
Blind side panel 2000x600 (HxW)	EL2061K	1/1
Blind side panel 2000x800 (HxW)	EL2081K	1/1
Blind side panel 2000x1000 (HxW)	EL2011K	1/1
Blind side panel 2200x400 (HxW)	EL2241K	1/1
Blind side panel 2200x500 (HxW)	EL2251K	1/1
Blind side panel 2200x600 (HxW)	EL2261K	1/1
Blind side panel 2200x800 (HxW)	EL2281K	1/1
Blind side panel 2200x1000 (HxW)	EL2211K	1/1
Track for front plate insertion D=400mm	EA0401	1/1
Track for front plate insertion D=500mm	EA0501	1/1
Track for front plate insertion D=600mm	EA0601	1/1
Track for front plate insertion D=800mm	EA0801	1/1
Track for front plate insertion D=1000mm	EA1001	1/1
No.5 sliding back plate kits with front insertion	EV0001	1/5
Cloth for filter 105x105mm (HxW)	EN3105	1/6
Cloth for filter 150x150mm (HxW)	EN3150	1/6
Cloth for filter 204x204mm (HxW)	EN3204	1/6
Cloth for filter 250x250mm (HxW)	EN3250	1/6
Cloth for filter 325x325mm (HxW)	EN3326	1/6
"IS2 survival kit" accessories and spare part items	EV1057 <sup>(1)</sup>	1/1

<sup>(1)</sup> Kit consisting of: No.10 mounting kits for plinth flanges H=100mm; No.10 kits for mounting uprights; No.10 mounting kits for rear/side panels; No.5 kits for mounting plate, No.10 kits for door accessories, No.4 hinges for IP on intermediate upright; No.6 squares box door with overlapping closure; No.5 kits of 50 pcs refill screws, No. 5 kits of 20 pcs cage nuts; No. 6 blocks for mounting door with overlapping closure.

## IS2 Enclosures

### Ordering codes - Completion of structures

#### Fixing accessories for apparatus

Description	Code	Package/ No. of pieces
No.1000 cross-cut head piercing screws 4.2x13mm	EV1100	1/1000
No.1000 cross-cut head piercing screws 4.2x19mm	EV1101	1/1000
No.50 screws M6 x 13mm cross rounded head	EV6130	1/50
No.50 cage nut M6 for square hole 9,2 x 9,2mm	EV6131	1/50
No.20 M5 cage nuts - insertion from the front	EV0102 <sup>(1)</sup>	1/20
No.20 M6 cage nuts - insertion from the front	AD1036 <sup>(2)</sup>	1/20
No.50 trilobed screws M6 L=10mm	AD1033	1/50
No.20 Torx screws M5 and nylon washer L=16mm	EV0103	1/20
No.20 Torx screws M6 and nylon washer L=16mm	EV0104	1/20
No.500 special screws for IS2 side and rear panels	EV1102	1/500
No.8 Hinges and rivets for IS2 standard uprights	EV1103	1/8

<sup>(1)</sup> For rack frames' squared holes and cage nuts 9.2x9.2mm.

<sup>(2)</sup> For rectangular holes 13x8,2mm.

## IS2 Enclosures

### Examples of configurations

#### Composition of the supply

##### Width $\leq 1000\text{mm}$

- Self-supporting galvanised steel structure consisting of a closed section drilled with 25mm pitch
- Removable roof
- Plinth H=100mm consisting of four angle pieces (2,5mm)
- Rear panel
- Blind door made of 2,00mm thick sheet, fitted with polyurethane gasket, complete with fixed handle with double tongue key. Reversible with 4 closure points and complete with internal reinforcement frame for  $W \geq 600\text{mm}$  and earthing pins.
- Glazed door made of 2,00mm thick sheet, with 4mm thickness safety glass, fitted with polyurethane gasket, complete fixed handle with double tongue key. Reversible with 4 closure points and complete with internal reinforcement frame and earthing pins.
- Cable container door (2,00mm) with opposite opening (standard hinging on the left) complete with double box with double tongue key (interchangeable) for cable container  $W=200\text{mm}$  or flange for cable container  $W=400\text{mm}$ , intermediate removable crosspiece and upright
- Packed separately

##### Width $\geq 1200\text{mm}$

- Self-supporting galvanised steel structure consisting of a closed section drilled with 25mm pitch
- Removable roof
- Plinth H=100mm consisting of four angle pieces plus intermediate support (3,00mm) and relative covering flanges
- Rear panel with 1,5mm thickness (two panels with  $W=800\text{mm}$  for the version  $W=1600\text{mm}$ )

- Blind doors (2,00mm) with opposite opening complete with internal reinforcement frame and lever closing mechanisms in four points, removable intermediate crosspiece and upright for improved access
- Glazed doors (2,00mm) with 4mm thickness safety glass and with opposite opening, complete with fixed handles with double tongue key (interchangeable) and lever closing mechanisms in four points, removable intermediate crosspiece and upright
- Packed separately

#### Completion items

Standard and oversized back plates with front and lateral insertion	Pag. 2-64
Cable entry flanges	Pag. 2-57
Plinth covering flanges H=100/200mm and reinforced plinth	Pag. 2-62
Side panels	Pag. 2-55
Crosspieces	Pag. 2-70
19" rack frames	Pag. 2-85
Lifting eyebolts and reinforcements	Pag. 2-113
Key inserts	Pag. 2-108
Fans, air conditioners	Pag. 2-104
Uprights, panels and DIN rails	Pag. 2-80

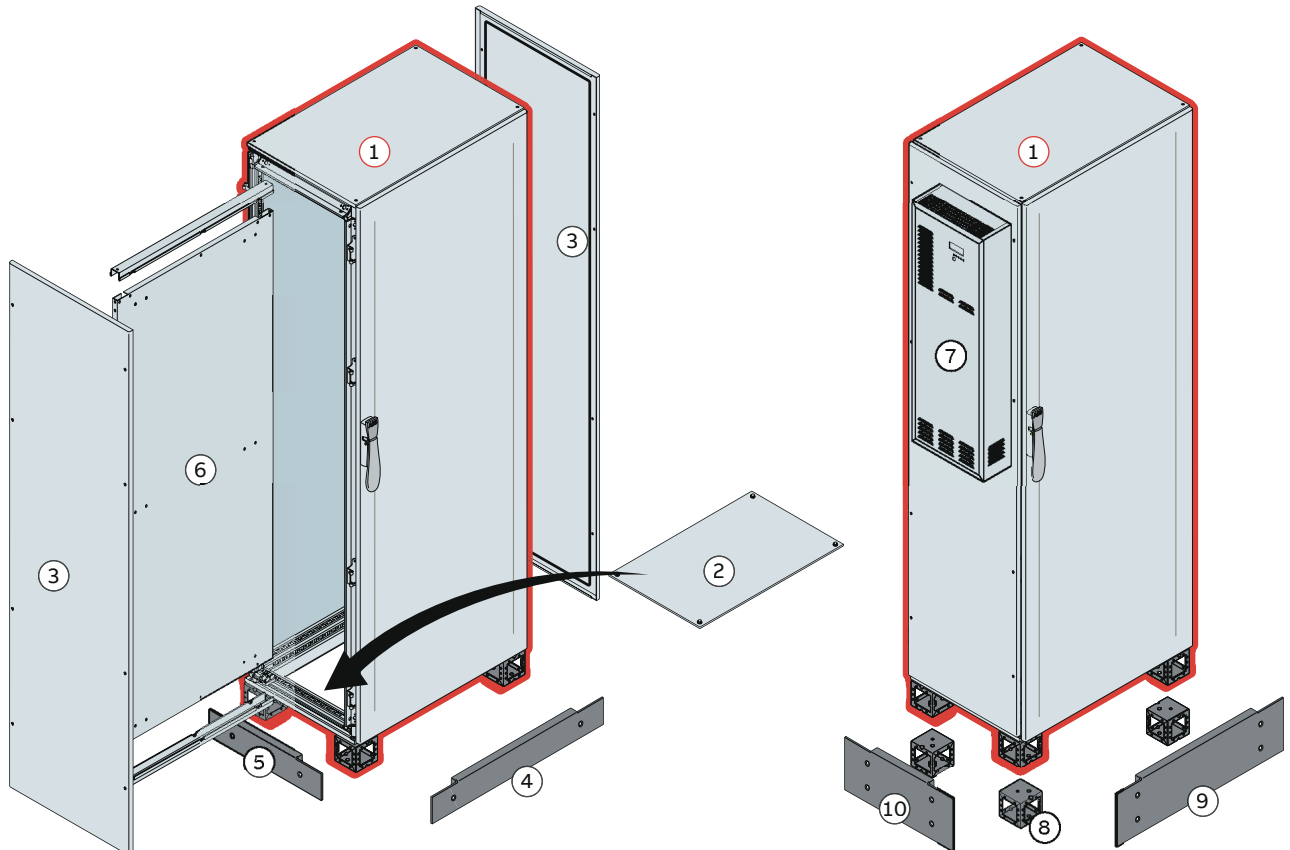
#### Technical characteristics

Conformity with Standard	IEC EN 62208, IEC EN 60439-1, IEC 62208	
Degree of protection	IP65 (IEC 60529) with fixed flanges	
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanized white
	external panelling	RAL 7035 orange peel
	plinth	RAL 7012 orange peel

## IS2 Enclosures

### Examples of configurations

#### Example of completion of pre-assembled structure



① ES2065K

Structure 2000x600x500 (HxWxD) complete with blind door and rear panel

#### Completion items

- |  |  |
|--|--|
| ② Structure 2000x600x500 (HxWxD) complete with blind door and rear panel | insertion  |
| ③ EL2050K No. 2 side panels  | ⑦ VZ1000K Super thin wall-mounted IP54 air conditioned |
| ④ ZN6000 No. 2 plinth flanges H=100mm front/rear                         | ⑧ ZN1010 No. 4 plinth angle pieces H=100mm             |
| ⑤ ZN5000 No. 2 plinth flanges H=100mm side                               | ⑨ ZN6002 No. 2 plinth flanges H=200mm front/rear       |
| ⑥ EA2161 Oversize back plate + tracks for lateral                        | ⑩ ZN5002 No. 2 plinth flanges H=200mm side             |

## IS2 Enclosures

### Examples of configurations

#### Configuration with compartments

##### Configuration with compartments

The cabinets with configuration with compartments can be constructed starting from pre-assembled structures, or from structure kits. The useful dimension is always 200mm less than the total height of the enclosure.

##### Composition of the supply with pre-assembled cabinet

- Pre-assembled self-supporting structure made of galvanised steel consisting of a closed section drilled with 25mm pitch preset for mounting the compartment cubicles and partial doors.
- Removable roof, plinth H=100mm (consisting of four angle pieces 2,5mm) and rear panel.
- The structures with internal compartment W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key. The structures with internal compartment W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), handle with double tongue key. Both versions are complete with removable intermediate upright and pair of crosspieces (top/bottom) for fixing the latter.

##### Composition of the supply with built-up cabinet

For construction of the cabinet kits, the base, top, uprights, panelling, doors, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

##### Base and top:

completely pre-assembled by means of 3-way joint complete with plinth angle pieces (2,5mm) H=100mm. Removable roof.

##### Uprights:

made of galvanised steel consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and partial doors, which can be mounted with just 8 screws at the base/top.

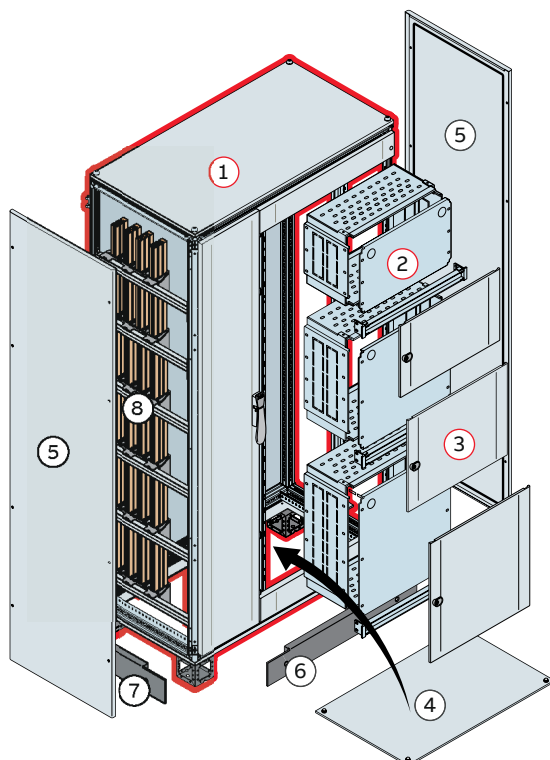
##### Rear panel:

made of 1,5mm thick sheet, fitted with polyurethane gasket.

##### Cable container door:

(2,00mm) opposite opening (standard hinging on the left) complete with double box with double tongue key (interchangeable), crosspiece and intermediate upright to be ordered separately for version with cable container montante intermedio da ordinare a parte in caso di versione con vano cavi.

#### Example of composition of a structure for configuration with compartments



##### Composition of pre-assembled structure 2000x800x600 (HxLxP)

- 1 ES2086MF2K Pre assembled cabinet with cable container and partial blind panels
- 2 2 EH.... Cubicles for compartments
- 3 EH....K Partial front panels for compartments

##### Completion items

- 4 EF8062 Bottom closure
- 5 EL2060K No. 2 side panels
- 6 ZN8000 No. 2 plinth flanges H=100mm front/rear
- 7 ZN6000 No. 2 plinth flanges H=100mm side
- 8 Busbar system with shaped section

## IS2 Enclosures

### Examples of configurations

#### Completion items

Cubicle for compartments	Pag. 2-78
Partial front doors	Pag. 2-79
Distribution system	Pag. 2-92
Cable entry flanges	Pag. 2-57
Plinth covering flanges H=100/200mm and reinforced plinth	Pag. 2-62
Side panels	Pag. 2-55
Crosspieces	Pag. 2-70
Lifting eyebolts and reinforcements	Pag. 2-113
Key inserts	Pag. 2-108

#### Technical characteristics

Conformity with Standard	IEC EN 62208, EN60439-1 - IEC 61439-1-2	
Rated service voltage Ue	up to 690 V	
Rated insulation voltage Ui	up to 1000 V	
Rated impulse withstand voltage Uimp	8 kV	
Rated current In	up to 1600 A	
Rated short-time short-circuit withstand	up to 65 kA	
Rated peak short-circuit current Ipk	143 kA	
Degree of protection	IP41 (IEC 60529)	
Degree of mechanical strength	IK10 (IEC 62262)	
Obtainable segregation forms	up to Form 3a	
Colour:	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

#### Segregated Form 3 PC version

Compartment selection according to the type of circuit-breaker

Type of circuit-breaker	Installation	H comp. Version (mm)		
		fixed	plug-in	
Tmax T1 - 3/4P	horizontal	200	✓	
Tmax T2/T3 - 3P	horizontal	200	✓	✓
Tmax T2/T3 - 4P	horizontal	300	✓	✓
Tmax T3 - 3/4P	vertical	300	✓	✓
Tmax T4 - 3P	horizontal	300	✓	✓
Tmax T4 - 3/4P	vertical	400	✓	✓
Tmax T5 - 3/4P	horizontal	300	✓	
Tmax T5 - 3P	horizontal	300		✓
Tmax T5 - 4P	horizontal	400		✓
Tmax T5 - 3/4P (400A)	vertical	400	✓	✓
Tmax T5 - 3/4P	vertical	500		✓
Tmax XT1 - 3/4P	horizontal	200	✓	✓
Tmax XT1 - 3/4P	vertical	300	✓	✓
Tmax XT2 - 3P	horizontal	200	✓	✓
Tmax XT2 - 4P	horizontal	300	✓	✓
Tmax XT2 - 3/4P	vertical	300	✓	✓
Tmax XT3 - 3P	horizontal	200	✓	✓
Tmax XT3 - 4P	horizontal	300	✓	✓
Tmax XT3 - 3/4P	vertical	300	✓	
Tmax XT3 - 3/4P	vertical	400		✓
Tmax XT4 - 3P	horizontal	200	✓	✓
Tmax XT4 - 4P	horizontal	300	✓	✓
Tmax XT4 - 3/4P	vertical	300	✓	
Tmax XT4 - 3/4P	vertical	400		✓

#### MCC version with fixed drawers

Compartment selection according to the type of starting/power

Type of starter	Power diagram	Power 400-50Hz		Type of circuit-breaker	Type of contactor	Type of thermal relay	Compartment dimensions HxW mm		
		kW	A				200x600	200x800	300x800
Direct		0.37÷11	1.1÷22	T2	A9÷A30	TA25÷TA42	✓		
		15÷45	28.5÷83	T2	A50÷A95	TA75÷TA110		✓	
		0.37÷11	1.1÷22	XT2	A9÷A30	TA25÷TA42	✓		
		15÷45	28.5÷83	XT2	A50÷A95	TA75÷TA110		✓	
		55÷90	98÷158	T3	A110÷A185	TA110÷TA200		✓	
		55÷90	98÷158	XT3	A110÷A185	TA110÷TA200		✓	
		110	193	T4	A210	TA450/E320			✓
		110	193	XT4	A210	TA450/E320			✓
		132÷160	232÷282	T5	A260÷A300	TA450/E320			✓
Star Delta		18.5÷55	36÷98	T2	A50÷A26÷A75÷A40	TA75	✓		
		18.5÷55	36÷98	XT2	A50÷A26÷A75÷A40	TA75	✓		
		75÷110	135÷193	T3	A95÷A75÷A145÷A95	TA110÷TA200		✓	
		75÷110	135÷193	XT3	A95÷A75÷A145÷A95	TA110÷TA200		✓	
		132	232	T4	A145÷A110	TA200			✓
		132	232	XT4	A145÷A110	TA200			✓
		160÷200	282÷349	T5	A210÷A145÷A210÷A185	TA200÷TA450			✓

## IS2 Enclosures

### Examples of configurations

#### Construction of modular configurations

Making up configurations with DIN panels and rails is possible by means of the pre-assembled cabinet or cabinet Kit solution.

The useful dimension is always 100mm less than the total height of the enclosure.

#### Composition of the supply with pre-assembled cabinet

- Pre-assembled self-supporting structure made of galvanised steel consisting of a closed section drilled with 25mm pitch preset for mounting the modular uprights.
- Removable roof, plinth H=100mm (consisting of four angle pieces 2,5mm) and rear panel.
- Blind door made of 2,00mm thick sheet, fitted with polyurethane gasket, complete with ergonomic handle and other types of inserts, see page 2-108. Reversible (standard hinging on the right) with 4 closure points and complete with internal reinforcement frame for  $W \geq 600$ mm and earthing pins.
- Glazed door made of 2,00mm thick sheet, with 4mm thickness safety glass, fitted with polyurethane gasket, complete with fixed handle with double tongue key interchangeable with other types of inserts, see page 4/108. Reversible (standard hinging on the right) with 4 closure points and complete with earthing pins.
- The structures with internal cable container W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key. The structures with internal cable container W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), handle with double tongue key. Both versions are complete with removable intermediate upright.

#### Composition of the supply with built-up cabinet

For construction of the cabinet kits, the base, top, uprights, panelling, doors, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

#### Base, top and plinth:

completely pre-assembled by means of a 3-way joint complete with plinth angle pieces (2,5mm) H=100mm. Removable roof.

#### Uprights:

made of galvanised steel consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and partial doors, which can be mounted with just 8 screws at the base/top

#### Rear panel:

made of 1,5mm thick sheet, fitted with polyurethane gasket

#### Cable container door

The doors for internal cable container W=200mm with opposite opening (standard hinging on the left) are complete with double box with double tongue key. The doors for internal cable container W=400mm with opposite opening (standard hinging on the left) are complete with handle with double tongue key. Both versions require the removable intermediate upright

#### Completion items

Uprights for apparatus	Pag. 2-80
DIN rails and modular panels	Pag. 2-80
Distribution system	Pag. 2-92
Cable entry flanges	Pag. 2-57
Plinth covering flanges H=100/200mm and reinforced plinth	Pag. 2-62
Side panels	Pag. 2-55
Crosspieces	Pag. 2-70
Lifting eyebolts and reinforcements	Pag. 2-113
Key inserts	Pag. 2-108

#### Technical characteristics

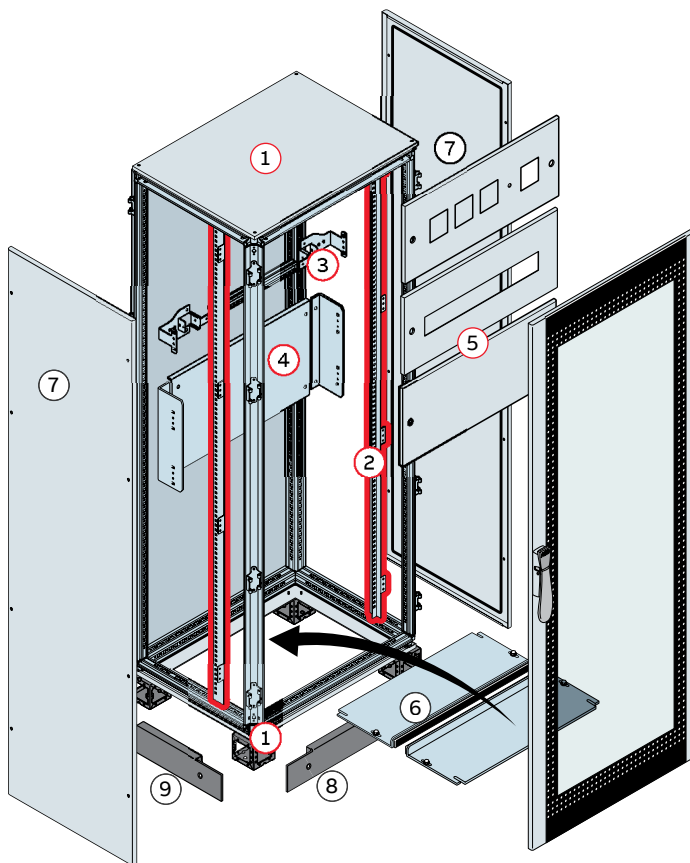
Conformity with Standard	IEC 62208 IEC 60439-1, IEC 61439-1-2
Rated service voltage Ue	up to 690 V
Rated insulation voltage Ui	up to 1000 V
Rated impulse withstand voltage Uimp	8 kV
Rated current In	up to 1600 A
Rated short-time short-circuit withstand	up to 65 kA
Rated peak short-circuit current Ipk	143kA
Degree of protection	IP65 (IEC 60529)
Degree of mechanical strength	IK10 (IEC 62262)
Obtainable segregation forms	IK09 (IEC 62262)
Colour:	internal structure galvanised white
	external panelling Orange peel RAL 7035
	plinth Orange peel RAL 7012



## IS2 Enclosures

### Examples of configurations

#### Example of composition of a structure for power factor correction

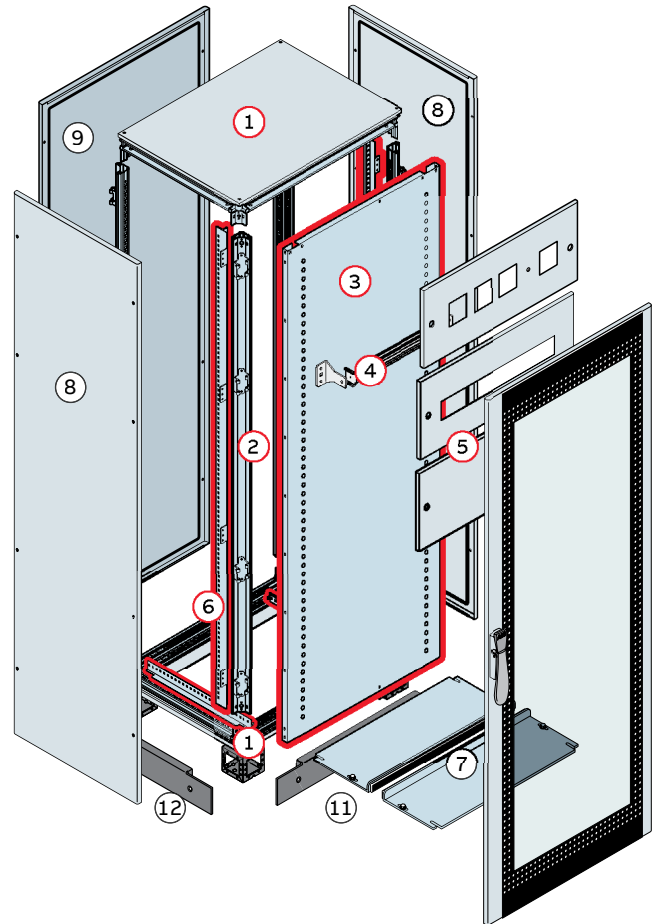


#### Composition of pre-assembled structure 2000x600x600 (HxWxD) for apparatus

- ① Composition of pre-assembled structure 2000x600x600 (HxWxD) for apparatus
- ② EH2000 Uprights for apparatus
- ③ EH0018 Kit for modular apparatus
- ④ EH.... Blind back plates for apparatus
- ⑤ EH....K Blind front panels, with cut-outs for modular items and instrument holder

#### Completion items

- ⑥ EF6060 Cable entry sliding flanges
- ⑦ EL2060K No. 2 side panels
- ⑧ ZN6000 No. 2 plinth flanges H=100mm front/rear
- ⑨ ZN6000 No. 2 plinth flanges H=100mm side



#### Composition of pre-assembled structure 2000x600x600 (HxWxD) for apparatus

- ① CEK6050K Base top
- ② EM2000 Uprights
- ③ EX2060 Oversized back plate
- ④ EH1018 Kit for modular apparatus
- ⑤ EH....K Blind front panels with cut-outs for modular items and instruments holder
- ⑥ EH2000 Kit for modular apparatus

#### Completion items

- ⑦ EF6050 Cable entry sliding flanges
- ⑧ EL2050K No. 2 side panels
- ⑨ EP2060K Rear panel
- ⑩ ET2060K Glazed door
- ⑪ ZN6000 No. 2 plinth flanges H=100mm front/rear
- ⑫ ZN5000 No.2 plinth flanges H=100mm side

## IS2 Enclosures

### Examples of configurations

#### Constructing the 19" rack structures

Making up the 19" rack structures is possible by means of the pre-assembled or cabinet Kit solution, using a rack 19" with "L" profile or a rack 19" with cranked shaped frame profile.

#### Composition of the supply with pre-assembled cabinet

- Pre-assembled self-supporting structure made of galvanised steel consisting of a closed section drilled with 25mm pitch.
- Removable roof, plinth H=100mm (consisting of four angle pieces 2,5mm) and rear panel.
- Blind door made of 2,00mm thick sheet, fitted with polyurethane gasket, complete with handle with double tongue key interchangeable with other types of inserts, see page 2-108. Reversible (standard hinging on the right) with 4 closure points and complete with internal reinforcement frame and earthing pins.
- Glazed door made of 2,00mm thick sheet, with 4mm thickness safety glass, fitted with polyurethane gasket, complete with handle with double tongue key interchangeable with other types of inserts, see page 2-108. Reversible (standard hinging on the right) with 4 closure points and complete with earthing pins.

#### Composition of the supply with built-up cabinet

For construction of the cabinet kits, the base, top, uprights, panelling, doors, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

#### Base, top and plinth:

completely pre-assembled by means of 3-way joint complete with plinth angle pieces (2,5mm) H=100mm. Removable roof.

#### Uprights:

made of galvanised steel consisting of a closed section drilled with 25mm pitch preset for mounting the rack frames.

#### 19" rack frame with "L" profile:

made of galvanised steel, this is able to support a maximum load of 90kg, and is available in the fixed and swing versions.

It can hold 38 to 47 HE in the fixed version, 36 to 45 HE in the swing version and 9 to 27 HE in the partial version. The structure is completed with the aluminium dummy panels.

#### Rear panel:

made of 1,5mm thick sheet, fitted with polyurethane gasket.

#### Completion items

19" rack frames with "L" profile	Pag. 2-85
19" fixed rack frames with cranked shaped profile	Pag. 2-86
19" swing rack frames with "C" shaped profile	Pag. 2-87
Accessories	Pag. 2-90
Dummy panels	Pag. 2-89
Cable entry flanges	Pag. 2-57
Plinth covering flanges H=100/200mm and reinforced plinth	Pag. 2-62
Side panels	Pag. 2-55
Crosspieces	Pag. 2-70
Lifting eyebolts and reinforcements	Pag. 2-113
Key inserts	Pag. 2-108

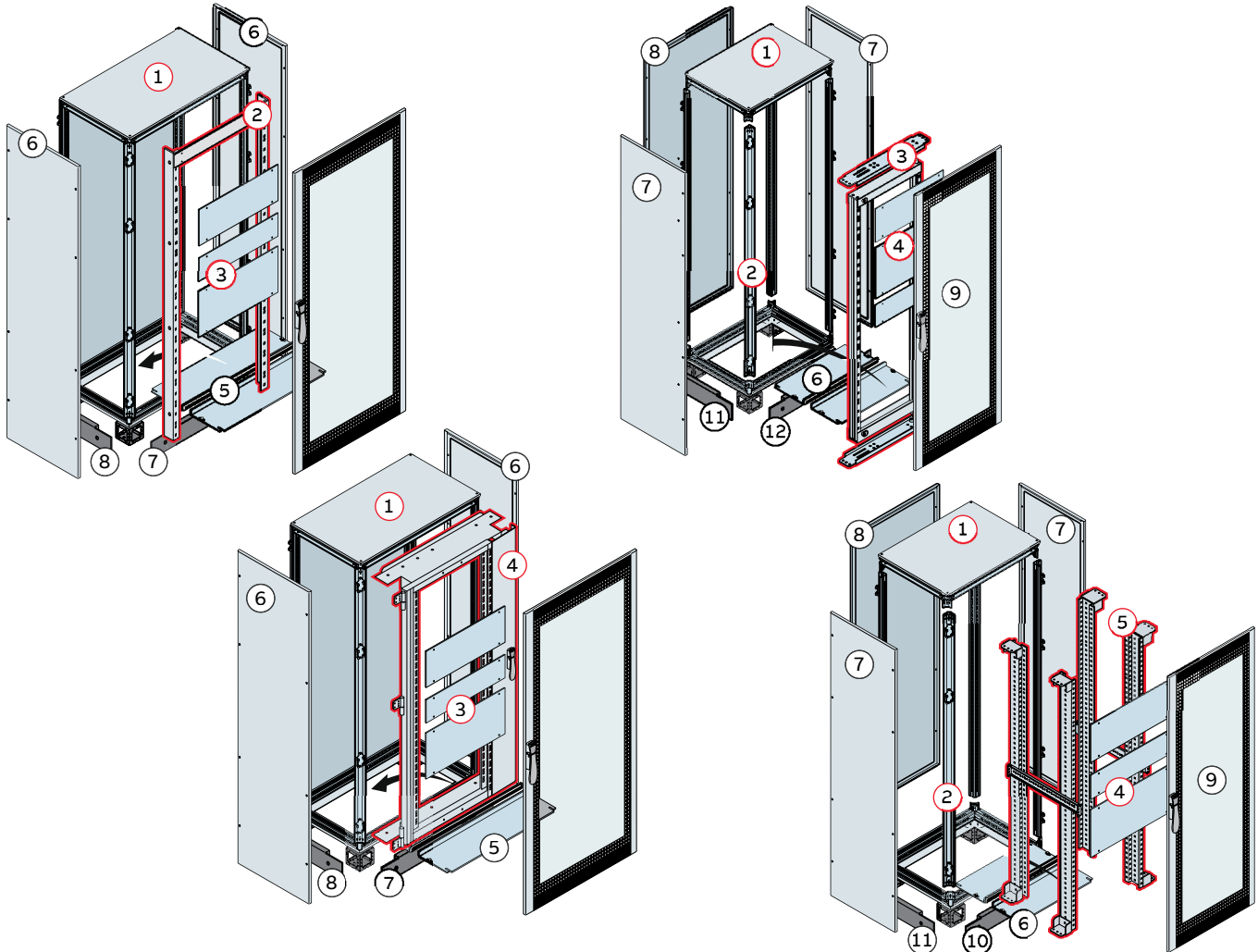
#### Technical characteristics

Conformity with Standard	IEC 62208, IEC 60439-1, IEC 61439-1-2	
Degree of protection	IP65 (IEC 60529) with fixed flanges	
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

## IS2 Enclosures

### Examples of configurations

#### Example of composition of a structure with 19" rack frame



#### Making up a pre-assembled structure 2000x800x600 (HxWxD) for 19" rack frames

- ① ES2086VK Pre-assembled cabinet with glazed door
- ② EG2080 Telaio rack fisso con profilo a "L"
- ③ EG.... Panels for rack frame
- ④ EG2004K Swing "C" shaped rack frame and EV0007 kit for fixing swing rack frame "C" shaped

#### Completion items

- ⑤ EF8060 Cable entry sliding flanges
- ⑥ EL2060K No.2 blind side panels
- ⑦ ZN8000 No. 2 plinth flanges H=100mm front/rear
- ⑧ ZN6000 No. 2 plinth flanges H=100mm side

#### Composition of a structure Kit 2000x600x500 (HxWxD) for 19" rack frames

- ① EK6050K Base top
- ② EM2000 Uprights
- ③ EG2001K Centred swing rack frame
- ④ EG.... Panels for rack frame
- ⑤ EG2005 Cranked shape uprights  
EB6000 kit for fixing and EB0500 crosspieces

#### Completion items

- ⑥ EF6050 Cable entry sliding flanges
- ⑦ EL2050K No. 2 side panels
- ⑧ EP2060K Rear panel
- ⑨ ET2060K Glazed door
- ⑩ ZN6000 No. 2 plinth flanges H=100mm front/rear
- ⑪ ZN5000 No.2 plinth flanges H=100mm side

## IS2 Enclosures

### Examples of configurations

#### Construction of cabinet kits

For construction of the cabinet kits, the base, top, uprights, paneling, door, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

#### Components to be ordered:

##### Base, top and plinth:

completely pre-assembled by means of 3-way joint complete with plinth angle pieces (2,5mm) H=100mm; removable roof.

##### Uprights:

made of galvanised steel consisting of a closed section drilled with 25 mm pitch, which can be mounted with just 8 screws at the base/top.

##### Rear/side panel:

made of 1,5mm thick sheet, fitted with polyurethane gasket.

##### Blind door:

made of 2,00mm thick sheet, fitted with polyurethane gasket, complete with fixed handle with double tongue key.

Reversible with 4 closing points, and complete with internal reinforcement frame for  $W \geq 600$ mm and earthing pins.

##### Glazed door:

made of 2,00mm thick sheet with 4 mm thickness safety glass, fitted with polyurethane gasket, complete with handle with double tongue key interchangeable with other types of inserts. Reversible with 4 closure points and complete with earthing pins.

#### Cable container door:

(2,00mm) opposite opening (standard hinging on the left) complete with double box with double tongue key (interchangeable), intermediate removable crosspiece and upright.

#### Completion items

Standard and oversized back plates with front and lateral insertion	Pag. 2-64
Cable entry flanges	Pag. 2-57
Plinth covering flanges H=100/200mm and reinforced plinth.	Pag. 2-62
Crosspieces	Pag. 2-70
19" rack frames	Pag. 2-85
Lifting eyebolts and reinforcements	Pag. 2-113
Key inserts	Pag. 2-108
Fans, air conditioners	Pag. 2-104
Uprights, panels and DIN rails	Pag. 2-80

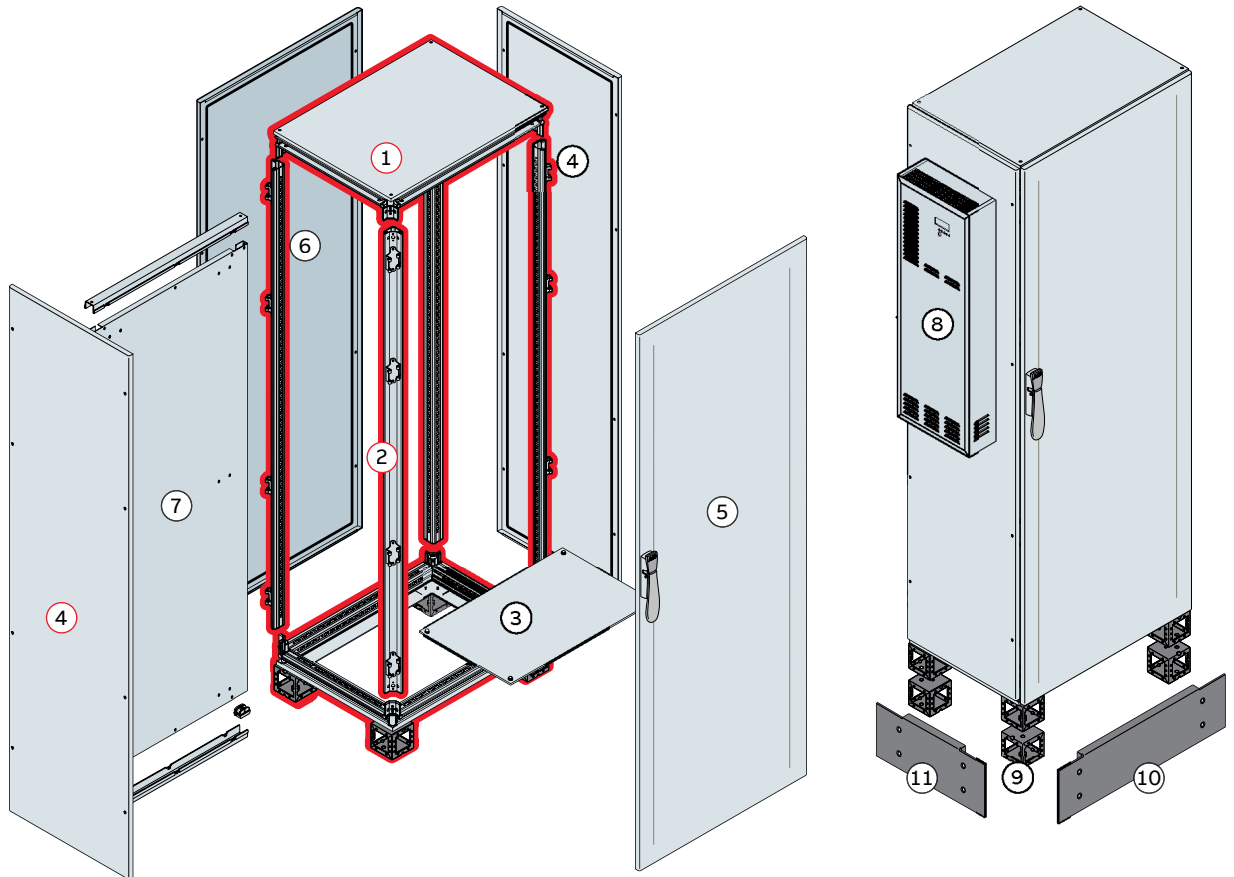
#### Technical characteristics

Conformity with Standard	IEC 62208 IEC 60439-1, IEC 61439-1-2	
Degree of protection	IP65 (IEC 60529) with fixed flanges	
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

## IS2 Enclosures

### Examples of configurations

#### Example of composition of a structure Kit



#### Composition of a structure 2000x600x500 (HxWxD)

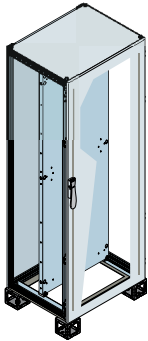
- ① EK6050K Base, top and plinth
- ② EM2000 N°4 uprights

#### Completion items

- ③ EF6052 Bottom closure
- ④ EL2050K No. 2 side panels
- ⑤ EC2060K Blind door
- ⑥ EP2060K Rear panel
- ⑦ EA2161 Oversized back plate + tracks for lateral insertion
- ⑧ VZ1850K Super thin wall air conditioner IP54
- ⑨ ZN1010 No. 4 plinth angle pieces H=100mm
- ⑩ ZN6002 No. 2 plinth flanges H=200mm front/rear
- ⑪ ZN5002 No. 2 plinth flanges H=200mm side

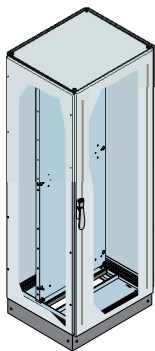
## IS2 Enclosures

Examples of configurations - Pre-assembled structures



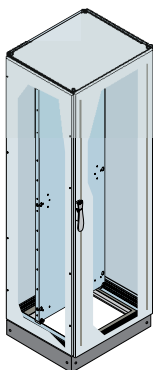
IS2 series pre-assembled structure dim.: 1800x600x400mm HxWxD (1905x594x410mm external), IP65 with blind door, back plate and plinth H=100mm (side panels, cable entry flanges and plinth flanges excluded).

Description	Code	Q.ty
Blind door cabinet 1800x600x400mm	ES1864K	1
Back plate 1800x600mm (HxW)	EA1860	1



IS2 series pre-assembled structure dim.: 1800x600x500mm HxWxD (1905x610x510mm external), IP65 with blind door, back plate, side panels, cable entry flanges and plinth flanges H=100mm.

Description	Code	Q.ty
Blind door cabinet 1800x600x500mm	ES1865K	1
Back plate 1800x600mm (HxW)	EA1860	1
No.2 blind side panels 1800x500mm (HxD)	EL1850K	1
No.2 plinth flanges W=600mm	ZN6000	1
No.2 plinth flanges D=500mm	ZN5000	1
Sliding cable entry flanges 600x500mm	EF6050	1

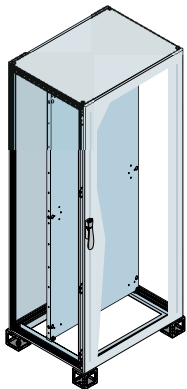


IS2 series pre-assembled structure dim.: 2000x600x500mm HxWxD (2105x610x510mm external), IP65 with blind door, back plate, side panels, plinth and flange H=100mm (cable entry flanges excluded)

Description	Code	Q.ty
Blind door cabinet 2000x600x500mm	ES2065K	1
Back plate 2000x600mm (HxW)	EA2060	1
No.2 blind side panels 2000x500mm (HxD)	EL2050K	1
No.2 plinth flanges W=600mm	ZN6000	1
No.2 plinth flanges D=500mm	ZN5000	1

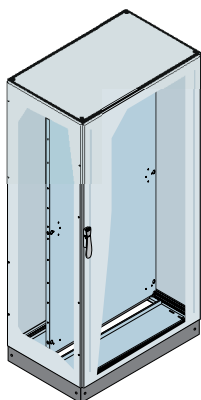
## IS2 Enclosures

Examples of configurations - Pre-assembled structures



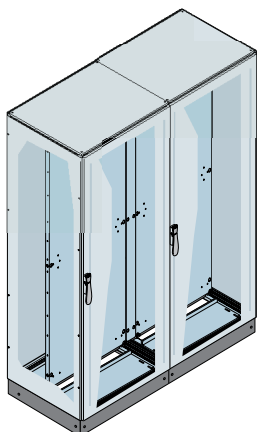
IS2 series pre-assembled structure dim.: 2000x800x600mm HxWxD (2105x794x610mm external), IP65 with blind door, back plate and plinth H=100mm (flange excluded)

Description	Code	Q.ty
Blind door cabinet 2000x800x600mm	ES2086K	1
Back plate 2000x800mm (HxW)	EA2080	1



IS2 series pre-assembled structure dim.: 2000x1000x600mm HxWxD (2105x1010x610mm external), IP65 with blind door, back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included)

Description	Code	Q.ty
Blind door cabinet 2000x1000x600mm	ES2006K	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Sliding flanges 1000x600mm	EF1060	1
No.2 plinth flanges W=1000mm	ZN1000	1
No.2 plinth flanges D=600mm	ZN6000	1



No.2 IS2 series pre-assembled structures dim.: 2000x600x600mm HxWxD (2105x1204x610mm external), IP65 with blind door, back plate, side panels, sliding cable entry flanges, structure/plates and plinth joining kit H=100mm (flanges included).

Description	Code	Q.ty
Blind door cabinet 2000x600x600mm	ES2066K	2
Back plate 2000x600mm (HxW)	EA2060	2
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Sliding flanges 600x600mm	EF6060	2
Back plate joining kit H=2000mm	EA2000	1
Kit for joining cabinets	EV0003	1
No.2 plinth flanges W=600mm	ZN6000	3

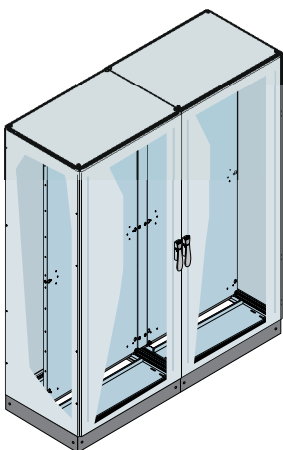
## IS2 Enclosures

### Examples of configurations - Pre-assembled structures



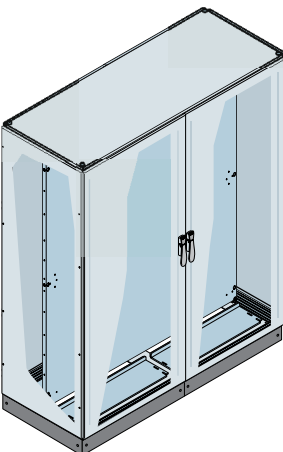
IS2 series pre-assembled structure dim.: 2000x1200x600mm HxWxD (2105x1210x610mm external), IP65 with blind door, back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Cabinets with blind door 2000x1200x600mm	ES2026K	1
Black plate 2000x1200mm (HxW)	EA2013	1
No.2 side blind panels 2000x600mm (HxD)	EL2060K	1
Sliding flanges 600x600mm	EF6060	2
No.2 plinth flanges W=600mm	ZN6000	3



No.2 IS2 series pre-assembled structures dim.: 2000x800x600mm HxWxD (2105x1604x610mm external), IP65 with blind door, back plate, side panels, sliding cable entry flanges, structure/plates and plinth joining kit H=100mm (flanges included).

Description	Code	Q.ty
Blind door cabinet 2000x800x600mm	ES2086K	2
Back plate 2000x800mm (HxW)	EA2080	2
Back plate joining kit H=2000mm	EA2000	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Sliding flanges 800x600mm	EF8060	2
Kit for joining cabinets	EV0003	1
No.2 plinth flanges W=800mm	ZN8000	2
No.2 plinth flanges D=600mm	ZN6000	1



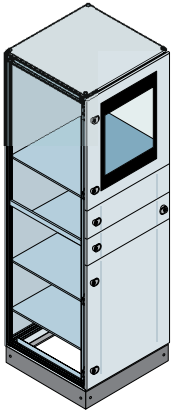
IS2 series pre-assembled structure dim.: 2000x1600x600mm HxWxD (2105x1610x610mm external), IP65 with blind door, back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Blind door cabinet 2000x1600x600mm	ES2076K	1
Back plate 2000x1600mm (HxW)	EA2016	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Sliding flanges 800x600mm	EF8060	2
No.2 plinth flanges W=800mm	ZN8000	2
No.2 plinth flanges D=600mm	ZN6000	1



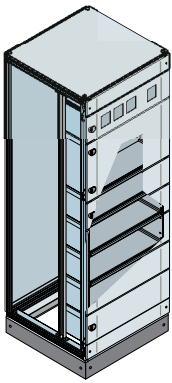
## IS2 Enclosures

### Examples of configurations - Pre-assembled structures



IS2 series pre-assembled structure dim.: 2000x600x600mm HxWxD (2105x610x610mm external), IP65 PC version with glazed door for monitor, keyboard shelf, CPU module, side panels and plinth H=100mm (flanges included)

Description	Code	Q.ty
Cabinet for computer 2000x600x600mm	ES2066PCK	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
No.2 plinth flanges W=600mm	ZN6000	2



IS2 series pre-assembled structure dim.: 1800x600x600mm HxWxD (1805x594x610mm external), IP65 version with Form 3 segregated compartments, with instrument panel and blind doors for PC-MCC, plinth H=100mm (flanges included)

Description	Code	Q.ty
Cabinet with compartments 1800x600x600mm (HxWxD)	ES1864VK	1
No.2 plinth flanges 100x600mm (HxW)	ZN6000	1
Back plate x compartments 400x600mm (HxW)	EH1800	1
Back plate x compartments 200x600mm (HxW)	EH2272K	1
Panel for No.2 72x72 instruments - 200x600mm(HxW)	EH3063K	1
Front panel for compartments 400x600mm (HxW)	EH0018	6
Front panel for compartments 200x600mm (HxW)	EH6018K	2
No.2 flange zoccolo 100x400mm (hxl)	ZN4000	1



IS2 series pre-assembled structure dim.: 1800x800x400mm HxWxD (1805x794x410mm external), IP65 version with Form 3 segregated compartments, cable riser W=200mm, with instrument panel and blind doors for PC-MCC, plinth H=100mm (flanges included)

Description	Code	Q.ty
Cabinet with compartments 1800x800x400+cable cont. W=200	ES1884MF2K	1
Back plate x compartments 400x600mm (hxw)	EH4063	1
Back plate x compartments 300x600mm (hxw)	EH3060	2
Back plate x compartments 200x600mm (HxW)	EH2060	3
Panel for No.2 72x72 instruments - 200x600mm(HxW)	EH7262K	1
Front panel for compartments 200x600mm (HxW)	EH2061K	2
Front panel for compartments 300x600mm (HxW)	EH3061K	2
Front panel for compartments 400x600mm (HxW)	EH4061K	1
No.2 plinth flanges 100x800mm (HxW)	ZN8000	1
No.2 plinth flanges 100x400mm (HxW)	ZN4000	1

## IS2 Enclosures

### Examples of configurations - Pre-assembled structures



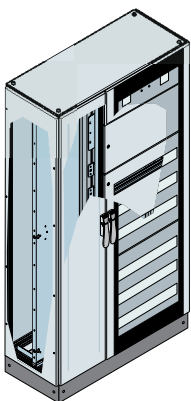
IS2 series pre-assembled structure dim.: 1800x1000x400mm HxWxD (1805x994x410mm external), IP65 version with Form 3 segregated compartments, cable riser W=400mm, with instrument panel and blind doors for PC-MCC, plinth H=100mm (flanges included).

Description	Code	Q.ty
Cabinet with compartments 1800x1000x400+ cable container W=400	ES1804MF4K	1
Back plate x compartments 400x600mm (HxW)	EH4063	1
Back plate x compartments 300x600mm (HxW)	EH3060	2
Back plate x compartments 200x600mm (HxW)	EH2060	3
Panel for No.2 72x72 instruments - 200x600mm (HxW)	EH7262K	1
Front panel for compartments 200x600mm (HxW)	EH2061K	2
Front panel for compartments 300x600mm (HxW)	EH3061K	2
Front panel for compartments 400x600mm (HxW)	EH4061K	1
No.2 plinth flanges 100x1000mm (HxW)	ZN1000	1
No.2 plinth flanges 100x1000mm (HxW)	ZN4000	1



IS2 series pre-assembled structure dim.: 1800x600x400mm HxWxD (1805x594x410mm external), IP65 modular version, with instrument panel and glazed door, DIN panels, plinth H=100mm (flanges included).

Description	Code	Q.ty
Glazed door cabinet 1800x600x400mm	ES1864VK	1
No.2 plinth flanges 100x600mm (HxW)	ZN6000	1
No.2 uprights H=1800mm x DIN panels	EH1800	1
Panel for No.2 72x72 instruments - 200x600mm(HxW)	EH2272K	1
Blind panel 300x600mm (HxW)	EH3063K	1
DIN rail W=600mm (18 mod.)+front supp.	EH0018	6
Panel 3x18 DIN mod. 600x600mm (HxW)	EH6018K	2
No.2 plinth flanges 100x400mm (HxW)	ZN4000	1

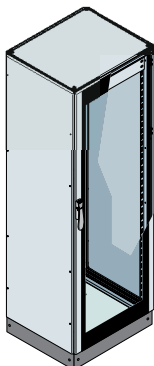


IS2 series mounted structure, dimensions: 1800x1200x400mm HxWxD (1805x1210x410mm external), IP65 modular version with cable riser W=400mm, instrument panel, DIN panels, cabling on mounting plate and plinth H=100mm (flanges included).

Description	Code	Q.ty
Cabinet+Cable container W=400 transparent door 1800x1200x400	ES1824VC4K	1
No.2 plinth flanges 100x600mm (HxW)	ZN6000	2
No.2 plinth flanges 100x400mm (HxW)	ZN4000	1
Back plate for bench cabling 1800x800mm (HxW)	EX1880	1
DIN rail l=800mm (18 mod.)+ rear support	GD1530	6
Panel x No.2 instruments 72x72-200x800mm (HxW)	EH3272K	1
Blind panel 300x800mm (HxW)	EH3082K	1
Panel 3x18 DIN mod. 600x800mm (HxW)	EH6029K	2
No.2 blind side panels 1800x400mm (HxD)	EL1840K	1
No.2 rails for sliding back plate	EB4101	1
No.2 uprights for modular apparatus	EH1800	1

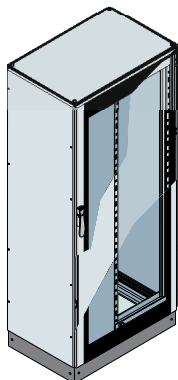
## IS2 Enclosures

### Examples of configurations - Pre-assembled structures



IS2 series pre-assembled structure dim.: 2000x600x500mm HxWxD (2105x610x510mm external), IP65 version 19" rack with 42 fixed HE, side panels, glazed door, plinth H=100mm (flanges included).

Description	Code	Q.ty
Glazed door cabinet 2000x600x500mm	ES2065VK	1
19" rack frame 2000x600mm 42 fixed HE	EG2000	1
No.2 blind side panels 2000x500mm (HxD)	EL2050K	1
No.2 plinth flanges 100x600mm (HxW)	ZN6000	1
No.2 plinth flanges 100x500m m (HxW)	ZN5000	1

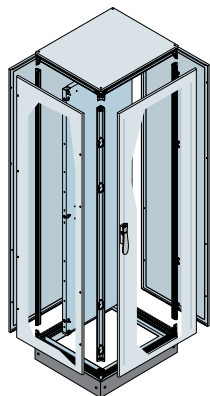


IS2 series mounted structure dim.: 2000x800x500mm HxWxD (2105x810x510mm external), IP65 19" 40 HE swing offcentre rack version, side panels, transparent door, plinth H=100mm (flanges included).

Description	Code	Q.ty
Cabinet with transparent door 2000x800x500mm	ES2085VK	1
40HE swing off-centre rack frame 2000x800mm	EG2003K	1
No.2 blind side panels 2000x500mm (HxD)	EL2050K	1
No.2 plinth flanges 100x800mm (HxW)	ZN8000	1
No.2 plinth flanges 100x500mm (HxW)	ZN5000	1

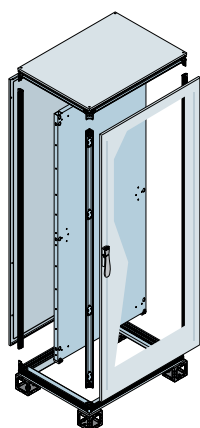
## IS2 Enclosures

### Examples of configurations - Built-up structures



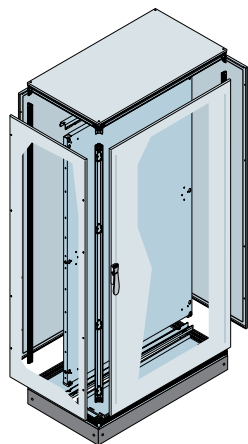
IS2 series structure kit dim.: 2000x600x500mm HxWxD (2105x610x510mm external), IP65 with blind door, back plate, side panels, plinth and flange H=100mm (cable entry flanges excluded).

Description	Code	Q.ty
Base/Top 600x500mm (WxD)	EK6050KN	1
No.4 uprights H=2000mm	EM2000	1
Back plate 2000x600mm (HxW)	EA2060	1
No.2 blind side panels 2000x500mm (HxD)	EL2050K	1
No.2 plinth flanges W=600mm	ZN6000	1
No.2 plinth flanges D=500mm	ZN5000	1
Blind door 2000x600mm (HxW)	EC2060K	1
Rear panel 2000x600mm (HxW)	EP2060K	1



IS2 series structure kit dim.: 2000x800x600mm HxWxD (2105x794x610mm external), IP65 with blind door, back plate and plinth H=100mm (flange excluded).

Description	Code	Q.ty
Base/Top 800x600mm (WxD)	EK8060KN	1
No.4 uprights H=2000mm	EM2000	1
Back plate 2000x800mm (HxW)	EA2080	1
Blind door 2000x800mm (HxW)	EC2080K	1
Rear panel 2000x800mm (HxW)	EP2080K	1

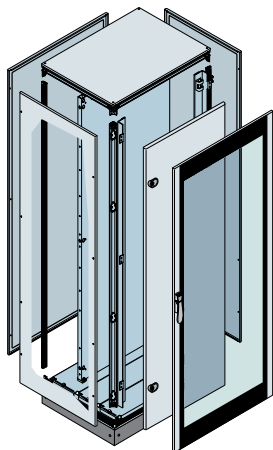


IS2 series structure kit dim.: 2000x1000x600mm HxWxD (2105x1010x610mm external), IP65 with blind door, oversized back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 1000x600mm (WxD)	EK1060KN	1
No.4 uprights H=2000mm	EM2000	1
Oversized back plate+tracks 2000x1000mm(HxW)	EA2110	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Sliding flanges 1000x600mm	EF1060	1
No.2 plinth flanges W=1000mm	ZN1000	1
No.2 plinth flanges D=600mm	ZN6000	1
Blind door 2000x1000mm (HxW)	EC2012K	1
Rear panel 2000x1000mm (HxW)	EP2010K	1

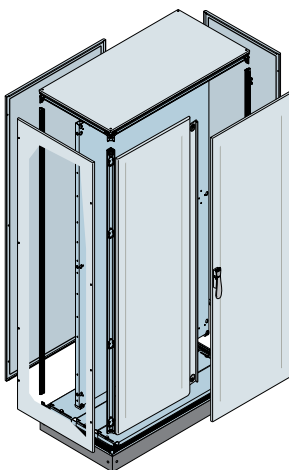
## IS2 Enclosures

### Examples of configurations - Built-up structures



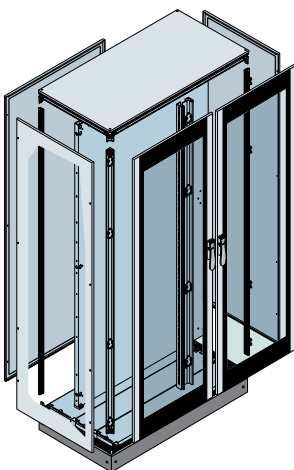
IS2 series structure kit dim.: 2200x800x600mm HxWxD (2305x810x610mm external), IP65 with glazed door, Inner door, back plate, side panels, removable cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 800x600mm (WxD)	EK8060KN	1
No.4 uprights H=2200mm	EM2200	1
No.2 blind side panels 2200x600mm (HxD)	EL2260K	1
Glazed door 2200x800mm (HxW)	ET2280K	1
Inner door 2200x800mm (HxW)	EE2280K	1
Back plate 2200x800mm (HxW)	EA2280	1
Removable flanges 800x600mm	EF8061	1
No.2 plinth flanges W=800mm	ZN8000	1
No.2 plinth flanges D=600mm	ZN6000	1
Rear panel 2200x800mm (HxW)	EP2280K	1



IS2 series structure kit dim.: 2000x1000x600mm HxWxD (2105x1010x610mm external), IP65 with double doors closing with overlap, back plate, side panels, built-up cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 1000x600mm (WxD)	EK1060KN	1
No.4 uprights H=2000mm	EM2000	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Blind door for double door version	EC2080FC5K	1
Blind door with overlap	ED2010SK	1
Back plate 2000x1000mm (HxW)	EA2010	1
Removable flanges 1000x600mm	EF1061	1
No.2 plinth flanges W=1000mm	ZN1000	1
No.2 plinth flanges D=600mm	ZN6000	1
Rear panel 2000x1000mm (HxW)	EP2010K	1



IS2 series structure kit dim.: 2000x1200x600mm HxWxD (2105x1010x610mm external), IP65 with double doors closing with overlap on intermediate upright, back plate, side panels, built-up cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 1000x600mm (WxD)	EK1260KN	1
No.4 uprights H=2000mm	EM2000	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Glazed door for double door version	EC2080FV6K	2
Intermediate upright H=2000mm	EM2001	1
Pair of intermediate crosspieces	EB6100	1
Back plate 2000x1000mm (HxW)	EA2013	1
Removable flanges 1000x600mm	EF6061	2
No.2 plinth flanges D=600mm	ZN6000	3
Rear panel 2000x1200mm (HxW)	EP2012K	1



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## **Chapter 3**

### Wiring ducts

#### **General characteristics**

**3-2 Halogen free wiring ducts with vertical slots**

**3-3 Thermoplastic wiring ducts with vertical slots**

**3-4 Flexible thermoplastic wiring ducts**

#### **Ordering codes**

**3-5 Halogen free wiring ducts with vertical slots**

**3-6 Thermoplastic wiring ducts with vertical slotsi**

**3-7 Flexible thermoplastic wiring ducts**

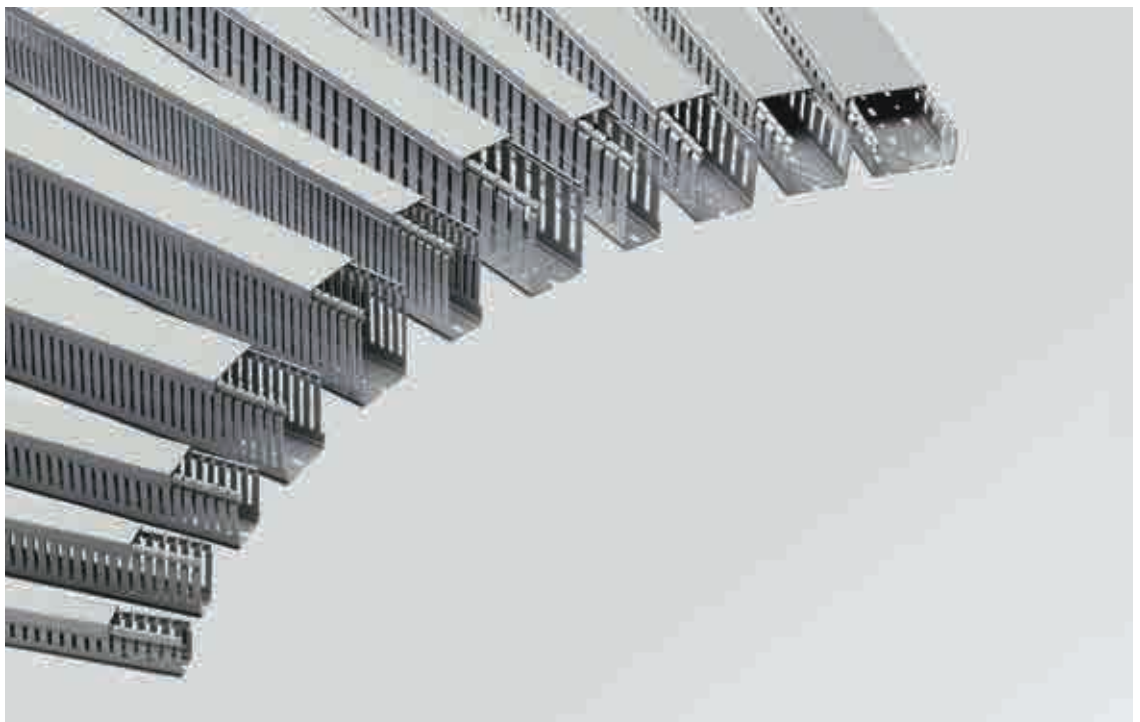
**3-8 Accessoires**

# Wiring ducts

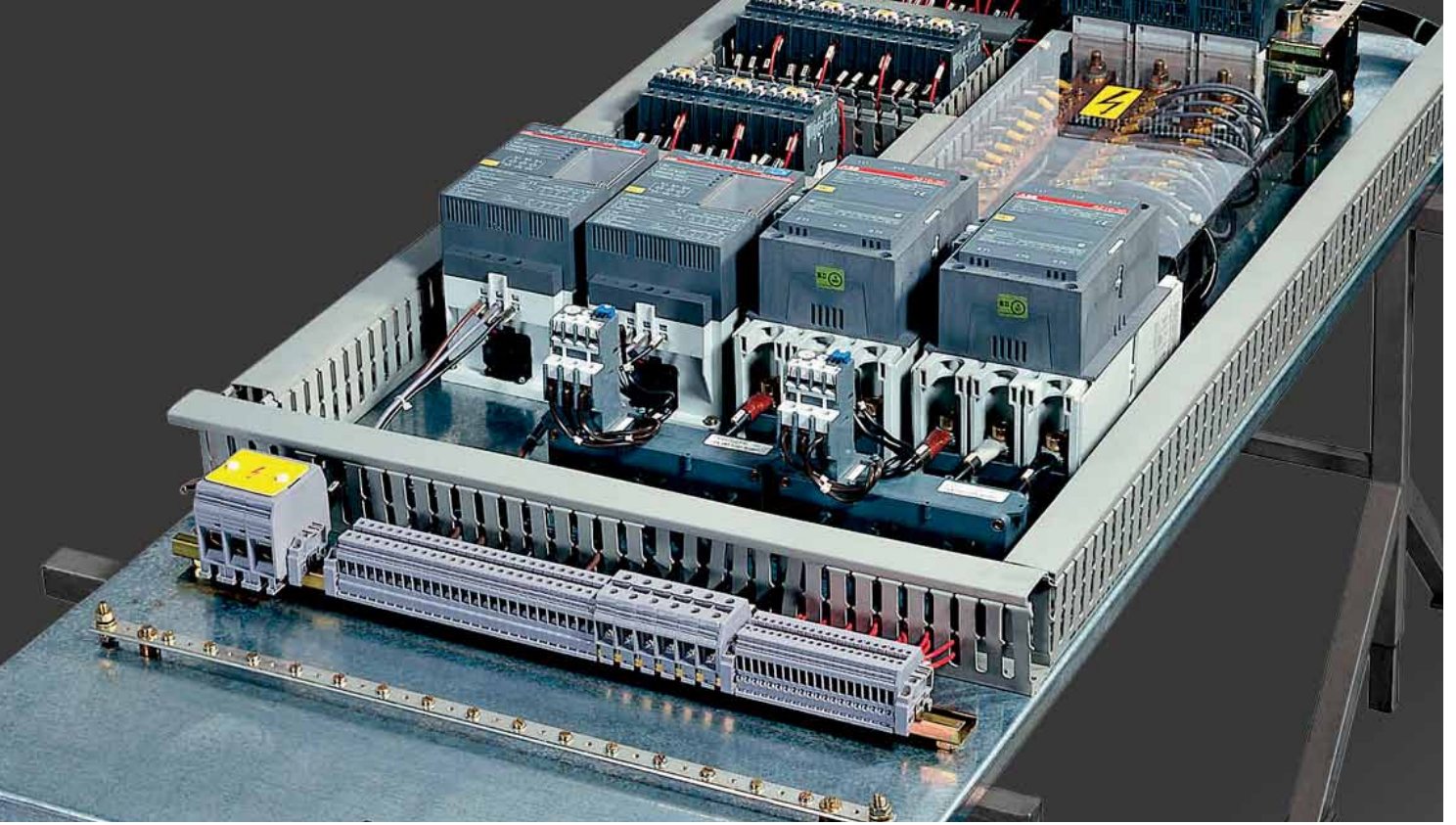
## General characteristics

Halogen-free thermoplastic material in compliance with VDE 0472 Part 815 Standard:  
 Br + Cl < 0.2 %, F < 0.1 %

- colour RAL 7035 grey
- halogen-free thermoplastic material in compliance with VDE 0472 Part 815 Standard: Br + Cl < 0.2 %, F < 0.1 %
- smoke toxicity index: 18.0 according to NF X70-100 and NF F16-101 Standards
- smoke opacity index\*: Dm 377.0 (2.3 mm) V0F4 386.2 (2.3 mm) in compliance with NF X10-702 Standard (reference NF F16-101)\* in the event of fire, it is extremely important for the smoke opacity level to be as low as possible during the first 4 minutes in order to allow people to move away from the areas of risk
- on the basis of the values obtained during the smoke opacity and toxicity tests, the material falls within class F2 (in compliance with NF F16-101 Standard)
- in conformity with the UNI EN ISO 11925-2 Standard (test with use of a single flame)
- insulating, shock-proof, self-extinguishing material in compliance with UL 94 V0 Standard and resistant to abnormal heat and fire up to 850°C (glow wire test) in compliance with IEC 695-2-1 Standard
- dimensional stability from -40 to +100 °C
- resistant to acids, oils and greases
- absence of burrs, rounded internal edges
- dimensions and resilience of ribs guarantee repeated splaying during the wiring phase controlled splaying of sides for guaranteeing a perfect seal of the cover in vertical sections and in the case of high temperatures
- two prearranged trimming lines: one line at the basis of ribs in order to remove them by bending them towards the outside direction and another line at the basis of the wall in order to cut the edge when two connection ducts are used
- cable holder mouldings halfway along the straight section of the ribs in 80 mm high ducts
- standard 2-metre length trunkings comply with the EN 50085-2-3 European Standard
- fields of application: residential, industrial and commercial
- compliance to RoHS directive







—  
 Thermoplastic wiring ducts with vertical slots.  
 Plastic, insulating, shock-proof, selfextinguishing material in compliance with UL 94 V0 Standard and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 695-2-1 Standard

- colour RAL 7030 grey
- minimum storage/transport temperature -5 °C
- minimum installation and usage temperature -15 °C
- maximum usage temperature +60 °C
- resistant to acids, oils and greases
- no burr, rounded-off inner edges
- new rib profile makes it easy to open and close the cover and guarantees that it clips on more safely

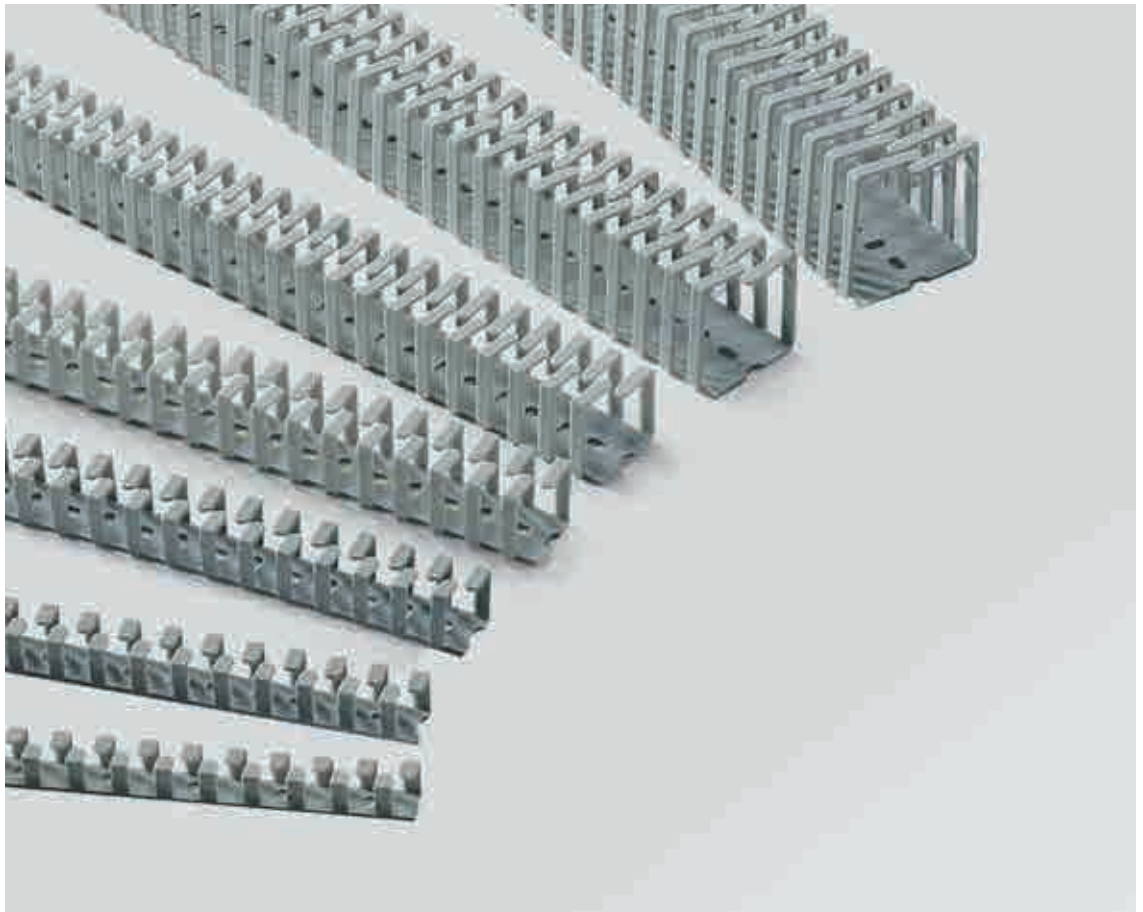
- designed to snap onto the Fix-O-rapid special accessory, suitable to be fastened both to DIN rail and base plate
- the ribs are cut using a special pressing process (rounding of the edges) producing wiring ducts completely free of burr and rough edges
- the dimensions and resilience of the ribs ensure repeated splaying during cabling
- controlled splaying of sides to ensure a perfect seal of the cover in the vertical sections and at high temperatures
- double trimming line, one at the base of the ribs so that they can be removed by bending them outwards and one at the base of the lateral sides so that the edge can be cut when two wiring ducts are branched
- cable holder mouldings half-way up the straight section of the ribs in 80 and 100-mm high wiring ducts
- cover can be opened without having to use a special tool
- can be mounted on horizontal or vertical surfaces even when the cover is on the bottom
- standard 2-metre length
- industrial application
- compliance to RoHS directive

# Wiring ducts

## General characteristics

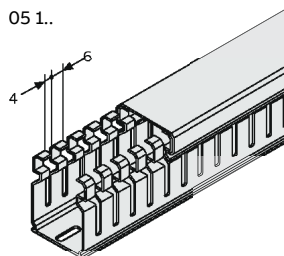
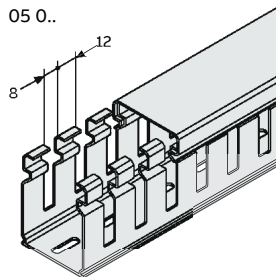
Flexible thermoplastic wiring ducts. Suitable for connecting panels and doors with compass-opening mechanisms and in general for applications where cabling is subject to bending and twisting.

- colour RAL 7040 grey
- plastic, insulating, shock-proof, self-extinguishing material in compliance with UL 94 V2 Standard and resistant to permanent temperature of 80 °C and peaks up to 110 °C in compliance with IEC 216 Standards
- resistant to acids, oils and greases
- ribs alternate and angle slightly inwards to make it easier to insert and extract cables
- less smoke opacity and toxicity tests, the material falls within class F2 (in compliance with NF F16-101 Standard) in conformity with the UNI EN ISO 11925-2 Standard (test with use of a single flame)
- no covers so that cables can be constantly monitored
- possibility of fastening using screws and rivets or bi-adhesive tape which sticks strongly to the steel (pre-mounted)
- standard 500-mm length
- industrial application



# Wiring ducts

## Ordering codes



### Halogen free wiring ducts with vertical slots

#### Halogen free wiring ducts with vertical slot grey RAL 7035

Dimensions (mm)		Slot 8x12mm	Slot 4x6mm	Unit/pack meters
B	H	Code	Code	
15	17	1SL9019A00	1SL9119A00	46
25	30	1SL9033A00	1SL9133A00	58
40	30	1SL9035A00	1SL9135A00	38
60	30	1SL9037A00	1SL9137A00	52
25	40	1SL9043A00	1SL9143A00	48
40	40	1SL9045A00	1SL9145A00	30
60	40	1SL9047A00	1SL9147A00	40
80	40	1SL9049A00	1SL9149A00	32
100	40	1SL9051A00	1SL9151A00	24
120	40	1SL9053A00	1SL9153A00	20
25	60	1SL9063A00	1SL9163A00	34
40	60	1SL9065A00	1SL9165A00	22
60	60	1SL9067A00	1SL9167A00	32
80	60	1SL9069A00	1SL9169A00	24
100	60	1SL9071A00	1SL9171A00	20
120	60	1SL9073A00	1SL9173A00	14
25	80	1SL9083A00	1SL9183A00	28
40	80	1SL9085A00	1SL9185A00	36
60	80	1SL9087A00	1SL9187A00	24
80	80	1SL9089A00	1SL9189A00	16
100	80	1SL9091A00	1SL9191A00	16
120	80	1SL9093A00	1SL9193A00	12

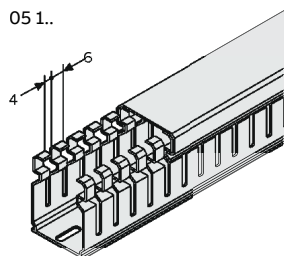
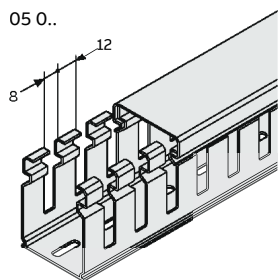
#### Spare covers

Description	Code	Unit/pack meters
Trunking base 15mm	1SL5316A00	2/200
Trunking base 25mm	1SL5317A00	2/60
Trunking base 40mm	1SL5318A00	2/40
Trunking base 60mm	1SL5319A00	2/24
Trunking base 80mm	1SL5320A00	2/16
Trunking base 100mm	1SL5321A00	2/48
Trunking base 120mm	1SL5322A00	2/36

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

## Wiring ducts

### Ordering codes



### Lead free thermoplastic wiring ducts with vertical slots

Wiring ducts made of lead free thermoplastic material with grey RAL 7030 slots

Dimensions (mm)		Slot 8x12mm	Slot 4x6mm	Unit/pack meters
B	H	Code	Code	
15	17	05 019	05 119	92
25	30	05 033	05 133	116
40	30	05 035	05 135	80
60	30	05 037	05 137	52
25	40	05 043	05 143	96
40	40	05 045	05 145	60
60	40	05 047	05 147	40
80	40	05 049	05 149	32
100	40	05 051	05 151	24
120	40	05 053	05 153	20
25	60	05 063	05 163	68
40	60	05 065	05 165	44
60	60	05 067	05 167	32
80	60	05 069	05 169	24
100	60	05 071	05 171	18
120	60	05 073	05 173	14
25	80	05 083	05 183	56
40	80	05 085	05 185	36
60	80	05 087	05 187	24
80	80	05 089	05 189	16
100	80	05 091	05 191	16
120	80	05 093	05 193	12
25	100	05 094	05 194	40
40	100	05 095	05 195	28
60	100	05 096	05 196	20
80	100	05 097	05 197	14
100	100	05 098	05 198	8
150	100	05 099	05 199	8

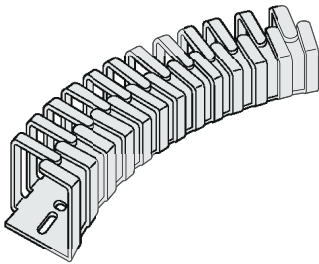
### Spare covers

Description	Code	Unit/pack meters
Trunking base 15mm	05 300	2/200
Trunking base 25mm	05 302	2/60
Trunking base 40mm	05 304	2/40
Trunking base 60mm	05 306	2/24
Trunking base 80mm	05 308	2/16
Trunking base 100mm	05 310	2/48
Trunking base 120mm	05 312	2/36
Trunking base 150mm	05 314	2/28

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

## Wiring ducts

### Ordering codes



### Flexible thermoplastic wiring ducts

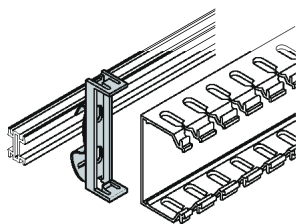
#### Flexible wiring duct

Dimensions (mm)		Code	Unit/pack meters
B	H		
<b>Slot pitch 7.5/5 - Standard length 500 mm.</b>			
12.5	12.5	05 400	112
16	16	05 402	84
20	20	05 405	112
25	25	05 410	70
30	30	05 415	50
40	40	05 420	50
50	50	05 425	32

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

## Wiring ducts

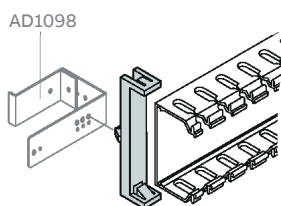
### Ordering codes



### Accessories

#### Fix-O-quick Quick clip for DIN rail

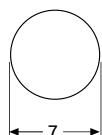
Description	Code	Unit/pack pieces
Trunking base 25 mm	05 250	20/600
Trunking base 40 mm	05 252	20/600
Trunking base 60 mm	05 254	20/600
Trunking base 80 mm	05 256	20/240
Trunking base 100 mm	05 258	20/240
Trunking base 120 mm	05 260	20/240
Trunking base 150 mm	05 262	20/240



#### Quick clip for base plate

Description	Code	Unit/pack pieces
Trunking base 25 mm	05 270	20/600
Trunking base 40 mm	05 272	20/600
Trunking base 60 mm	05 274	20/600
Trunking base 80 mm	05 276	20/240
Trunking base 100 mm	05 278	20/240
Trunking base 120 mm	05 280	20/240
Trunking base 150 mm	05 282	20/240

Can be snapped onto holes as shown:

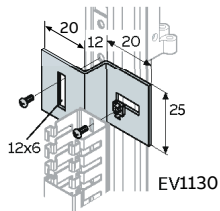


For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

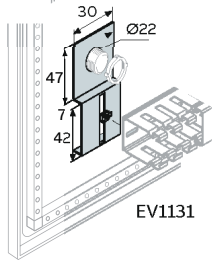


## Wiring ducts

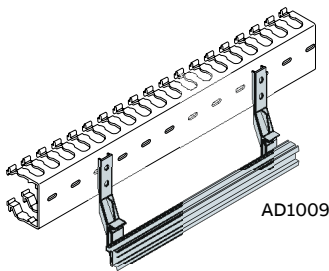
### Ordering codes



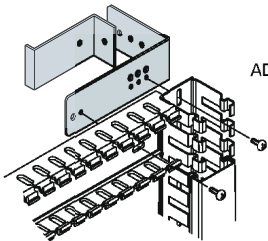
EV1130



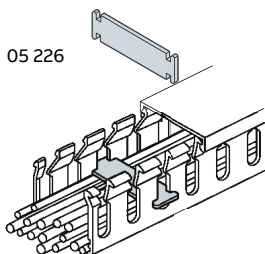
EV1131



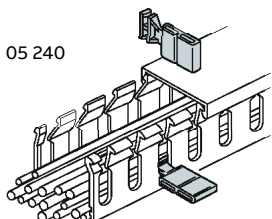
AD1009



AD1098



05 226



05 240

## Accessories

### Wiring duct support brackets

Description	Code	Unit/pack pieces
No.100 wiring duct support brackets on structure uprights	EV1130	1/100
No.100 wiring duct support brackets on structure uprights	EV1131	1/100

### Wiring duct support brackets

Description	Code	Unit/pack pieces
No.4 plastic supports for horizontal wiring duct	AD1009	1/4
No.4 metal supports for horizontal/vertical wiring duct	AD1098	1/4

### Duct shears

Description	Code	Unit/pack pieces
Duct shears	05 265	1/1

### Rivet fastener

Description	Code	Unit/pack pieces
For Ø 6 mm rivets (black colour)	05 266	1/12
For Ø 4 mm rivets (green colour)	05 268	1/12

### Plastic rivet

Description	Code	Unit/pack pieces
05 214 Ø 4mm	05 214	1/100
05 216 Ø 6mm	05 216	1/100

### Plastic cable retainer

Description	Code	Unit/pack pieces
Trunking base 40 mm	05 224	1/100
Base duct 60mm	05 226	1/100
Base duct 80mm	05 228	1/100
Base duct 100/120mm	05 230	1/100

### Plastic label tag

Description	Code	Unit/pack pieces
Suitable for wiring ducts with 8/12 mm slots only	05 240	1/100

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

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## **Chapter 4**

In-depth technical information

- 4-2 Mechanical and characteristics**
- 4-4 Declaration of conformity**
- 4-5 Dissipating power**
- 4-10 Conformity with Standards**
- 4-11 Mechanical shock resistance IK**
- 4-12 IP Protection classes**
- 4-14 Special painting**
- 4-15 NEMA classification**
- 4-16 ATEX Certification**
- 4-17 Electrical continuity**
- 4-19 Handling**
- 4-21 Maximum capacities**
- 4-25 Busbars with shaped section and flat busbars**
- 4-30 Ventilation and air conditioning**

# In-depth technical information

## Mechanical characteristics

### Material

	Structure	Kit panels	Structure panels	Doors	Safety glass external thickness [mm]	Plates
	Galvanized Steel sheet [mm]	Pickled steel sheet [mm]	Pickled steel sheet [mm]	Pickled steel sheet [mm]		Galvanized Steel sheet [mm]
IS2 Cabinets	15/10	12/10	15/10	20/10	4	25/10

### Painting

<b>Structure colour</b>	Grey orange peel RAL 7035
<b>Plinth colour</b>	Grey orange peel RAL 7012
<b>Standard cycle</b>	Sheet washing Phosphating with ferrous salt base Tunnel drying at 100°C External and internal painting with electrostatic application of powder thermosetting coat with epoxy polyester binders, orange peel RAL 7035 colour, 60/70 micron total thickness. Oven polymerisation at 180° C.
<b>Characteristics of the paint</b>	Binder: epoxy polyester Specific gravity: 1,61g/cm <sup>3</sup> Theoretical spread: 10.4 m <sup>2</sup> /kg with 60 micron average film thickness Melting point: 85-95° C (Kofler bench method) Granulometry: standard distribution from 5 to 100 micron with average particle size between 30 and 40 micron. Hardening 12 min x 190° C (object temperature). Hardness: 1H - 2H Bending elasticity DIN 53152: unaltered on 1/4" spindle Reticle adhesion DIN 53151: GT O (100%) Erichem elasticity: SEN DIN 53156: > 6mm Gardner impact strength: 25 Kg. x cm.

Tests carried out on degreased and phosphated plates with 60/70 micron film thickness.  
The painting has passed the saline mist resistance tests (193 hours).

### Environmental characteristics according to the IEC 62208 Standard

<b>Type of installation</b>	indoor
<b>Installation conditions</b>	floor
<b>Operating climate (t°/rh %)</b>	constant 23°C/83% - 40°C/93% variable 23°C/98% - 40°C/98%
<b>Environmental temperature limits</b>	operating -5°C +40°C storage -25°C +55°C

## In-depth technical information

### Mechanical characteristics

#### IS2 cabinet vibration tests

The results of the vibration tests which our standard IS2 automation enclosures have undergone are significant, above all when the enclosures are installed on ships, in seismic areas and in military areas. The vibration tests on the standard IS2 enclosure s have produced the following positive result: with respect to a stress 0.1 g in a range of frequencies between 10 and 500Hz, the maximum acceleration found inside the enclosure is less than 0.5 g.

Range of frequency 10-500Hz	10-500Hz
Stress 0,1 g	0,1 g
Maximum acceleration reached (inside the enclosure) <0,5 g	<0,5 g

We have also verified that the IS2 standard enclosure has linear behaviour even when the level of acceleration is increased up to 1 g in the same range of frequencies.

#### Antiseismic tests enclosures IS2

Enclosure IS2 dimensions 2000x800x800mm (HXDXW) with 435 kh of load. Enclosures have been tested according with the Standard IEC 60068-2-57 “Environmental testing Part. 2: Tests method. Vibration - Time history method” and with the Standard IEEE Std 693 “Recommended Practice for Seismic Design of Substation”.

#### Similar application fields\*

According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
<b>Enclosure without specific accessories</b>			
Shock level test up to 0.5 g	Zona 4	7	9
<b>Enclosure with specific accessories AS0001+crosspieces+reinforced plinth</b>			
Shock level test up to 0.75 g	Zona 4	7,5	10

\* Values of different scales are indicative.

# In-depth technical information

## Declaration of conformity

Conformity with the IEC 62208, IEC 60439-1 and new EN61439-1 and 2 standards. The enclosures have undergone the type tests foreseen by the IEC 62208 and IEC 60439-1 and new 61439-1 and 2 standards at the ABB laboratories. The results of these tests guarantee the performances of the IS2 enclosures and allow the end enclosure builder not to carry out any further type tests by respecting the selection criteria and assembly instructions of the various components. These results, given below, can be referred to for making out the declaration of conformity for the electric enclosure.

### CEI IEC 62208 Standard

“Empty enclosures for low voltage switchgear and controlgear assemblies”.

EN 60439-1 and new 61439-1 and 2 standards

“Low voltage protection switchgear and controlgear assemblies”.

### IS2 Cabinets

#### Nominal characteristics:

<b>Rated service voltage Un</b>	up to 1000V AC - 1500V DC
<b>Rated insulation voltage Ui</b>	up to 1000V AC - 1500V DC
<b>Rated impulse withstand voltage Uimp</b>	8 kV
<b>Rated frequency fn</b>	50-60Hz
<b>Degree of protection</b>	IP65 with door and fixed flanged IP54 with ventilated/air-conditioned door and panels - with EMC door version
<b>Mechanical impact strength IK</b>	10 with blind door 09 with glazed door - 08 EMC version glazed door
<b>Rated short-time current Icw</b>	65 kA
<b>Rated max. peak current Ipk</b>	143 kA
<b>Installation condition</b>	Internal cabinet

#### Efficiency of the protection circuit (Ref. par. 8.2.4. of the Standard)

By respecting the assembly indications for the metal components, the effective electrical continuity between the conductive electrical parts has been verified, with negligible resistance values.

#### Insulation distances (Ref. par. 8.2.5. of the Standard)

The insulation distances are guaranteed by following the ABB SACE metalwork structure and circuit-breaker assembly and mounting instruction.

#### The insulation distances are guaranteed by following the ABB SACE metalwork structure and circuit-breaker assembly and mounting instruction.

By respecting the assembly instructions for the structures and ABB SACE circuit-breakers, mechanical operation is verified.

When correctly selected and assembled, as per the indications given in the catalogue and in the instruction manual, they allow of electrical enclosures complying with the IEC 60439-1 Standard and the new IEC 61439-1 and 2 Standard “Low voltage controlgear and switchgear for assemblies” and the IEC 60204-1“ Standard “Safety of machinery – Electrical equipment of machines”, to be built, based on what is foreseen under the Low Voltage Directive of the European Community 2006/95/CE (which takes place of 73/23/CEE directive).

The above is valid if the electrical enclosure is designed and constructed:

- selecting the materials based on the performances indicated in the ABB catalogues;
- sizing the conductors according to the prescriptions of the IEC 60439-1 Standard and the new IEC 61439-1 and 2 Standard, and Standard and CEI 64-8;
- carrying out the individual tests foreseen under the IEC 60439-1 Standard and the new Standard IEC 61439-1 and 2 Standard with a positive outcome.

# In-depth technical information

## Dissipating power

### Temperature-rise (Ref. Standard IEC 60439-1 par. 8.2.1 and new IEC 61439-1-2 Standard).

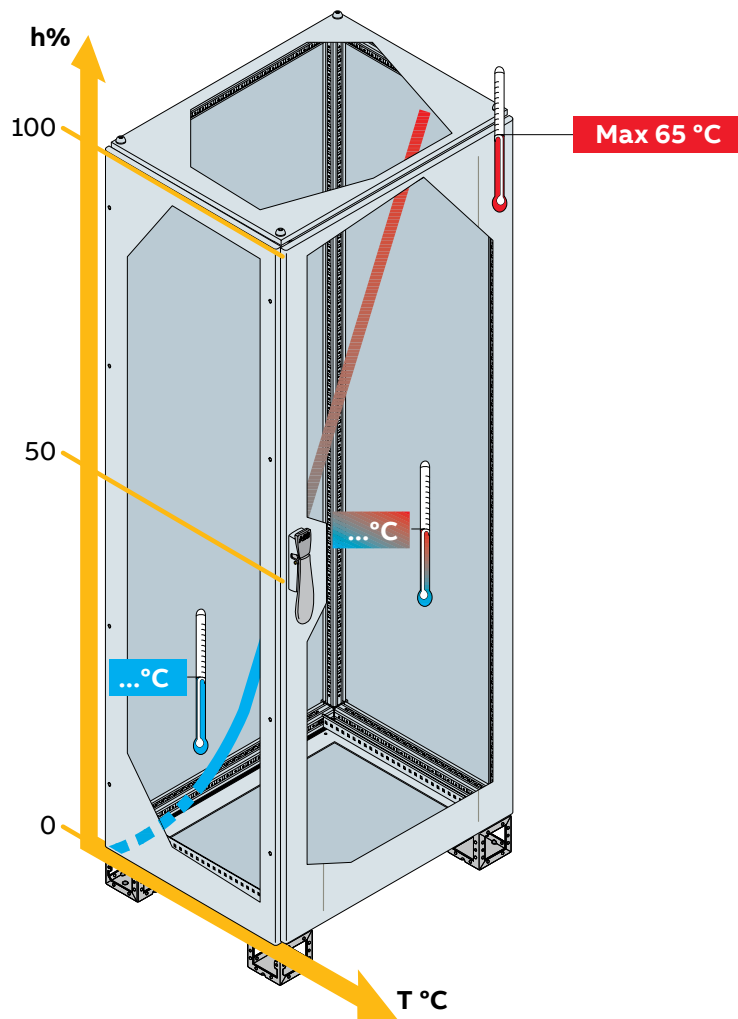
The following tables show the thermal dissipation values referred to all the dimensions of the enclosures and to the type of installation, coming from the type tests carried out. The dissipating power data (in Watts) depend on the admissible overtemperature inside the enclosure in the upper Part, and must be compared with the sum of the powers dissipated by all the components installed inside the enclosure.

### Use of the dissipated power tables

The dissipated power value of a cabinet depends on the maximum temperature ( $T_{max}$ ) and on the admissible overtemperatures (EN60439-1 Standard and new IEC 61439-1-2 Standard).

### Example

If an ambient temperature of 35 °C is considered, the value of dissipating admissible overtemperature ( $\Delta T$ ), which is 30 °C if a temperature at the top of the enclosure of 65 °C is acceptable.

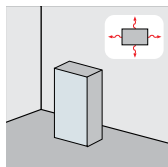


## In-depth technical information

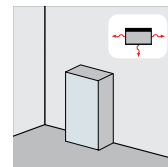
### Dissipating power

#### IS2 enclosures - H = 1400/1600mm

##### Maximum dissipating power (W)



Single enclosure exposed on all sides



Wall-mounted single enclosure

Code	Dimensions (mm)			Overtemperature values $\Delta T$							
	H	W	D	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C
1STQ005346B0000	1400	600	300	148	186	225	266	136	170	206	244
1STQ005350B0000	1400	600	400	178	224	271	320	175	220	266	314
1STQ005357B0000	1400	600	500	234	294	357	421	211	265	321	379
1STQ005347B0000	1400	800	300	195	245	297	350	186	233	282	333
1STQ005351B0000	1400	800	400	249	313	379	447	230	289	350	414
1STQ005358B0000	1400	800	500	300	376	456	538	271	340	412	487
1STQ005348B0000	1400	1000	300	257	323	391	461	236	297	359	424
1STQ005352B0000	1400	1000	400	303	380	460	543	284	357	432	511
1STQ005353B0000	1400	1200	400	354	444	538	635	332	417	505	596
1STQ005359B0000	1400	1000	500	346	434	526	621	325	408	494	584
1STQ005360B0000	1400	1200	500	390	489	592	699	362	454	551	650
1STQ005369B0000	1600	600	300	176	221	268	316	151	190	230	272
1STQ005371B0000	1600	600	400	220	277	335	396	194	244	295	349
1STQ005378B0000	1600	600	500	259	325	394	465	234	293	355	420
1STQ005370B0000	1600	800	300	244	307	371	439	209	263	318	376
1STQ005372B0000	1600	800	400	284	357	432	510	253	317	384	453
1STQ005379B0000	1600	800	500	317	398	483	570	295	371	449	530
1STQ005373B0000	1600	1000	400	331	415	503	594	308	387	469	554
1STQ005374B0000	1600	1200	400	379	476	577	681	347	435	527	622
1STQ005379B0000	1600	800	500	317	398	483	570	295	371	449	530
1STQ005380B0000	1600	1000	500	366	460	557	657	342	429	520	614
1STQ005381B0000	1600	1200	500	416	522	632	746	383	481	582	688

Values also valid for the versions with glazed door.

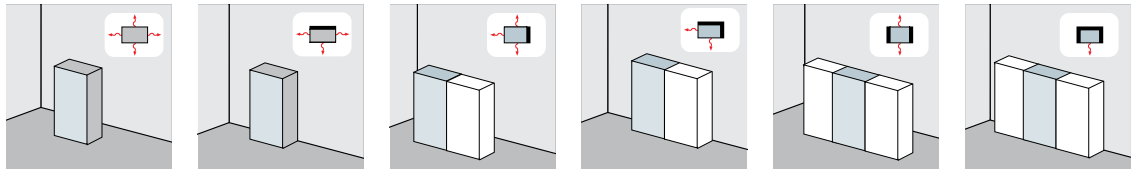
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# In-depth technical information

## Dissipating power

### IS2 enclosures - H = 1800mm

Maximum dissipating power (W)



Single enclosure exposed on all sides    Wall-mounted single enclosure    First or last enclosure exposed    Wall-mounted first or last enclosure    Central enclosure exposed    Wall-mounted central enclosure

Dimensions (mm)

Overtemperature values ΔT

Code	W	D	25°C				30°C				35°C				40°C											
			25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C								
ES1844K	400	400	161	202	245	289	147	185	224	264	145	145	220	260	132	166	201	237	130	163	197	233	119	149	180	213
ES1845K	400	500	190	238	289	341	177	222	268	317	170	170	259	305	157	197	239	282	149	187	227	268	139	174	211	250
ES1846K	400	600	219	275	333	393	207	259	314	371	195	195	296	349	182	229	277	327	169	212	257	303	159	200	242	286
ES1848K	400	800	283	355	430	508	270	339	411	485	248	248	377	445	236	296	358	423	211	264	320	378	203	254	308	364
ES1840K	400	1000	346	435	526	621	336	421	510	602	301	301	457	540	289	363	439	519	252	317	384	453	247	310	375	443
ES1864K	600	400	219	275	333	393	197	247	300	354	204	204	310	366	182	229	277	327	188	235	285	337	169	212	257	304
ES1865K	600	500	256	321	389	460	233	293	355	419	236	236	359	423	214	268	325	383	214	268	325	383	196	246	298	351
ES1866K	600	600	292	367	444	524	269	337	409	483	267	267	406	479	244	306	371	438	239	299	362	428	221	278	337	397
ES1868K	600	800	367	461	558	659	346	434	526	621	328	328	499	589	309	387	469	554	292	366	443	523	277	347	420	496
ES1860K	600	1000	425	533	646	762	421	529	640	756	392	392	596	704	375	470	569	672	344	432	523	618	331	416	503	594
ES1884K	800	400	283	355	430	508	250	314	380	449	268	268	407	481	236	296	358	423	250	314	380	449	224	281	340	402
ES1885K	800	500	323	406	492	580	291	365	443	523	303	303	461	544	271	339	411	485	281	352	427	504	255	320	388	458
ES1886K	800	600	367	461	558	659	335	420	509	601	339	339	515	608	309	387	469	554	313	393	476	562	288	361	438	517
ES1888K	800	800	431	541	655	774	422	529	641	757	413	413	628	741	383	480	582	687	375	470	569	672	351	441	534	630
ES1880K	800	1000	482	605	733	865	471	590	715	844	454	454	691	815	450	565	684	808	435	546	661	780	413	518	627	741
ES1804K	1000	400	346	435	526	621	304	382	463	546	332	332	504	595	289	363	439	519	315	395	478	565	280	351	426	502
ES1805K	1000	500	395	496	601	709	353	443	537	634	373	373	567	669	333	417	506	597	353	443	537	634	319	400	484	572
ES1806K	1000	600	425	533	646	762	401	503	609	719	412	412	627	740	375	470	569	672	389	488	592	699	355	446	540	637
ES1808K	1000	800	482	605	733	865	464	583	706	833	461	461	700	826	450	565	684	808	446	560	678	801	425	534	646	763
ES1800K	1000	1000	543	681	825	974	520	653	791	934	509	509	774	913	496	622	754	890	485	609	737	870	485	608	737	870
ES1824K	1200	400	403	506	613	723	362	454	550	650	396	396	603	711	347	436	528	623	384	482	583	689	340	426	517	610
ES1827K	1200	500	438	549	665	786	415	520	630	744	427	427	650	767	395	495	600	708	423	530	642	758	382	480	581	686
ES1826K	1200	600	471	591	715	845	448	562	680	803	456	456	693	818	440	552	669	789	448	562	680	803	422	530	642	758
ES1828K	1200	800	538	674	817	964	508	637	772	911	511	511	777	918	491	616	747	882	494	620	751	886	487	611	740	873
ES1875K	1600	500	533	669	810	956	466	585	708	836	517	517	785	927	449	563	682	805	497	624	755	892	442	554	671	793
ES1876K	1600	600	592	743	900	1063	524	658	797	941	566	566	861	1016	502	630	763	901	546	685	829	979	491	615	745	880
ES1878K	1600	800	705	884	1071	1264	636	798	966	1141	667	667	1013	1197	603	757	917	1082	636	798	966	1141	582	730	885	1044

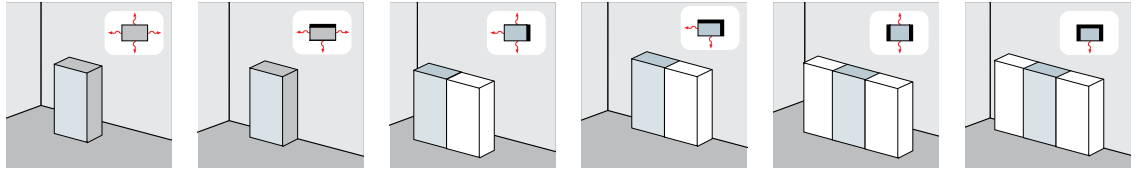
Values also valid for the versions with glazed door.

## In-depth technical information

### Dissipating power

#### IS2 enclosures - H = 2000mm

Maximum dissipating power (W)



Single enclosure exposed on all sides    Wall-mounted single enclosure    First or last enclosure exposed    Wall-mounted first or last enclosure    Central enclosure exposed    Wall-mounted central enclosure

Dimensions (mm)

Overtemperature values  $\Delta T$

Code	W	D	25°C				30°C				35°C				40°C											
			25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C								
ES2044K	400	400	174	218	264	312	158	199	240	284	155	195	236	279	141	177	215	254	139	175	212	250	127	159	193	228
ES2045K	400	500	206	258	313	369	191	239	290	342	183	230	278	329	169	212	257	304	161	202	245	289	149	187	227	268
ES2046K	400	600	237	297	360	425	223	280	339	400	210	264	320	377	197	247	299	353	182	228	277	326	171	215	260	307
ES2048K	400	800	305	382	463	547	291	365	442	522	266	334	405	478	253	317	385	454	226	283	343	405	217	272	330	389
ES2040K	400	1000	372	467	566	668	361	453	549	648	324	407	493	582	311	391	473	559	270	339	411	485	264	331	401	473
ES2064K	600	400	237	297	360	425	213	267	323	382	221	277	335	396	197	247	299	353	202	254	308	363	182	228	277	327
ES2065K	600	500	275	346	419	494	251	315	381	450	253	318	385	454	229	287	348	411	229	288	348	411	209	263	318	376
ES2066K <sup>(1)</sup>	600	600	315	395	479	565	290	364	440	520	287	360	436	515	262	329	399	471	257	322	390	460	237	298	361	426
ES2068K <sup>(2)</sup>	600	800	387	486	588	694	370	464	562	663	351	440	533	629	329	413	500	591	311	390	473	558	294	369	447	528
ES2060K	600	1000	438	550	666	786	432	542	656	775	411	515	624	737	401	503	609	719	368	462	559	660	353	443	537	634
ES2084K	800	400	305	382	463	547	269	338	409	483	288	361	437	517	253	317	385	454	269	338	409	483	240	301	365	430
ES2085K	800	500	349	438	531	627	313	392	475	561	327	410	497	587	291	365	442	522	301	378	458	541	273	342	414	489
ES2086K <sup>(3)</sup>	800	600	387	486	588	694	358	449	544	642	362	455	551	650	329	413	500	591	334	420	508	600	307	385	466	550
ES2089K <sup>(4)</sup>	800	800	445	559	677	799	432	542	657	776	423	531	643	760	410	514	623	735	401	503	610	720	375	471	570	673
ES2080K	800	1000	506	635	769	908	489	613	743	877	471	591	716	845	463	581	703	830	446	560	678	801	442	554	671	792
ES2004K	1000	400	372	467	566	668	327	410	497	587	358	449	544	642	311	391	473	559	338	424	514	607	300	376	455	537
ES2007K	1000	500	404	507	614	725	378	474	574	678	393	494	598	706	355	446	540	637	378	474	574	678	340	426	516	610
ES2006K	1000	600	438	550	666	786	419	526	637	752	423	531	643	759	401	503	609	719	413	519	628	742	380	476	577	681
ES2008K	1000	800	506	635	769	908	481	604	732	864	479	601	727	859	463	581	703	830	460	577	699	825	456	572	693	819
ES2000K	1000	1000	579	726	880	1039	548	687	832	982	536	672	814	961	516	647	784	926	505	633	767	905	499	626	758	895
ES2024K	1200	400	414	519	628	742	387	486	589	695	405	508	616	727	371	466	564	666	401	504	610	720	363	455	551	651
ES2025K	1200	500	454	569	690	814	427	536	649	766	441	553	670	791	420	527	639	754	433	544	659	778	409	513	622	734
ES2026K	1200	600	493	618	749	884	462	580	702	829	474	595	720	850	451	566	686	809	462	580	702	829	451	566	686	810
ES2028K	1200	800	573	719	871	1028	533	668	810	956	539	677	820	968	511	641	776	916	516	647	784	925	502	629	762	900
ES2075K	1600	500	574	720	872	1030	499	625	758	895	556	697	845	997	481	604	732	864	532	668	809	955	471	591	715	845
ES2076K	1600	600	632	793	961	1135	558	700	848	1001	604	758	918	1084	533	669	811	957	581	729	883	1043	520	653	791	934
ES2078K	1600	800	755	947	1147	1354	679	851	1031	1218	713	895	1084	1279	643	806	976	1153	679	851	1031	1218	619	776	941	1110

<sup>(1)</sup> Values also valid for ES2066EMCK.  
<sup>(2)</sup> Values also valid for ES2086EMCK.  
<sup>(3)</sup> Values also valid for ES2068EMCK.  
<sup>(4)</sup> Values also valid for ES2089EMCK.

Values also valid for the versions with glazed door.

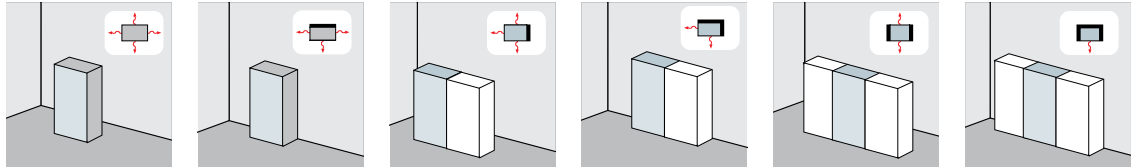


# In-depth technical information

## Dissipating power

### IS2 enclosures - H = 2200mm

Maximum dissipating power (W)



Single enclosure exposed on all sides    Wall-mounted single enclosure    First or last enclosure exposed    Wall-mounted first or last enclosure    Central enclosure exposed    Wall-mounted central enclosure

Dimensions (mm)

Overtemperature values ΔT

Code	W	D	25°C				30°C				35°C				40°C											
			25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C	25°C	30°C	35°C	40°C								
ES2244K	400	400	186	233	282	333	169	212	256	303	165	207	251	296	150	188	228	269	148	186	225	266	135	169	204	241
ES2245K	400	500	221	277	335	396	204	256	310	366	196	245	297	351	180	226	274	324	172	216	262	309	159	200	242	285
ES2246K	400	600	255	320	388	458	239	300	364	429	225	283	342	404	210	264	320	377	195	245	296	350	183	229	278	328
ES2248K	400	800	325	408	494	583	311	390	472	557	283	355	431	508	269	338	409	483	240	302	365	431	230	289	350	413
ES2240K	400	1000	381	478	580	684	379	476	576	680	346	435	526	622	333	417	506	597	289	362	439	518	281	352	427	504
ES2264K	600	400	255	320	388	458	228	286	347	409	236	296	359	424	210	264	320	377	217	272	330	389	195	244	296	349
ES2265K	600	500	293	368	446	526	267	335	406	479	270	339	411	485	244	307	371	439	244	306	371	438	223	279	338	399
ES2266K	600	600	336	422	511	604	309	388	470	555	306	384	465	549	280	351	425	502	274	343	416	491	253	317	384	453
ES2268K	600	800	397	498	603	712	388	486	589	696	379	475	575	679	351	440	533	629	330	414	502	592	311	390	473	558
ES2260K	600	1000	453	568	689	813	443	556	673	795	420	527	638	753	417	523	633	747	391	490	594	701	374	470	569	672
ES2284K	800	400	325	408	494	583	287	360	436	515	306	385	466	550	269	338	409	483	287	360	436	515	255	320	387	458
ES2285K	800	500	368	462	559	660	334	420	508	600	349	438	531	627	311	390	472	558	322	404	490	578	291	365	442	521
ES2287K	800	600	397	498	603	712	382	479	580	685	385	483	585	690	351	440	533	629	355	446	540	637	324	407	493	582
ES2288K	800	800	461	579	701	827	444	556	674	796	434	545	660	779	424	532	644	761	415	521	631	745	398	499	604	714
ES2280K	800	1000	532	668	809	955	509	639	774	914	490	614	744	879	476	598	724	855	459	575	697	823	459	575	697	823
ES2204K	1000	400	381	478	580	684	350	439	532	628	375	471	570	674	333	417	506	597	362	454	550	650	320	401	486	574
ES2205K	1000	500	416	521	631	746	393	493	597	705	406	509	616	728	376	472	572	675	393	493	597	705	359	451	546	645
ES2206K	1000	600	453	568	689	813	429	538	651	769	434	545	660	779	417	523	633	747	422	529	641	757	402	505	612	722
ES2208K	1000	800	532	668	809	955	500	627	760	897	499	625	758	895	476	598	724	855	474	595	721	851	466	584	708	836
ES2200K	1000	1000	621	779	943	1114	578	725	879	1037	566	710	860	1015	538	674	817	964	526	660	799	944	514	645	782	923
ES2224K	1200	400	428	537	651	768	397	498	603	712	421	528	640	755	394	494	598	706	410	515	623	736	385	483	585	690
ES2225K	1200	500	472	592	717	846	438	549	665	785	455	571	692	817	428	538	651	769	445	558	676	799	430	540	654	772
ES2226K	1200	600	517	649	786	928	478	599	726	857	494	619	750	886	463	581	704	831	478	599	726	857	461	578	700	827
ES2228K	1200	800	614	770	932	1101	561	703	852	1006	571	716	867	1024	532	667	808	954	540	677	820	968	518	649	787	929
ES2275K	1600	500	613	769	932	1100	532	667	808	954	593	744	901	1064	513	643	779	920	568	713	863	1019	501	628	761	898
ES2276K	1600	600	675	846	1025	1210	591	742	898	1061	649	814	986	1164	567	711	861	1016	616	773	936	1106	549	689	835	985
ES2279K	1600	800	794	996	1206	1424	719	902	1093	1291	757	950	1150	1358	680	853	1033	1220	719	902	1093	1291	654	820	993	1173

Values also valid for the versions with glazed door.

# In-depth technical information

## Conformity with Standards

### Reference Standards

- CEI 17-70 "Guide to application of the low voltage enclosure standards"
- CEI EN 60439-1 and new IEC 61439-1-2 Standard "Low voltage switchgear and controlgear assemblies (LV enclosures) Part 1: Assemblies subject to type tests (TTA) and assemblies partially subject to type tests (PTTA)"
- CEI EN 60529 (IEC 529-1) "Degrees of protection provided by enclosures (IP Code)"
- IEC 62262 "Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK Code)"
- CEI 17-43 (IEC 60890) "Method of temperature-rise assessment by extrapolation for partially type-tested assemblies (PTTA) of low voltage switchgear and controlgear (LV enclosures) not mass-produced"
- (\*) CEI 17-52 (IEC 61117 "Method of assessment of the short-circuit withstand of switchgear and controlgear assemblies not mass-produced (PTTA)"
- CEI EN 62208 "Empty enclosures for low voltage switchgear and controlgear assemblies. General prescriptions"
- CEI EN 60204-1 (IEC 60204-1) "Safety of machinery – Electrical equipment of machines. Part 1: General requirements"
- IEEE Std 693 "Recommended Practice for Seismic Design of Substation"

### Laws which have implications for electrical enclosures

The new series of IS2 enclosures comply with the national laws regulating responsibility regarding the matter of electrical apparatus and assemblies.

- Law 187/68, in which the following is stated:
  - Art.1. All the materials, apparatus, machinery, assemblies and electrical and electronic plants must be professionally made and constructed.
  - Art.2. The materials, apparatus, machinery, assemblies and electrical plants built according to the Italian Electrotechnical Committee are considered to be constructed professionally.
- The 2006/95/EC Low voltage Directive (which replaces 73/23/EEC and subsequent amendments) indicates what characteristics the electrical material commercialised must have. In this case, the technical references are the Harmonised European Standards, and in case of their lacking, the IEC publications and, in order, National Standards.
- Legislative Decree n° 626 of 25 November 1996, implementation of the 93/68 EEC Directive on the matter of CE marking for the Low voltage Directive, modified with Legislative Decree n° 227 of 31 July 1997.
- Law 46/90 and Decree of implementation DPR n° 447 of 6 December 1991; introduce the obligation for the installer to issue the customer with a declaration of conformity with the Law relative to the plant and to which a report with the type of components used must be attached.
- Directive 1999/92/EC and 94/9/EC Directive Minimum requirements for improvement of safeguarding the health and safety of workers who may be exposed to the risk of explosive atmospheres

# In-depth technical information

## Mechanical shock resistance IK

### IK degree of resistance to impacts

The method specified in the IEC 62262 Standard to determine the IK degree of resistance to impact is indicated in the table below.

It specifies the resistance of equipment to impact. The proof consists in let a weight falling down from a pre-established height. The degree of resistance to impacts is therefore obtained and it is expressed in Joules.

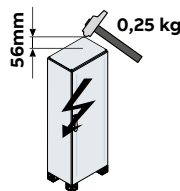
The IK is expressed in Joule in compliance with the requirements of IEC 62262.

#### IK 0



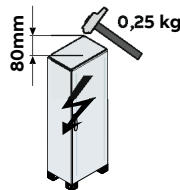
Not protected

#### IK 01



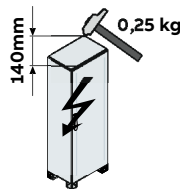
Impact energy in Joule 0.140

#### IK 02



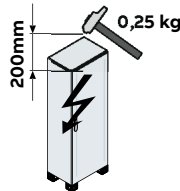
Impact energy in Joule 0.200

#### IK 03



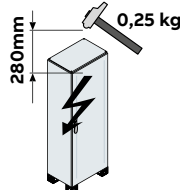
Impact energy in Joule 0.350

#### IK 04



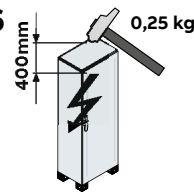
Impact energy in Joule 0.500

#### IK 05



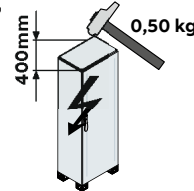
Impact energy in Joule 0.700

#### IK 06



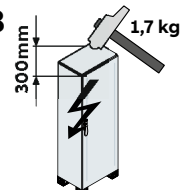
Impact energy in Joule 1.00

#### IK 07



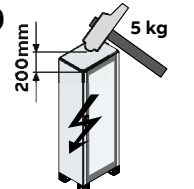
Impact energy in Joule 2.00

#### IK 08



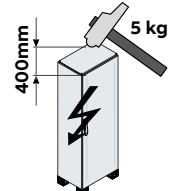
**IS2 enclosure**  
Without door with DIN panels / inner door  
Impact energy in Joule 5.0

#### IK 09



**IS2 enclosure**  
Glass door  
Impact energy in Joule 10.00

#### IK 10



**IS2 enclosure**  
Blind door  
Impact energy in Joule 20.00

### Test performed according to the IEC 62262 Standard

Degree of protection provided by enclosures for electrical equipment against external mechanical impacts (IK Code).

	With blind door	With glass door	Without door with DIN panels / inner door
IS2 enclosure console/PC/compartment	IK10	IK09	IK8

# In-depth technical information

## IP Protection classes

1 <sup>st</sup> DIGIT: protection against solid objects		2 <sup>nd</sup> DIGIT: Protection against liquids	
<b>0</b>	No protection	<b>0</b>	No protection
<b>1</b> $\varnothing$ 50mm	Protected against solid objects larger 50mm (accidental contact with the hands)	<b>1</b>	Protected against vertically dripping water (condensation)
<b>2</b> $\varnothing$ 12mm	Protected against solid objects larger than 12mm (fingers)	<b>2</b> $\leftarrow$ 15°	Protected against water dripping at an angle up to 15° from the vertical
<b>3</b> $\varnothing$ 2,5mm	Protected against solid objects larger than 2.5mm (tools, wires)	<b>3</b> $\leftarrow$ 60°	Protected against rain falling at an angle up to 60° from the vertical
<b>4</b> $\varnothing$ 1mm	Protected against solid objects larger than 1mm	<b>4</b>	Protected against water splashing from all directions
<b>5</b>	Protected against dust (no harmful deposits)	<b>5</b>	Protected against jets of water sprayed from all directions
<b>6</b>	Totally protected against dust	<b>6</b>	Protected against jets of water similar to waves
		<b>7</b> 15cm	Protected against the effects of temporary immersion
		<b>8</b>	Protected against the effects of continuous immersion

**Tests carried out in accordance with IEC EN 60529. Degree of protection of the enclosures (IP code)**

	Version with blind / glass door	Version with PC cabinet/ with console/with compartments	Version for modular configurations or with inner door, without door
<b>IS2 enclosure</b>	IP65 with fixed cable entry flanges IP40 with sliding / modular cable entry flanges	IP41	IP20

## In-depth technical information

### IP Protection classes

#### Protection against ingress of solid objects

1 <sup>st</sup> characteristic digit	Brief description	Full description
0	Not protected	No particular protection is envisaged
1	Protected against solid objects larger than 50mm	A large area of the human body, for example a hand (however, voluntary protection is not envisaged) or solid objects larger than 50mm in diameter must not be able to penetrate
2	Protected against solid objects measuring	The fingers or similar objects measuring 80mm or solid objects more than 12mm in diameter must not be able to penetrate
3	Protected against solid objects measuring more than 2.5mm	Tools, wires, etc., more than 2.5mm in diameter or thickness or solid objects more than 2.5mm in diameter must not be able to penetrate
4	Protected against solid objects measuring more than 1.0mm	Wires or flat cables more than 1.0mm thick or solid objects more than 1.0mm in diameter must not be able to penetrate
5	Protected against dust	Penetration of dust is not totally excluded but the quantity that may penetrate is not sufficient to impair the correct operation of the material
6	Totally protected against dust	No dust penetration is permitted

#### Protection against ingress of water

2 <sup>nd</sup> characteristic digit	Brief description	Full description
0	Not protected	No particular protection is envisaged
1	Protected against dripping water	Drops of water falling vertically must not produce harmful effects
2	Protected against water dripping at a maximum angle of 15°	Drops of water falling vertically must not produce harmful effects when the enclosure is tilted at any angle up to 15° from its normal position
3	Protected against rainfall	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effects
4	Protected against splashing water	Water splashing against the enclosure from any direction shall have no harmful effects
5	Protected against water jets	Water projected by a nozzle from any direction shall have no harmful effects
6	Protected against waves	Waves or powerful water jets shall not penetrate the enclosure in harmful quantities
7	Protected against the effects of temporary immersion	Ingress of water in harmful quantities shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time
8	Protected against the effects of continuous immersion	The equipment is suitable for continuous immersion under conditions which shall be specified by the manufacturer












































# In-depth technical information

## Special painting

Standardised RAL colours (on request)

On request, colours other than the standard RAL 7035 orange peel are available with the same painting cycle. For every request regarding special colours, please contact ABB.

—  
**Available RAL colors chart (minimum lot 3 structures)**

RAL 1001  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 1004  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 1013  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 1015  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 1018  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 1021  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 2004  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 2008  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 2009  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 3000  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 3004  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 3020  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 4005  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 5000  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 5009  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 5010  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 5012  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 5015  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 6011  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 6021  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 6027  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7001  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7004  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7012  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7016  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 7024  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7030  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7032  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7035  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7036  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 7037  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7038  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7040  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7042  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 7043  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 7047  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 9001  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 9002  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 9003  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 9005  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>
RAL 9007  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 9010  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>	RAL 9016  Smooth <input type="checkbox"/> Orange peel <input type="checkbox"/>		

### Corrosion test in saline mist

(Ref. Standard UNI ISO 9227, CEI50-5/4, IEC 60068-2-30)

Treatment time (hours)	24	48	72	96	120	144	168	192
Rust penetration	no	no	no	no	no	no	no	193 <sup>(1)</sup>
Blistering	no	no	no	no	no	no	no	no

<sup>(1)</sup> When a tearing test with adhesive tape is carried out after 193 hours of exposure, about 3 mm of paint detachment can be noted from the notch area with 1-1.5 mm rust penetration.

# In-depth technical information

## NEMA Classification

### NEMA “National Electrical Manufacturers Association” Classification

Type	Description	Products classified
1	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dirt.	IS2
2	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment, to provide a degree of protection against falling dirt, and to provide a degree of protection against dripping and light splashing of non-corrosive liquids.	
3	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, and windblown dust; and that will be undamaged by the external formation of ice on the enclosure.	
3R*	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, and snow; and that will be undamaged by the external formation of ice on the enclosure.	IS2
3S	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, and windblown dust; and in which the external mechanism(s) remain operable when ice laden.	
4	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, and hose-directed water; and that will be undamaged by the external formation of ice on the enclosure.	
4x	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, hosedirected water, and corrosion; and that will be undamaged by the external formation of ice on the enclosure.	
5	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against settling airborne dust, lint, fibers, and flyings; and to provide a degree of protection against dripping and light splashing of non-corrosive liquids.	
6	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, hose-directed water, and the entry of water during occasional temporary submersion at a limited depth, and that will be undamaged by the external formation of ice on the enclosure.	
6P	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, hose-directed water, corrosion and the entry of water during prolonged submersion at a limited depth; and that will be undamaged by the external formation of ice on the enclosure.	
12	Enclosures constructed (without knockouts) for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, against circulating dust, lint, fibers, and flyings; against dripping and light splashing of non-corrosive liquids; and against light splashing and consequent seepage of oil and non-corrosive coolants.	IS2
12K	Enclosures constructed (with knockouts) for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, against circulating dust, lint, fibers, and flyings; against dripping and light splashing of non-corrosive liquids; and against light splashing and consequent seepage of oil and non-corrosive coolants.	IS2
13	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, against circulating dust, lint, fibers, and flyings; and against the spraying, splashing, and seepage of water, oil, and non-corrosive coolants.	

\* Type 3R has been assigned to enclosure provided with protective hood.

# In-depth technical information

## ATEX Certification

**TABLE 1 - GROUPS, CATEGORIES AND LEVELS OF PROTECTION**

(source: Atex Guide – first edition - European Commission DG Enterprises, May 2000)

Level of protection	Group I	Group II	Protection performances	Operating conditions*
Very high	M1		Two independent means of protection or safety guaranteed even when two faults independent of each other occur	The apparatus remains supplied and in operation even in the presence of an explosive atmosphere
Very high		1	Two independent means of protection or safety guaranteed even when two faults independent of each other occur	The apparatus remains supplied and in operation even in areas 0, 1, 2 (G) and/or 20, 21, 22 (D)
High	M2		Protection suited to normal operation and heavy operating conditions <sup>(37)</sup>	The power supply is cut off to the apparatus in the presence of an explosive atmosphere
High		2	Protection suited to normal operation and to frequent disturbances during which the faults are normally taken into account	The apparatus remains supplied and in operation in areas 1, 2 (G) and/or 21, 22 (D)
<b>IS2 Enclosures</b>				
Normal		3	Protection suited to normal operation	The apparatus remains supplied and in operation in areas 2 (G) and/or 22 (D)

\* Note: Also see directive 1999/92/CE regarding the minimum prescriptions for improving safety and health of the workers who may be exposed to the hazard of explosive atmospheres <sup>(38)</sup>.

<sup>(37)</sup> Although the wording of the requirements of apparatus belonging to categories M2 and 2 is different in the relative attachments to directive 94/9/CE, both categories are treated in parallel by the IEC 50014 standard and by the specific regulations. The concepts of technical protection relative to electrical apparatus belonging to category M2 and 2G (gas) in conformity with the IEC 50014 standard are identical. The requirements relative to category 2D (dusts) may, on the other hand, need to be considered separately.

<sup>(38)</sup> GU L23, of 28.1.2000.

**TABLE 2 - CHARACTERISTICS AND AREAS CORRESPONDING TO EQUIPMENT IN GROUP II**

(source: "Guide to certification - Directive 94/9/CE - Atex – on the subject of products destined to be used in potentially explosive atmospheres" - Ipsel)

MANUFACTURER				USER				
DPR 126/98 - Directive 94/9/CE Additional requirements for equipment (including the devices and components connected with it)				D.Lgs. 233/03 Direttiva 1999/92/CE)				
Means of protection								
Group	Category	Level	Protection characteristics (Annex. I)	Construction characteristic (Annex. II)	Applicable RES	Presence of explosive atmosphere	Area of use	
II	1	Very high	In the case of a fault in a means of protection the level of safety is guaranteed by at least one second independent means of protection. Furthermore, the level of safety is also guaranteed if two anomalies independent of each other occur	Must be designed and constructed so that the ignition sources are not activated, even in the case of anomalies	1.0	Continuous or for long periods of time	0	
					1.1			
					1.2			1
					1.3			2
					1.4			
					1.5			20
					1.6			21
	2.1	22						
	2	High	The level of safety is guaranteed even in the presence of recurring anomalies or operating defects of the equipment which must normally be taken into account	Must be designed and constructed so as to preclude the ignition sources even in the case of recurring anomalies or operating defects of the equipment which must normally be taken into account	1.0	Intermediate situation between the previous and the following one	1	
					1.1			2
					1.2			21
					1.3			22
					1.4			
					1.5			
1.6								
2.2								
<b>IS2 Enclosures</b>								
	3	Normal	The level of safety is guaranteed during normal operation	Must be designed and constructed so as to preclude the sources of ignition which can be anticipated during normal operation	1.0	Scarce probability and if it occurs it is of short duration	2	
					1.1			22
					1.2			
					1.3			
					1.4			
					1.5			
					1.6			
					2.3			



# In-depth technical information

## Electrical continuity

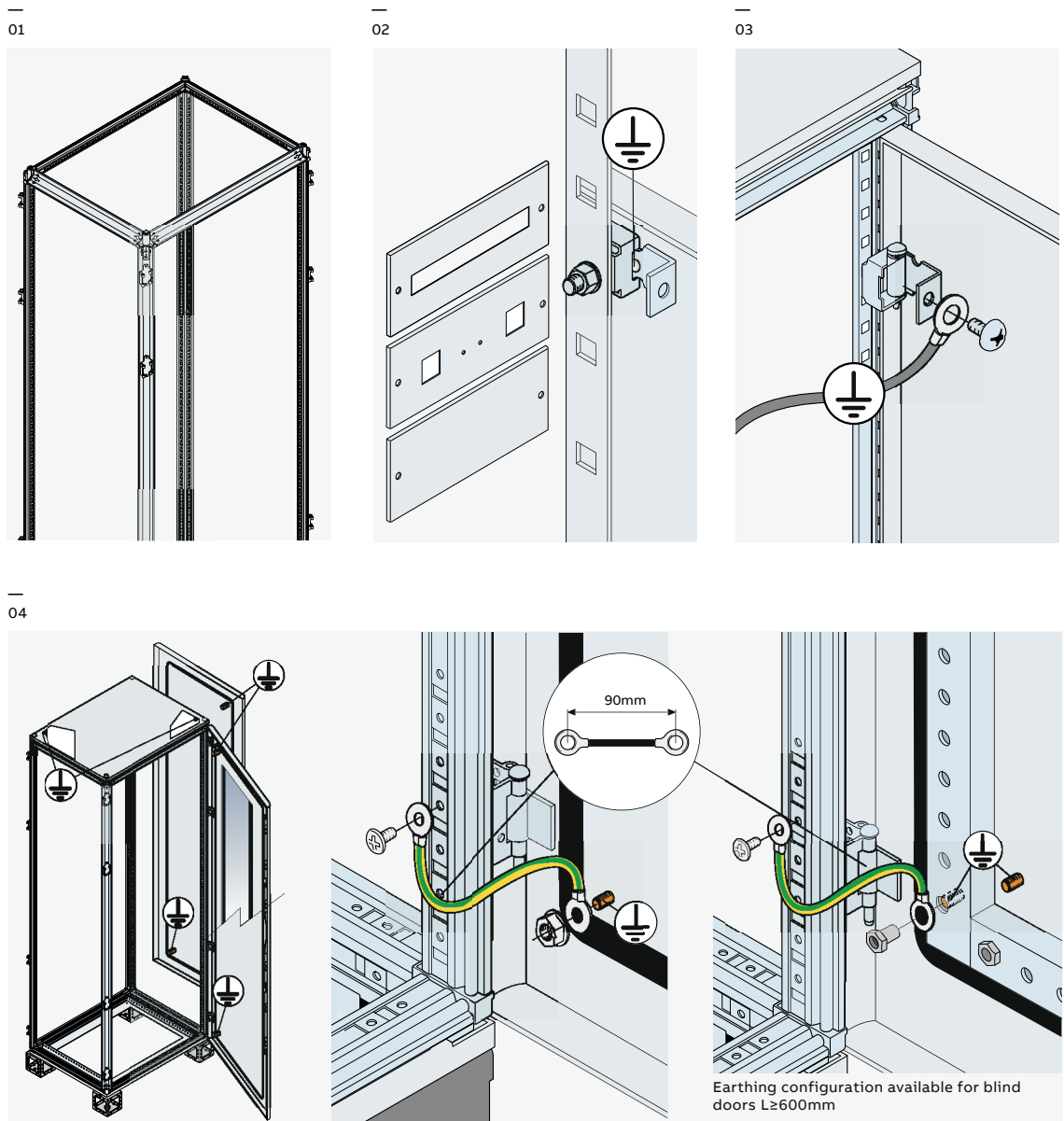
—  
01  
Electrical continuity of the structure in the IS2 cabinets is automatically guaranteed just with assembly of the structure, without the use of dedicated accessories.

—  
02  
In the case of modular panels, electrical continuity is guaranteed in the closed position by the special shape of the hinge (ABB patent).

—  
03  
The special shape of the hinges also allows connection by means of traditional copper braids (to be installed if the panel can be opened).

—  
04  
The blind and glazed doors, side panels, rear panels and roofs are fitted with M6 copper captive self-removing paint screws for earthing (test report LBRP14175/00).

### Electrical continuity of the structure and of the fixed and moving parts



Tests performed according to IEC 62208 (par. 7.7) Standard Empty enclosures for low voltage protection switchgear and controlgear assemblies. General prescriptions.

## In-depth technical information

### Electrical continuity

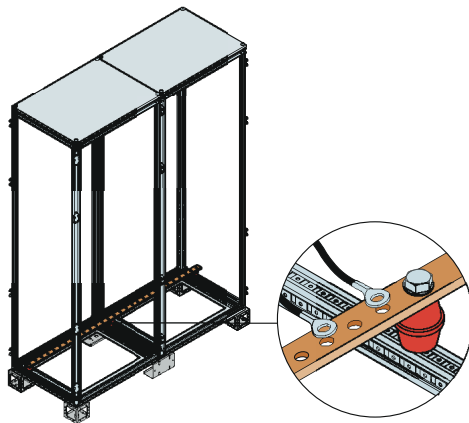
#### Electrical continuity

The IEC 60439-1 and new 61439-1-2 standard indicates the methods for calculating the cross-section of the PE protection conductor which must be suitably sized to withstand the thermal and dynamic components of the fault currents. The following conditions must be verified when identifying the fixing position of the busbar:

- the busbar must be connected directly to the earthed parts of the enclosure (structure);
- the busbar must be connected in an easily accessible position.

For sizing, use the values in the table, taken from the CEI EN60439-1 Standard and new IEC 61439-1-2 Standard (P.7.4.3.1.7)

S (mm <sup>2</sup> )		SP (mm <sup>2</sup> )			
		S	≤	16	S
16	<	S	≤	35	16
35	<	S	≤	400	S/2
400	<	S	≤	800	200
		S	>	800	S/4



The conductors must be connected individually

#### Equipotentiality

The accessible conductive parts of a device, which cannot be connected to the protection circuit by means of its own means of connection, must be connected to the protection circuit of the apparatus for equipotentiality of the protection by means of an equipotential conductor, whose cross-section must be selected according to the table given below.

Rated service current I <sub>e</sub> (A)		Minimum cross-section of the equipotential protection conductor (mm <sup>2</sup> )			
		I <sub>e</sub>	≤	20	S
20	<	I <sub>e</sub>	≤	25	2.5
25	<	I <sub>e</sub>	≤	32	4
32	<	I <sub>e</sub>	≤	63	6
63	<	I <sub>e</sub>			10

S = cross-section of the phase conductor (mm<sup>2</sup>)

#### PEN conductor

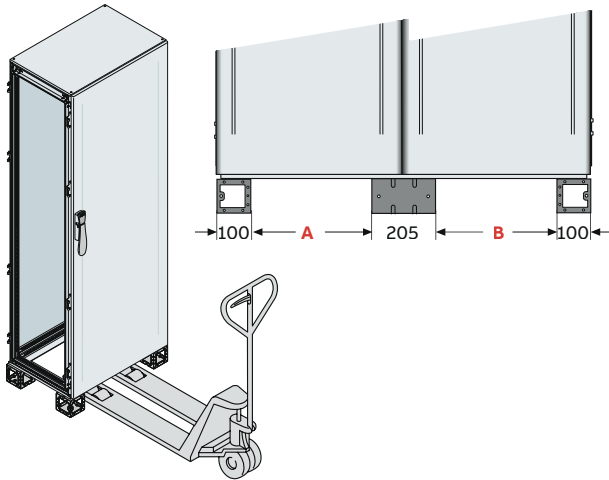
The cross-section of the PEN conductors of a piece of apparatus must be determined using the same procedure as the one followed for the neutral conductor (N). The minimum cross-section of a copper conductor must be 10mm<sup>2</sup>. The PEN conductor does not need to be insulated. The parts of the structure must not be used as PEN conductors. However, the assembly tracks, either in copper or aluminium, can be used as PEN conductors. For conductors not made of copper, the above cross-sections are replaced with crosssections of equivalent conductivity, which may require larger sized terminals.

# In-depth technical information

## Handling

### Handling

#### Handling by means of transpallets

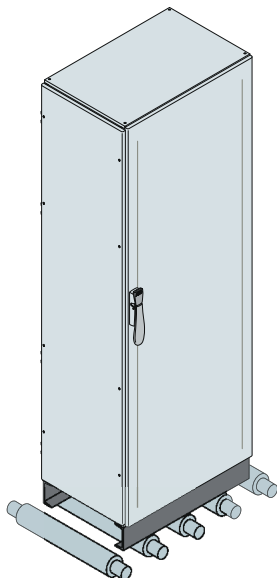


#### Palletisable plinth

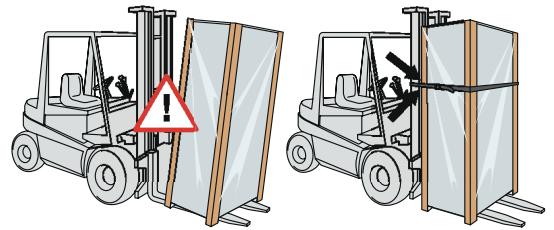
	A (mm)	B (mm)
External cable container W=300mm	88	
Structure W=400mm	188	
Structure W=600mm	388	
Structure W=800mm	588	
Structure W=1000mm	788	
Structure W=1200mm	391.5	391.5
Structure W=1600mm	591.5	591.5

#### Handling by rollers

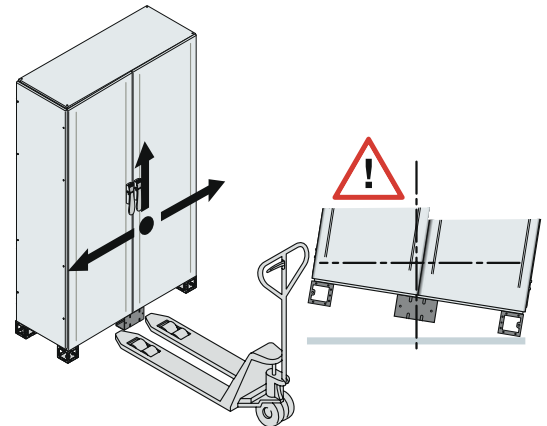
Handling IS2 structures by means of rollers: only with EZ... reinforced plinth.



For greater safety during transport by means of a fork-lift truck, it is advisable to anchor the enclosure to the fork-lift truck:



In the case of W=800mm structures (with internal or external cable container) containing a busbar system, check the centre of gravity before handling.



## In-depth technical information

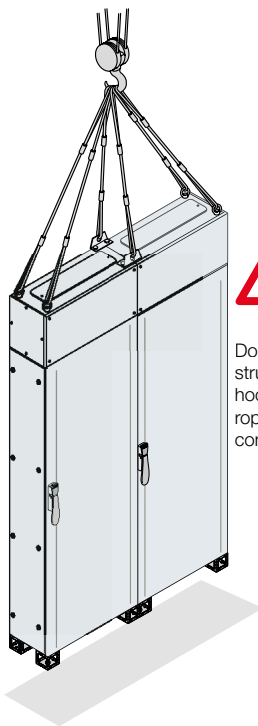
### Handling

#### Handling by means of bridge crane

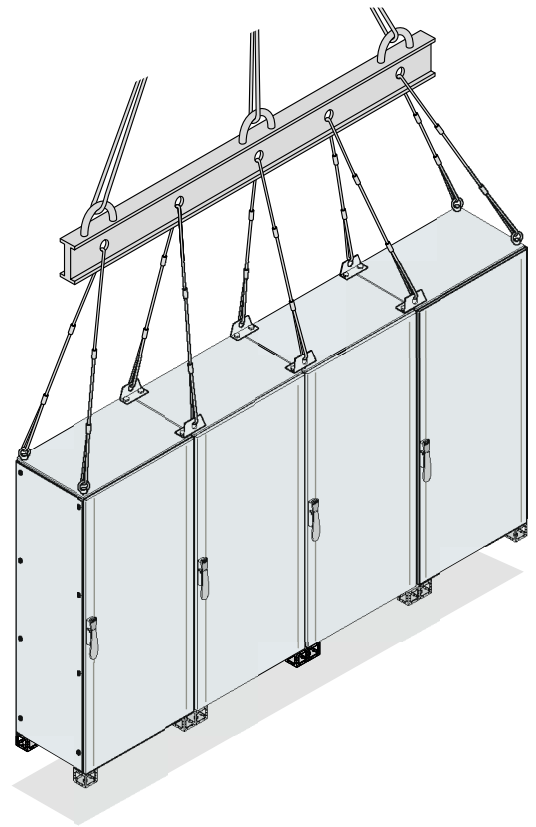
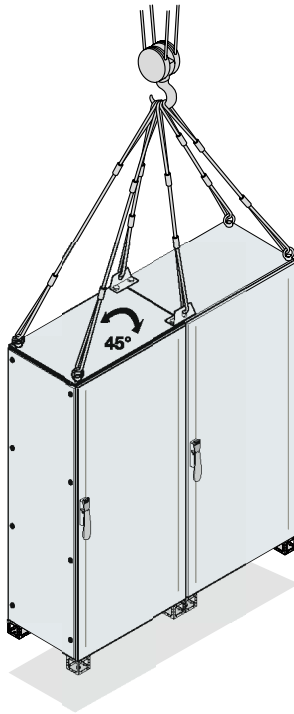
For handling by means of crane or bridge crane, check the following conditions before lifting the enclosure:

- excellent state of the ropes or chains;
- the angle between the lifting ropes and the roof of the switchboard must be  $\geq 45^\circ$ ;

- maximum number of columns which can be transported see pages 7-30;
- maximum weight which can be lifted see pages 7-31.
- When there are several columns placed side by side, to respect the above-mentioned conditions, a lifting beam with appropriate characteristics can be used.



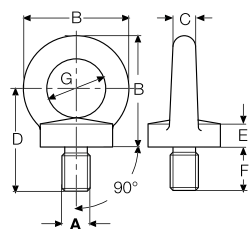
Do not lift the structures by hooking up the ropes to the connection box.



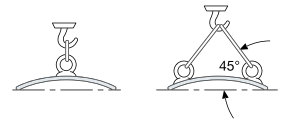
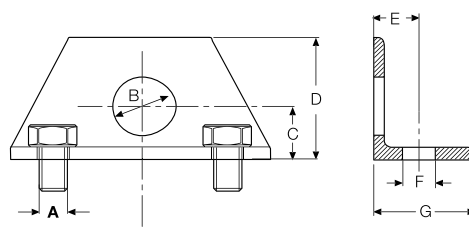
Tests carried out according to IEC 62208 (par. 8.4) Standard Empty enclosures for low voltage protection switchgear and controlgear assemblies. General prescriptions.

#### DIN 580 Standard regarding mechanical connection elements (only for lifting eyebolts)

##### Eyebolts



##### Lifting reinforcements

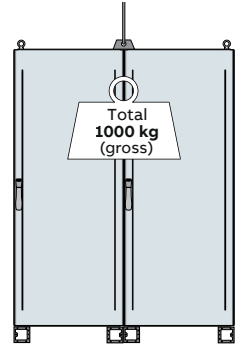
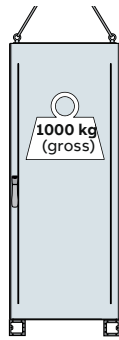


A	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Load 1 (kg)	Load 2 (kg)	Tightening (Nm)
<b>Eyebolts</b>									
M12	54	12	28	10	22	30	340	240	8*
<b>Lifting reinforcements</b>									
M12	Ø40	37	80	25	Ø14	60	510	350	40

# In-depth technical information

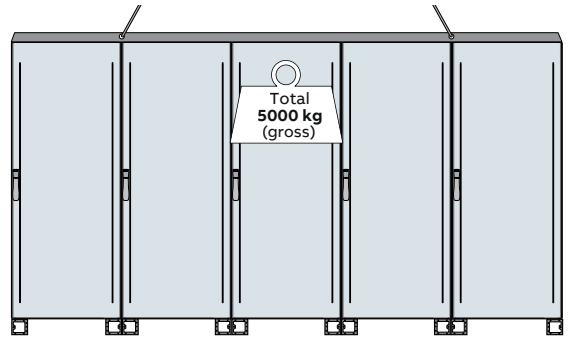
## Maximum capacities

In accordance with the IEC 62208 Standard



	IS2
Number of columns	1
Weight of single column Kg	1000
Total weight of columns Kg	1000
Joining Kit	
Lifting Kit	TA5510
Number of braces used	4

	IS2	IS2 EMC
Number of columns	2	2
Weight of single column Kg	500	500
Total weight of columns Kg	1000	1000
Joining Kit. The joining of the angle pieces ZN1010 can be obtained by means of M5 screws	EV0002	EV0002
Lifting Kit	EV0003	EV0006EMC
	EV1007	EV1007
Number of braces used	2	2



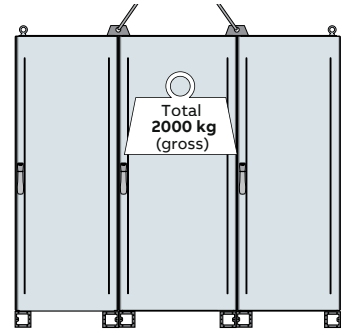
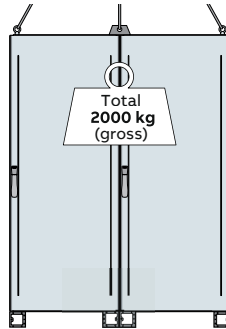
	IS2
Number of columns	5
Weight of single column Kg	1000
Total weight of columns Kg	5000
Joining Kit	EV0003
Lifting Kit	By means of TU1000
Number of braces used	4

	IS2 EMC
Number of columns	5
Weight of single column Kg	1000
Total weight of columns Kg	5000
Joining Kit	EV0006EMC
Lifting Kit	By means of TU1000
Number of braces used	4

## In-depth technical information

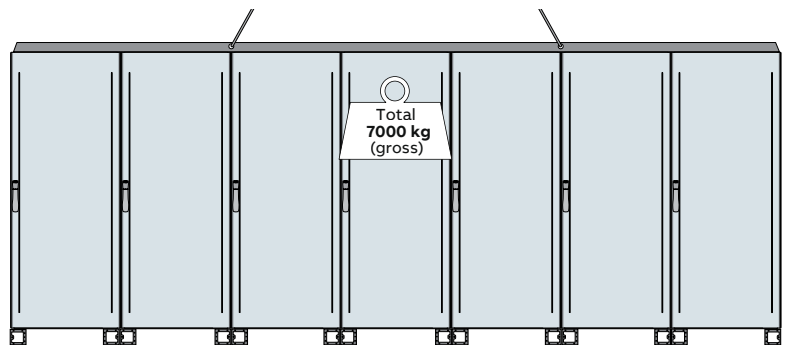
### Maximum capacities

In accordance with the IEC 62208 Standard



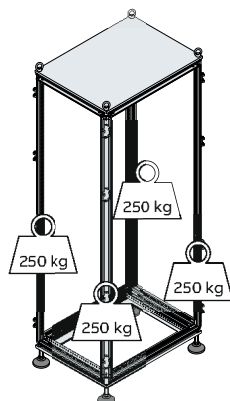
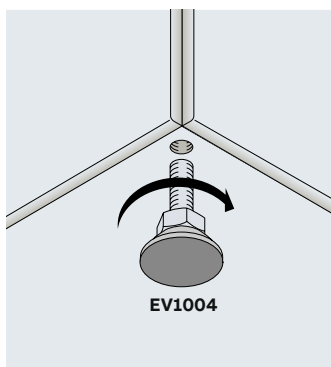
	IS2	IS2 EMC
Number of columns	2	2
Weight of single column Kg	1000	1000
Total weight of columns Kg	2000	2000
Joining Kit	EV0002	EV0002
	EV0003	EV0006EMC
Lifting Kit	AA9610	AA9610
	EZ1007	EZ1007
Number of braces used	6	6

	IS2	IS2 EMC
Number of columns	2	2
Weight of single column Kg	1000	1000
Total weight of columns Kg	2000	2000
Joining Kit. The joining of the angle pieces	EV0002	EV0002
ZN1010 can be obtained by means of M5 screws	EV0003	EV0006EMC
Lifting Kit	AA9610	AA9610
	EZ1007	EZ1007
Number of braces used	6	6

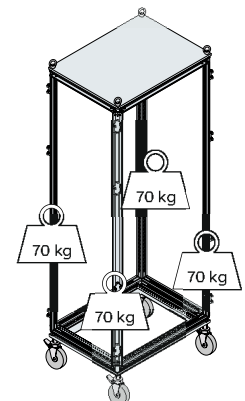
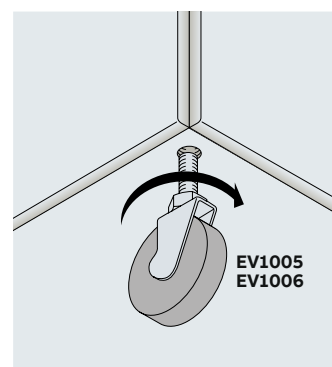


	IS2	IS2 EMC
Number of columns	7	7
Weight of single column Kg	1000	1000
Total weight of columns Kg	7000	7000
Joining Kit	EV0003	EV0006EMC
	TU1000	TU1000
Lifting Kit	By means of TU1000	By means of TU1000
Number of braces used	4	4

#### Fitted wheels



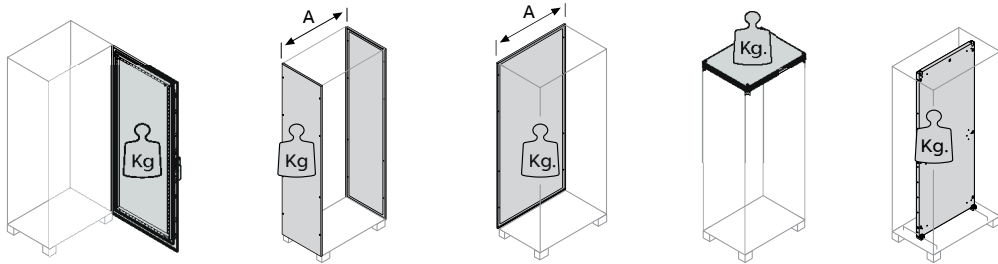
#### Braked wheels



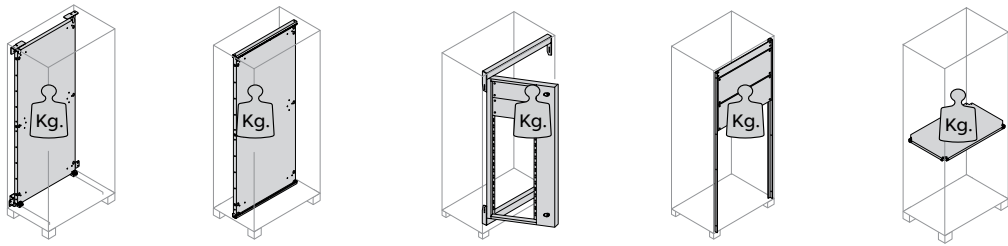
## In-depth technical information

### Maximum capacities

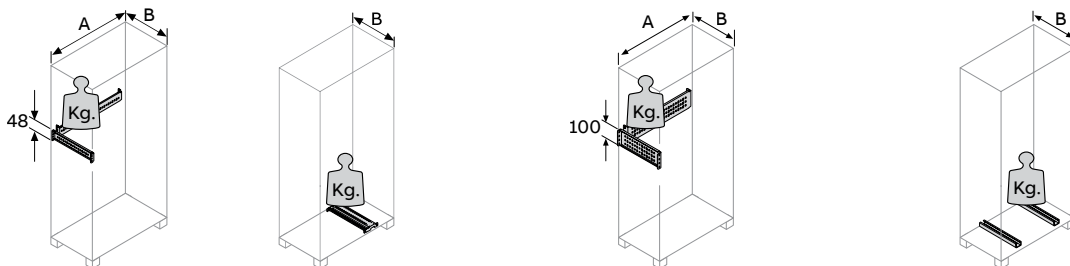
In accordance with the IEC 62208 Standard



IS2	Door	Side panels		Rear panels		Roof	Standard mounting plate
	Kg	A (mm)	Kg	A (mm)	Kg	Kg	Kg
	50	> 800	90	> 800	90	40	500
		≤ 800	110	≤ 800	110		



IS2	Kit for moving back plate back		Oversized mounting plate	Swing rack frame	Fixed rack frame	Horizontal partition panel
	Code	Kg	Kg	Kg	Kg	Kg
	EA2100	600	500	90	90	120

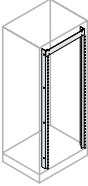
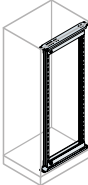
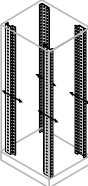
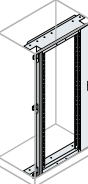


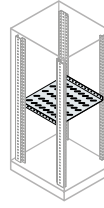
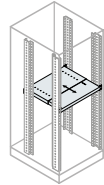
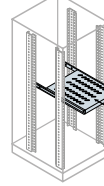
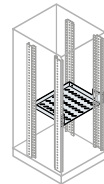
Crosspieces H = 48mm			Crosspieces for fixing heavy accessories			Crosspieces H = 100mm			Trasformer older crosspieces		
Code	A/B (mm)	Kg	Code	A/B (mm)	Kg	Code	A/B (mm)	Kg	Code	A/B (mm)	Kg
EB0400	400	110	EB4100	400	210	EB0440	400	220	EB6102	600	320
EB0500	500	110	EB5100	500	190	EB0550	500	210	EB8102	800	250
EB0600	600	100	EB6100	600	175	EB0660	600	210	EB1102	1000	200
EB0800	800	90	EB8100	800	150	EB0880	800	185			
EB1000	1000	70	EB1100	1200	130	EB1010	1000	160			
EB1200	1200	50				EB1020	1200	140			

## In-depth technical information

### Maximum capacities

#### In accordance with the IEC 62208 Standard

Rack code	Code	IS2
Fixed rack frame "L" shaped profile 	EG1400	90 kg with one frame 250 kg with two frame (the frame can be fixed on the front or rear uprights; for intermediate frame mounting use EM1804, EM2004 or EM2204)
	EG1600	
	EG1800	
	<b>EG2000</b>	
	<b>EG2200</b>	
	<b>EG1880</b>	
Swing rack frame "L" shaped profile 	EG1405	90 Kg
	EG1605	
	EG1801K	
	EG2001K	
	EG2201K	
	EG1803K	
19° cranked shaped uprights 	EG1805	1000 kg with 4 uprights on shelves 250 kg with 2 uprights
	EG2005	
	EG2205	
Swing rack frame "C" shaped upright 	EG1804K	120 kg 160 kg with extra central EV0004 180° hinge
	EG2004K	
	EG2204K	

Rack code	Code	IS2
Universal shelves 	EV0400	20 kg
	EV0600	
	EV0800	
Adjustable in depth shelf 1HE 	EV0041	80 kg
Withdrawable shelves 	EV3500	40 kg
	EV5000	
Fixed Shelves for apparatus 	EV1385	20 kg
	EV2385	

### Mechanical and electrical characteristics

#### Conformity with IEC 60439-1 and new IEC 61439-1-2 Standard

The IS2 cabinets have undergone the type tests foreseen by the IEC 60439-1 and new IEC 61439-1-2 Standard in ABB laboratories. The results of these tests guarantee the performances of the IS2 cabinets and, by using ABB SACE metalwork structures and accessories, such as moulded-case and modular circuit-breakers, allow the end enclosure builder not to carry out further type tests, as long as the selection criteria and assembly instructions of the various components are respected, just carrying out the individual tests foreseen by the IEC 61439-1-2 Standard. It is possible to make reference to these results, given below, to draw up the declaration of conformity of the electrical enclosure placed with crosssections of equivalent conductivity, which may require larger sized terminals.





Components	Material
Busbars	electrolytic copper 99.9% CU-ETP
Busbar holder	self-extinguishing thermoplastic VO
Tightening screws	Material class 8.8
Tightening torque	M6 screws - 10N.m
	M8 screws - 20N.m
	M10 screws - 30N.m











# In-depth technical information

## Busbars with shaped section

Technical characteristics of busbars with shaped section up to 1600A

Cross-section	In (A)	Type	No. busbars/phase	Capacity			Dimensions		Lenght (mm)	Weight (kg)
				(A) IP66	lcw max (kA)	IpK (kA)	WxW (mm)	Cross-section (mm <sup>2</sup> )		
	400	BA0400	1	400	35	74	20x20	200	1730	4
	800	BA0800	1	800	35	74	20x20	283	1730	4.4
	1250	BA1250	1	1250	65	143	20x60	603	1730	9.3
	1600	BA1600	1	1600	65	143	20x60	703	1730	10



Technical characteristics of flat busbars up to 1600A

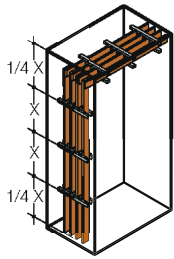
Cross-section	In (A)	Type	No. busbars/phase	Capacity			Dimensions		Cross-section (mm <sup>2</sup> )	Weight (kg)
				(A) IP66	lcw max (kA)	IpK (kA)	WxW (mm)			
	250	BR0250	1	250	32	48	15X5	1750	1.35	
	400	BR0400	1	400	32	48	25X5	1750	3.4	
	630	BR0630	1	630	32	68	30X10	1750	4.4	
	400	BR4005	1	400	35	74	32X5	1750	2.1	
	630	BR6305	1	630	50	105	50X5	1750	3.4	
	800	BR8005	1	800	50	105	63X5	1750	4.4	
	1250	BR1250	1	1250	50	105	100X5	1750	7.25	
	1600	BR1600	1	1600	100	220	100X10	1750	14.5	

## In-depth technical information

### Busbars with shaped section and flat busbars

#### Busbar holders for busbars with shaped section

Tipo	Icc (kA)	Busbar holder	In (A)	Busbars with shaped section				
				400A	800A	1250A	1600A	
	Linear	35	PB0803	L1-L2-L3	3xBA0400	3xBA0800	-	-
				N 100%	1xBA0400	1xBA0800	-	-
				N ridotto	-	1xBA0400	-	-
	Linear	65	PB1603 <sup>(4)</sup>	L1-L2-L3	-	-	3xBA1250	3xBA1600
				N 100%	-	-	1xBA1250	1xBA1600
				N ridotto	-	-	-	1xBA1250




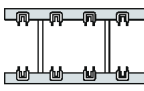
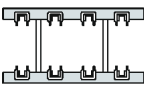
The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of X.

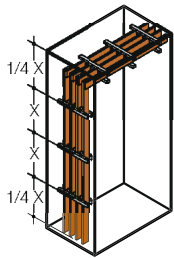
Busbar	Capacity (A)	Busbar holder	No. and distance of the busbar holder according to the max I <sub>cc</sub>							
			25 kA	X max (mm)	35 kA	X max (mm)	50 kA	X max (mm)	65 kA	X max (mm)
BA0400	400	PB0803	4	550	5	425	-	-	-	-
		PB1603 <sup>(4)</sup>	4	550	4	550	-	-	-	-
BA0800	800	PB0803	4	550	5	425	-	-	-	-
		PB1603 <sup>(4)</sup>	4	550	4	550	-	-	-	-
BA1250	1250	PB1603	4	550	4	550	6	350	9	225
BA1600	1600	PB1603	4	550	4	550	6	350	9	225

X max = maximum distance not to be exceeded between two consecutive busbar holders.

<sup>(4)</sup> It is possible to mount the 400/800A busbars with the special adapter AD1066.

#### Busbar holder for flat busbars

Tipo	Icc (kA)	Busbar holder	In (A)	Flat busbars						
				250A	400A	630A	800A	1250A	1600A	
	Linear	32	BP0630	L1-L2-L3	3xBR0250	3xBR0400	3xBR0630	-	-	-
				N 100%	1xBR0250	1xBR0400	1xBR0630	-	-	-
	Linear	50	BP1250	L1-L2-L3	-	3xBR4005	3xBR6305	3xBR8005	3xBR1250	-
				N 100%	-	1xBR4005	1xBR6305	1xBR8005	1xBR1250	-
	Linear	75	BP1600	L1-L2-L3	-	-	-	-	-	3xBR1600
				N 100%	-	-	-	-	-	1xBR1600



The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of X.

Busbar	Capacity (A)	Busbar holder	No. and distance of the busbar holder according to the max I <sub>cc</sub>							
			16 kA	X max (mm)	20 kA	X max (mm)	23 kA	X max (mm)	32 kA	X max (mm)
BR0250	250	BP0630	4	500	6	350	10	200	-	-
BR0400	400		4	500	6	350	10	200	-	-
BR0630	630		-	-	4	600	4	600	9	210
Busbar	Capacity (A)	Busbar holder	25 kA	X max (mm)	35 kA	X max (mm)	50 kA	X max (mm)	65 kA	X max (mm)
BR4005	400	BP1250	7	300	9	225	-	-	-	-
BR6305	630		6	375	7	275	9	225	-	-
BR8005	800		5	425	7	300	9	225	-	-
BR1250	1250		4	500	6	375	8	250	-	-
BR1250	1600	BP1600	3	1000	3	1000	4	600	6	375

X max = maximum distance not to be exceeded between two consecutive busbar holders.

## In-depth technical information

### Busbars with shaped section and flat busbars

#### Components

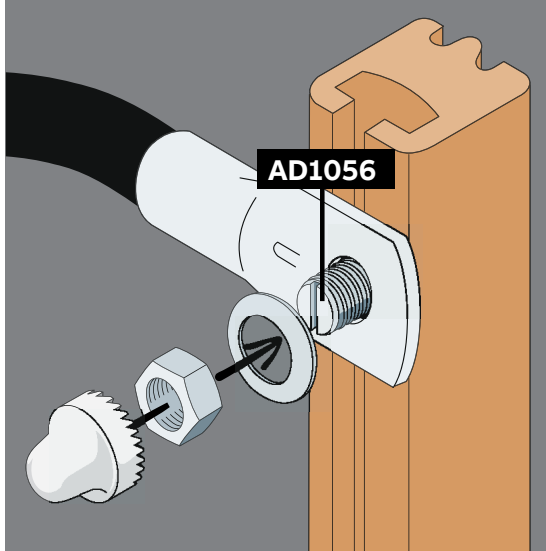
01 Direct branch by means of cable terminal for cross-section of cable up to 50mm<sup>2</sup>.

02 M8 self-locking hammer screw for fixing between conductors in any position along the busbar, guarantees a large contact surface.

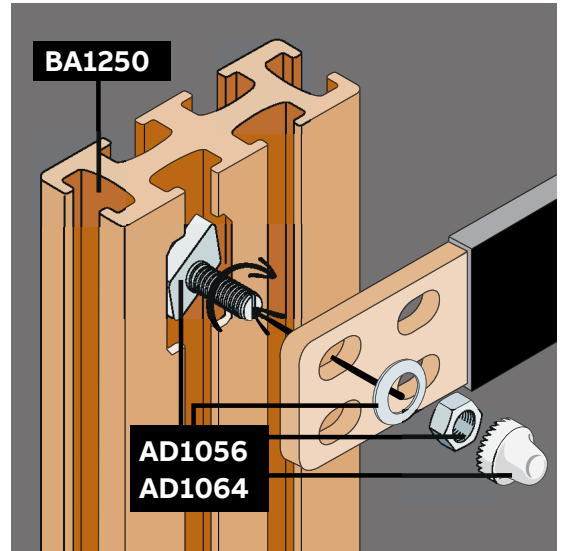
03 The 25mm drilling pitch allows branches between flat busbars at any point.

04 Branch between 1600A flat busbars and 1250/1600A busbars with shaped section.

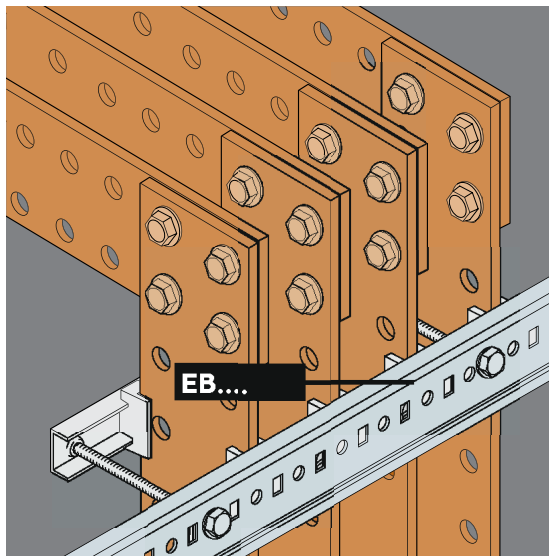
01



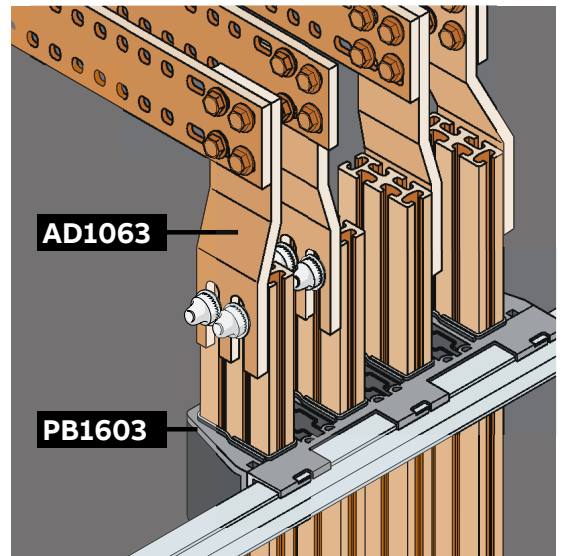
02



03



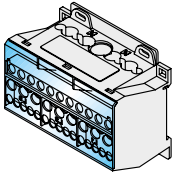

04

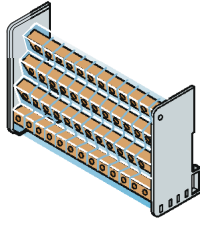



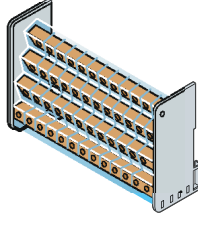

## In-depth technical information

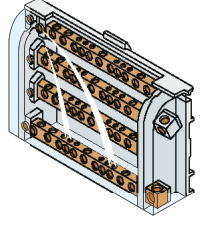

### Busbars with shaped section and flat busbars

#### Modular dividers

Four-poles	Code	AD1004
	Mark	
	In (A)	125
	Icw (kA)	10
	Ipk (kA)	24
	Version poles	4.2
	Installation	DIN35/plate
	Power supply min. Ø cable (mm <sup>2</sup> )	6
		max 35
	No.outgoing feeder (mm <sup>2</sup> ) Ø cable	With cable lugs 5L, 4Nx1,5-6mm <sup>2</sup> 2L, 6Nx4-10mm <sup>2</sup> 1L, 1Nx6-25mm <sup>2</sup> Without cable lugs 5L, 4Nx1,5-6mm <sup>2</sup> 2L, 6Nx4-10mm <sup>2</sup> 1L, 1Nx6-35mm <sup>2</sup>
	Dimensions (mm) HxWxD	74.5x98x45
	No. DIN modules	5,5
	Rated service voltage Ue (V)	1000 Vac/1500 Vdc
	Degree of protection IP	20

Four-poles	Code	AD1028
	Mark	
	In (A)	125
	Icw (kA)	4.2
	Ipk (kA)	25
	Version poles	4
	Installation	DIN35/plate
	Power supply min. Ø cable (mm <sup>2</sup> )	6
		max 25 with cable terminal
	No.outgoing feeder (mm <sup>2</sup> ) Ø cable	Rigid cable 7x1,5-10mm <sup>2</sup> 2x6-25mm <sup>2</sup> With cable lugs 7x1,5-10mm <sup>2</sup> 2x6-16mm <sup>2</sup> Without cable lugs 7x2,5-16mm <sup>2</sup> 2x6-35mm <sup>2</sup>
	Dimensions (mm) HxWxD	93x89x48
	No. DIN modules	5
	Rated service voltage Ue (V)	440
	Degree of protection IP	20

Four-poles	Code	AD1029
	Mark	
	In (A)	125
	Icw (kA)	4.2
	Ipk (kA)	25
	Version poles	4
	Installation	DIN35/plate
	Power supply min. Ø cable (mm <sup>2</sup> )	6
		max 25 with cable terminal
	No.outgoing feeder (mm <sup>2</sup> ) Ø cable	Rigid cable 9x1,5-10mm <sup>2</sup> 2x1,5-16mm <sup>2</sup> 2x6-25mm <sup>2</sup> With cable lugs 2x1,5-6mm <sup>2</sup> 9x1,5-10mm <sup>2</sup> 2x6-16mm <sup>2</sup> Without cable lugs 11x2,5-16mm <sup>2</sup> 2x6-35mm <sup>2</sup>
	Dimensions (mm) HxWxD	96x126x48
	No. DIN modules	7
	Rated service voltage Ue (V)	440
	Degree of protection IP	20

Four-poles	Code	AD1027
	Mark	
	In (A)	AD1027
	Icw (kA)	160
	Ipk (kA)	6.2
	Version poles	20
	Installation	4
	Power supply min. Ø cable (mm <sup>2</sup> )	DIN35
		max 10
	No.outgoing feeder (mm <sup>2</sup> ) Ø cable	50 Rigid cable 8x2,25-25mm <sup>2</sup> 1x10-50mm <sup>2</sup> 3x16-35mm <sup>2</sup> With cable lugs 8x2,5-16mm <sup>2</sup> 3x6-25mm <sup>2</sup> 1x10-35mm <sup>2</sup> Without cable lugs 8x6-16mm <sup>2</sup> 3x6-25mm <sup>2</sup> 1x10-35mm <sup>2</sup>
	Dimensions (mm) HxWxD	90x160.5x50
	No. DIN modules	9
	Rated service voltage Ue (V)	440
	Degree of protection IP	20

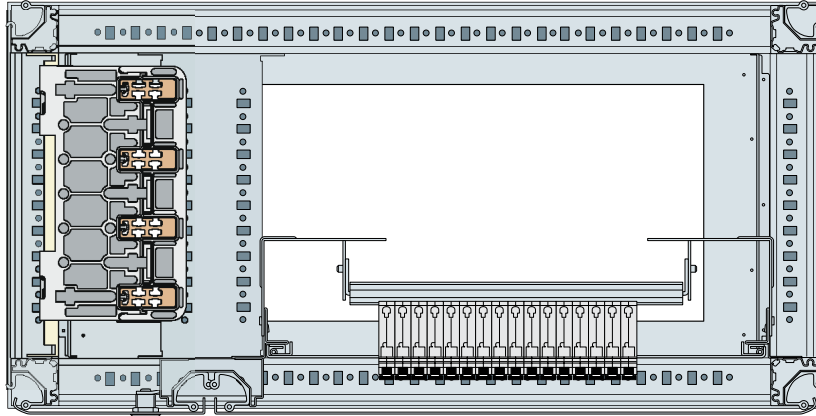
## In-depth technical information

### Busbars with shaped section and flat busbars

#### Linear busbar holder PB1603

##### IS2

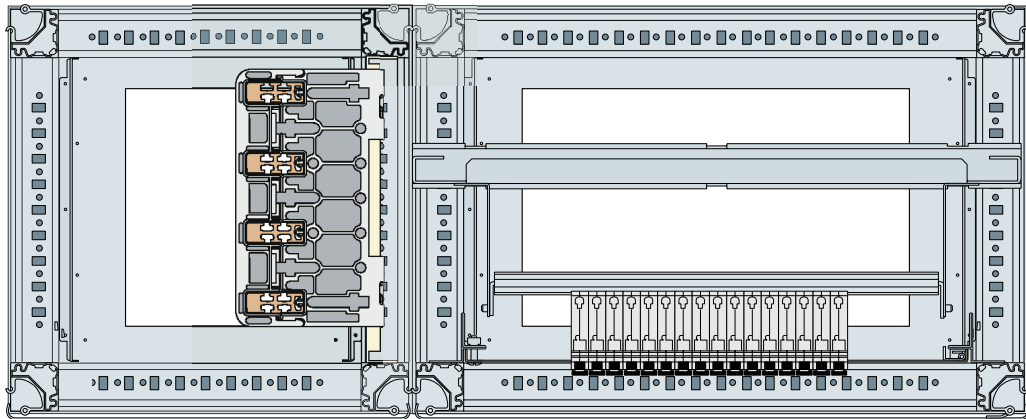
Busbars in the internal cable container and DIN rail apparatus holder fixed on the front.



#### Linear busbar holder PB1603

##### IS2

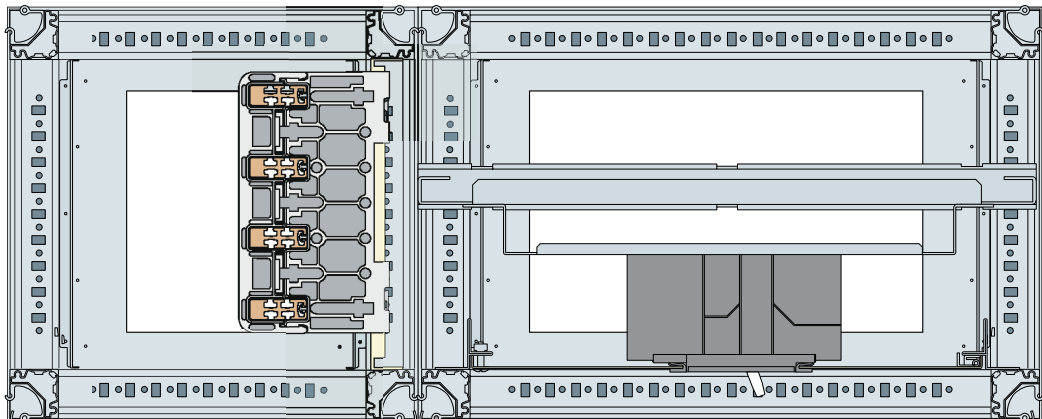
Busbars in the additional structure W=400mm and DIN rail apparatus holder fixed on the back plate.



#### Linear busbar holder PB1603

##### IS2

Busbars in the additional structure W=400mm and kit for moulded-case apparatus fixed on the back plate.



# In-depth technical information

## Ventilation and air conditioning

### General characteristics and applications

Heat, dust and humidity are the major causes of incorrect operation of controls and settings in electrical equipment, especially considering the high sensitivity of electronic components which have to record the input of signals and working of logical parts.

There are several methods and products for cooling the electrical enclosures:

- air condensed air conditioners
- water condensed air conditioners
- air-air heat exchangers
- gas pipe heat exchangers
- air-water heat exchangers
- fans with or without filters.

Each of these systems is able to cool in a different way and with different application limits, and consequently with advantages and disadvantages depending on the type of application they are destined for.

To maintain the ideal climatic conditions inside a enclosure, ABB has the following solutions:

### Ventilation

Natural ventilation together with forced ventilation is used when the temperature inside the electrical enclosure exceeds the ambient temperature. Fans are economical and efficient, making it possible to keep degrees of protection up to IP54, in the case of use of a filter, or IP21 without the latter.

The only precaution needed is periodic cleaning of the filtering elements.

### Air conditioners

These systems are able to keep temperatures inside the electrical enclosure lower than the ambient, ensuring a high degree of protection against dust and water (IP54). According to the position of the air conditioner (on the door, wall, roof or side of the enclosure) and to the type of installation (outdoor, indoor, or semi-embedded), ABB proposes a wide range of types based on the refrigeration yield required.

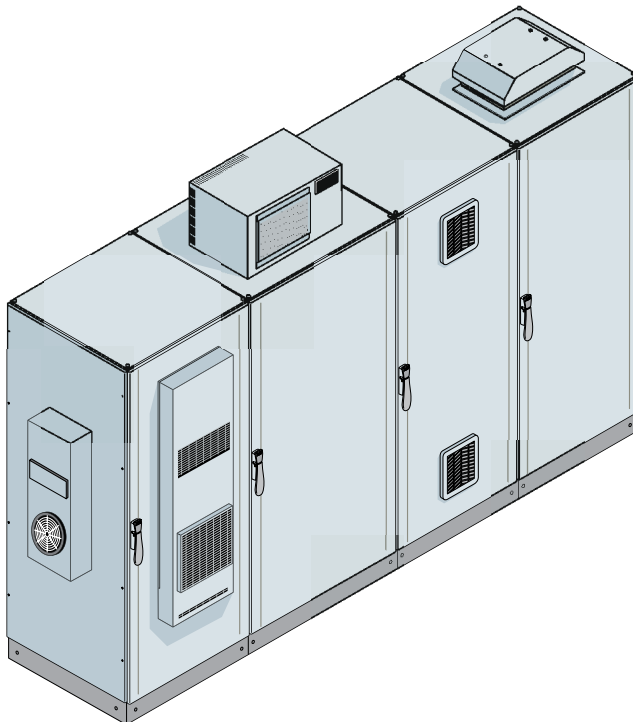
### Air-air heat exchangers

These systems are suitable when temperatures inside the electrical enclosure can be kept higher than ambient temperature, guaranteeing an IP54 degree of protection. The yield of heat exchangers is indicated in W/K (Watt/Kelvin) – a value which expresses the capacity of removing heat for each centigrade degree of difference between the ambient temperature and the temperature inside the electrical enclosure. In some cases heat exchangers can be more expensive than air conditioners. Under the same conditions air conditioners obtain the same results with lower costs and overall dimensions.

### Heaters for enclosures

Formation of condensation inside the electrical enclosures is the cause of oxidation of the apparatus contained in it and the consequent loss of insulation and dielectric strength.

By keeping the optimal temperature for operation of the components, anti-condensation heaters eliminate the risk of oxidation.



## In-depth technical information

### Ventilation and air conditioning

01 Natural aeration with gratings (IP54 with filter or IP21 without filter).

02 Natural aeration with hood (IP43) and grating.

03 Natural aeration with roof lifting kit (IP20) and grating.

#### Operation and selection of components

##### Natural ventilation

Enclosure cooling can be obtained by means of simple natural convection.

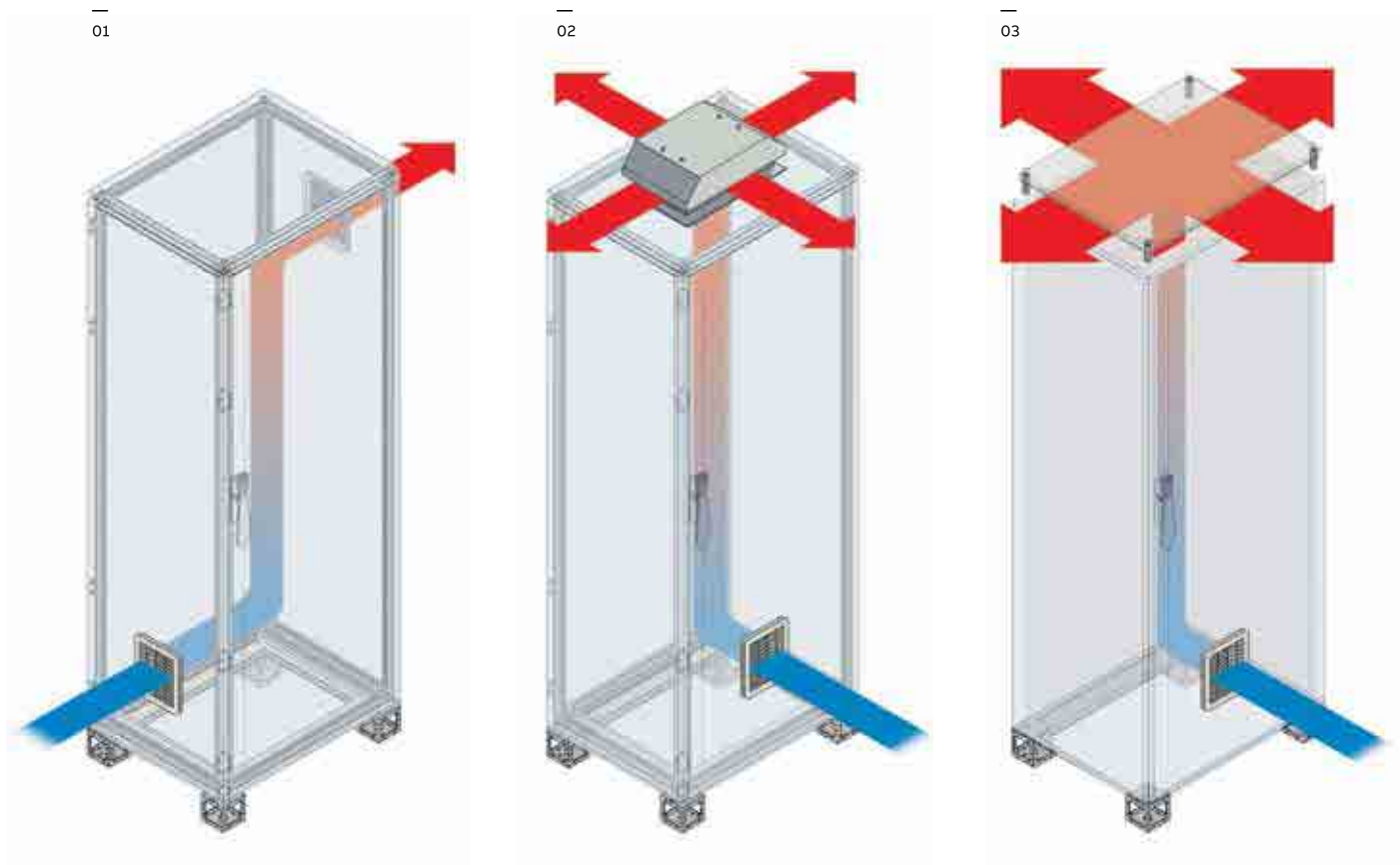
In fact, it is sufficient to install aeration kit (in the different ways shown in the diagram) to obtain a fair improvement in enclosure cooling.

The following table indicatively provides the increase in percentage of the thermal power value dissipated by the enclosure in relation to the aeration kits used.

The result is obtained by multiplying the dissipation power value of the selected cabinet (page 6-13) by the coefficient indicated in the table corresponding with the size of the aeration grating selected.

#### Multiplication coefficient of the dissipated power from the enclosure according to the dimensions of the aeration gratings.

H (mm)	W (mm)	D (mm)	Dimensions of the aeration grating WxW (mm)			
			105x105	150x150	204x204	250x250
1800 2000	600-800-1000-1200	400-500-600-800-1000	1,2	1,5	2,1	3
2200	1600	400-500-600-800	-	1,3	1,7	2,2



## In-depth technical information

### Ventilation and air conditioning

#### Forced ventilation

Operation of the ventilation kit is simple: the ambient air - in this case colder than the air inside the enclosure - is sucked up from below, filtered of impurities and conveyed inside. It grazes the apparatus cooling it, whilst the warmer air flows towards the upper part and exits through the special air passage.

In this way a slight overpressure is created inside, which prevents dust from entering.

Even when the fan is not working, there is no formation of condensation and humidity, since the entry and exit fans are a guarantee of quick heat exchange.

For correct operation, it is good practice to periodically clean the filtering part by shaking, compressed air or washing in water, or to replace it with a new cloth.

#### How to calculate the capacities of the fans

Once the value of the power to be dissipated has been calculated, given by the sum of the dissipating power of each device, and by the conductors (taking into account the contemporaneity coefficient as well) and once the maximum temperature inside the enclosure has been defined - compatibly with correct operation of the apparatus it contains - the following formula must be applied:

$$Q = \frac{P}{\Delta T} \cdot f$$

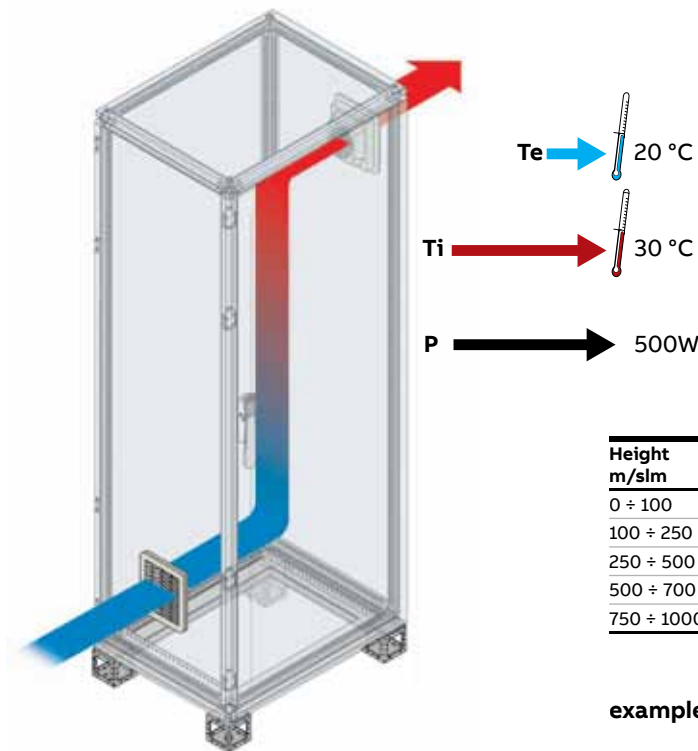
where:

Q = fan capacity (m<sup>3</sup>/h)

P = power to be dissipated (W)

ΔT = difference in the ambient temperature Te and the temperature inside the enclosure Ti

f = coefficient of thermal exchange



Height m/slm	f m <sup>3</sup> °C/Wh
0 ÷ 100	3.1
100 ÷ 250	3.2
250 ÷ 500	3.3
500 ÷ 700	3.4
750 ÷ 1000	3.5

example:  $Q = \frac{500}{10} \cdot 3.2 = 160 \frac{m^3}{h}$



## In-depth technical information

### Ventilation and air conditioning

#### How to install the ventilation kit

Use of a ventilator as a means for extracting heat from a cabinet is recommended when an internal temperature higher than the ambient temperature is acceptable.

In both cases (A and B), to improve the thermal performances of the system, it is advisable to use the filter without a fan one size larger than the one with a fan.

The best thermal situations are obtained by installing the aeration kit in the following ways:

#### Ventilation kit at the top and filter at the bottom on the opposite wall - Fig.1

The fan sucks in hot air from the top area of the cabinet towards the outside, whilst fresh air enters through the filter placed at the bottom. This configuration is recommended for cabinets fitted with gaskets as it is the condition which offers better temperature distribution.

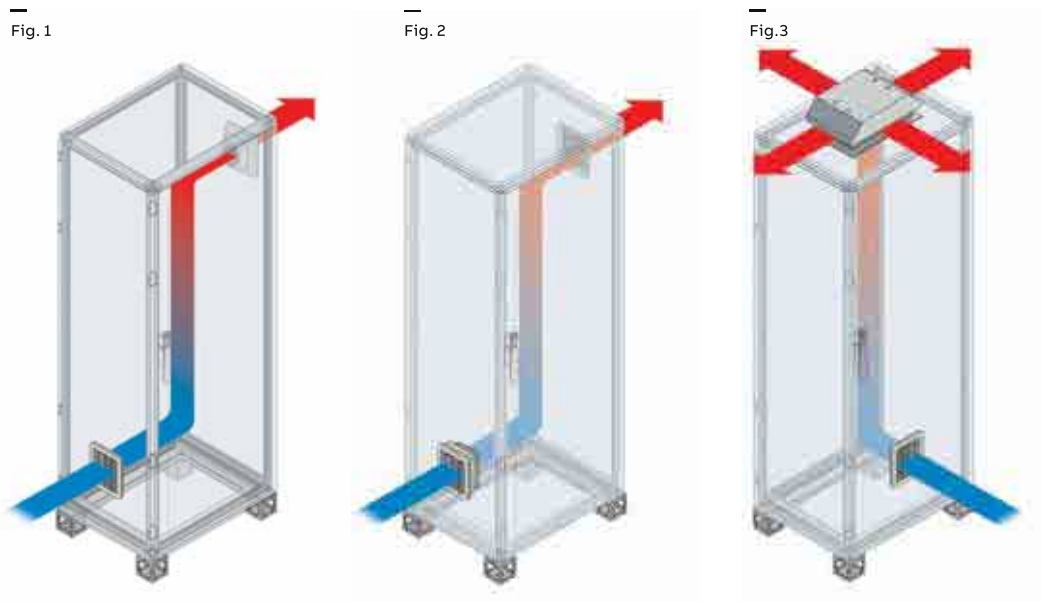
#### Ventilation kit at the bottom and filter at the top on the opposite wall - Fig.2

The fan sucks in fresh air from the outside towards the bottom area inside the cabinet, whilst hot air exits through the filter placed at the top. This solution is particularly recommended when you want to avoid entry of dust as far as possible, using the delivery fan, so as to put the cabinet under pressure and prevent entry of dust through the gaps between the panels. Entry of dust is prevented by the fan filter.

#### Hood with fan mounted on the cabinet roof and filter placed at the bottom on a wall - Fig.3

In this configuration, the air flow moves from the bottom towards the top: fresh air enters the cabinet through the filter placed at the bottom and hot air exits to the room through the hood. When the hood is used, what has already been said in the previous cases is valid with regard to selecting to mount the fan on delivery or on suction.

#### Air flow



## In-depth technical information

### Ventilation and air conditioning

#### Air conditioners

Air conditioners allow the temperature inside the enclosure to be kept within an established range and are available in the versions for mounting on a wall or on the enclosure roof. There are also four super thin versions available to be mounted on the wall with a thickness of 105mm.

To size the air conditioner, the following data are required:

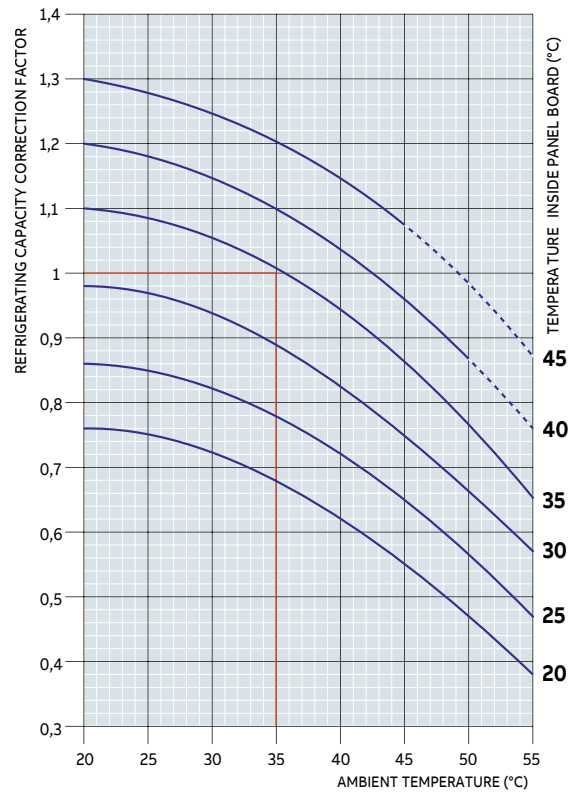
- **power to be dissipated**  
(this depends on the type and number of pieces of apparatus and conductors contained in the enclosure);
- **maximum internal temperature;**
- **ambient temperature**  
(referring to the place where the enclosure is installed);
- **equivalent cooling surface**  
(sum of the external surfaces able to transmit heat from/towards the outside). To calculate this, the calculation method of the IEC 60890 Standard can be used;

Disposition of the cabinet	Calculating the enclosure surface S (mm <sup>2</sup> )	Dimensions (m)
Detached, exposed on all sides	$A_e = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width
For closed to a wall structures	$A_e = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	H = height
Left or right exposed structure	$A_e = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	P = depth
Left or right closed to a wall structure	$A_e = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$A_e = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$A_e = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$A_e = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

- **thermal power**  
absorbed or dissipated by the surface of the cabinet, according to the difference in the existing internal/external temperature (if the external temperature is lower than the internal one, the heat flows towards the outside and vice versa);

#### - nominal characteristics

of the air conditioner and refrigerating yield: in our case, the ABB air conditioners work with outside temperatures between 20 and 55 °C, keeping temperature values between 25 and 45 °C inside the enclosure. The nominal reference condition is 35 °C inside and outside the enclosure: as this condition varies, the yielded refrigerating capacity of the air conditioner undergoes modifications which must be taken into account to size the air conditioner correctly (refer to the “Refrigerating capacity correction factor” table given here).vice versa);



## In-depth technical information

### Ventilation and air conditioning

#### Example of selection of an air conditioner

Data:

Internal power to be dissipated 400 W

Internal temperature 35°C Foreseen ambient tem-

perature 40°C Equivalent cooling surface (Ae)

(e.g. ES2086K 2000x800x600mm) 5,7 m<sup>2</sup>.

Note: in this case the cooling surface was considered in the hypothesis of installation exposed on all sides. For other types of installation, the effective cooling surface must be calculated using the method illustrated in the IEC 60890 Standard.

Disposition of the cabinet	Calculating the enclosure surface S (mm <sup>2</sup> )	Dimensions (m)
Detached, exposed on all sides	$Ae = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$Ae = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$Ae = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$Ae = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$Ae = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$Ae = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$Ae = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	



Since the internal temperature is lower than the external temperature, the heat is transmitted from the outside towards the inside of the enclosure. To size the air conditioner, the total power to be dissipated derives from the sum of two components: power generated by the apparatus, including that of the copper conductors, (400 W in our example) and the power transmitted by the ambient towards the inside of the enclosure through the external sheet steel surfaces, given by the following formula:

$$P = K \cdot Ae \cdot \Delta T = 5,5 \cdot 5,7 \cdot 5 = 156,75W$$

The total power to be dissipated is therefore:

$$P_{tot} = 400 + 156,75 = 556,75W$$

At this point the total power value obtained in this way could be used to select the air conditioner. However, correct sizing must also take into consideration the environmental effects where the conditioner is going to operate. In our example ( $T_{int} = 35^\circ C$  and  $T_{ext} = 40^\circ C$ ) the correction coefficient of the refrigerating capacity (0.94) is taken from table 1.

The power to be used for sizing the air conditioner is therefore:

$$P_{resa} = P_{tot} : 0,94 = 556,75 : 0,94 = 592,3 W$$

It should be noted how, in the case of an internal temperature higher than the external temperature, to calculate the total power to be dissipated, the heat naturally transmitted to the outside by the walls of the cabinet must be deducted from the power value deriving from the apparatus contained in the enclosure, due to the condition of the internal temperature being higher than the external temperature.

## In-depth technical information

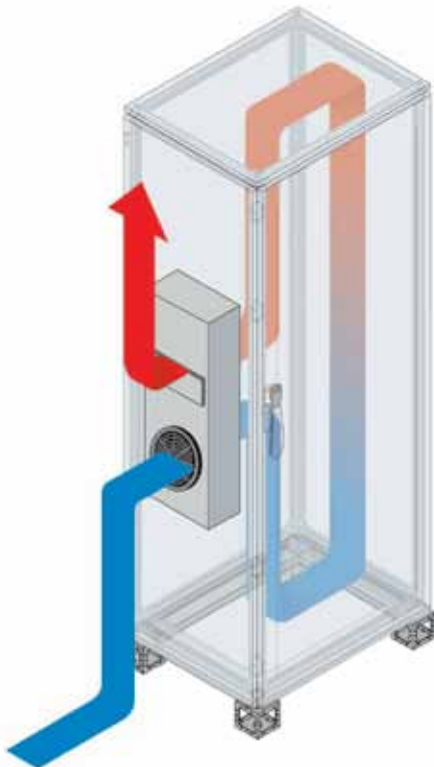
### Ventilation and air conditioning

#### Air-air heat exchangers

Heat exchangers cool the hot air taken up inside the cabinet causing thermal exchange with the colder air coming from the outside, but keeping the two air flows isolated from each other. For this reason, heat exchangers can only be used when the condition  $T_{int} > T_{ext}$  exists and their use is recommended in the case of enclosure installation in industrial environments with presence of dust.

In fact, heat exchangers allow the air inside the enclosure to be cooled without mixing it with the air coming from the outside, keeping an IP54 degree of protection and therefore preventing penetration of impurities into the electrical enclosure. The  $T_{int} > T_{ext}$  condition still being valid, the power generated by the apparatus installed inside the enclosure is dissipated by the heat exchanger and by the surface of the cabinet.

The heat exchanger is sized by means of its specific power  $W/K$  Watt/Kelvin) which expresses the power which can be exchanged for every degree of difference between the external and internal temperature.



#### Example of selection of a heat exchanger

Data:

Internal power to be dissipated 640 W

Internal temperature 35 °C

Foreseen ambient temperature 25 °C

Equivalent cooling surface ( $A_e$ )

(e.g. ES2086K 2000x800x600mm) 5.7 m<sup>2</sup>

Note: in this case the cooling surface was considered in the hypothesis of installation exposed on all sides. For other types of installation, the effective cooling surface must be calculated using the method illustrated in the IEC 60890 Standard.

Since the internal temperature is higher than the external temperature, the heat is transmitted from the inside towards

Disposition of the cabinet	Calculating the enclosure surface S (mm <sup>2</sup> )	Dimensions (m)
Detached, exposed on all sides	$A_e = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$A_e = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$A_e = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$A_e = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$A_e = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$A_e = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$A_e = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

the outside of the enclosure and therefore naturally contributes towards a part of the necessary dissipation. The power transmitted to the ambient through the external sheet surfaces of the enclosure is calculated with the following formula:

$$P = K \cdot A_e \cdot \Delta T = 5,5 \cdot 5,7 \cdot 10 = 313,5W$$

The total power to be dissipated is therefore:

$$P_{to} = 640 - 313,5 = 326,5W$$

The heat exchanger must dissipate:

$$P_{spec} = P_{tot} : \Delta T = 326,5 : 10 = 32,65W/K$$

In this case, the heat exchanger suitable for the purpose is the one with 35W/K specific power (code VS 4233).

Formula for calculating the power transmitted towards the ambient:

$$P = K \cdot A_e \cdot \Delta T$$

where:

P = power transmitted from the ambient (W)

K = coefficient of thermal exchange for painted sheet

K = 5,5 W/m<sup>2</sup> . K

$A_e$  = free surface of the cabinet (m<sup>2</sup>)

$\Delta T = (T_i - T_e)$

$T_i$  = internal temperature

$T_e$  = external temperature

## In-depth technical information

### Ventilation and air conditioning

#### Heater for enclosures

Heater prevent condensation of the atmospheric humidity inside the electrical enclosure – a phenomenon which can cause slow but progressive alteration of the of the surface of the materials, jeopardising the insulation.

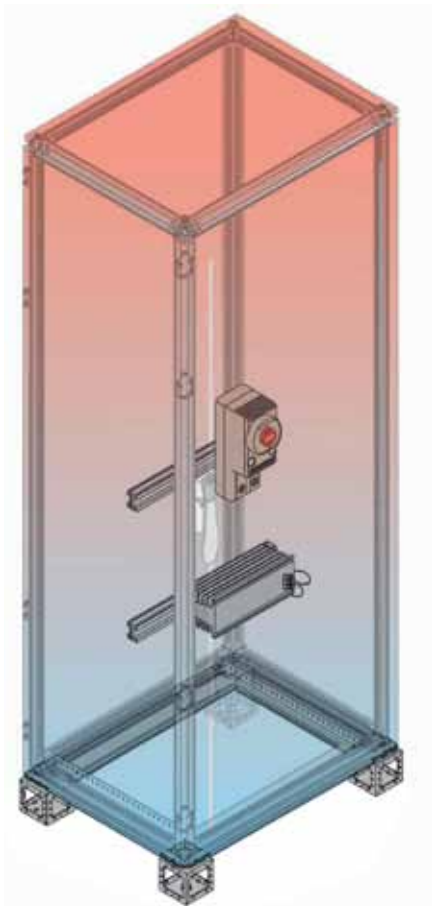
The temperature that can create condensation may depends on different factors, including atmospheric pressure and air humidity.

Generally, if the temperature inside the switchgear is kept over the 15°C limit, the condensation risk is null. In tropical countries, instead, the limit can be risen up to 30-35°C.

The anti- condensation heaters ABB are made of a PTC heating element positioned in an aluminum alloy sink. The use of the PTC heating element guarantees an excellent heater thermal stability and allows the use of it in a wide break of supply voltage (between 110 and 240 V).

The combination of the heater with EN0102K thermostat with NC contact (set at 20°C) is suggested in order to avoid energy waste.

Furthermore, it's suggested to position the heaters in the bottom part of the cabinet, keeping the distances advised in the section 8-48, to help the air convection inside the switchgear.



#### Thermostats for regulating the temperature

The thermostat is used to control operation of the fans. It has a temperature adjustment range from 10 ÷ 60 °C, with intervention sensitivity of about 1 °C and can be snap-on mounted on DIN EN 50022 rails.

Inside the regulation knob of the thermostat there is a manual device which limits the setting scale (min-max) of the temperature.

For correct installation, mount the apparatus so that the ventilation passes from the bottom to the top, but never sideways.

Furthermore, avoid the thermostat being close to direct heat sources and draughts of air.

Conforming to the IEC 60730-1, IEC 60730-2-9 Standards and UL approved, they have IP20 degree of protection. Grey RAL 7035, capacity of the 10 A contact and electrical life of 100000 cycles with resistive load.

The version with NO (normally open) contact allows closure of a circuit activating ventilation, air conditioning or alarms.

The version with NC (normally closed) contact allows opening of a circuit, disconnecting any anti-condensation heaters.

## In-depth technical information

### Ventilation and air conditioning

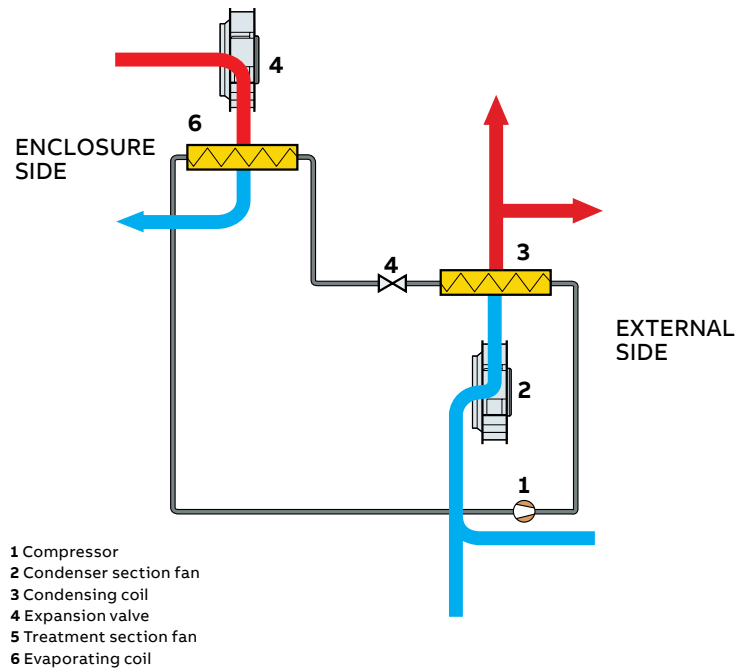
Air conditioner for mounting on wall or on door



Model		VZ1550K	VZ1850K	VZ1400K	VZ2000K						
Standard electrical power supply	V~(single-phase)	230		230							
Frequency	Hz	50	60	50	60	50	60				
Refrigerating yield	W	605	670	810	900	1300	1480	1926	2200		
Total power consumption	W	330	360	400	450	650	720	800	920		
Absorbed current	on inrush	A		8		12,5		21		22	
	operating	A		2		2,5		4		4,5	
Current protection	A	4,9		5,9		8		10			
Air evaporator capacity	m³/h	380		350		350		500			
Air condenser capacity	m³/h	400		400		600		950			
Degree of protection on enclosure side	IP	54		54		54		54			
Refrigerating gas (standard)		R 134 A		R 134 A		R 134 A		R 134 A			
Permissible external temperature	°C	55		55		55		55			
Noise	dB(A)	64		64		66		66			
Dimensions HxWxD	mm	1025x380x198		1025x380x198		1025x380x198		1100x380x230			
Approximate weight	kg	33		33		36		42			
Standard painting	RAL	7035 orange peel		7035 orange peel		7035 orange peel		7035 orange peel			



Basic cooling circuit diagram



## In-depth technical information

### Ventilation and air conditioning

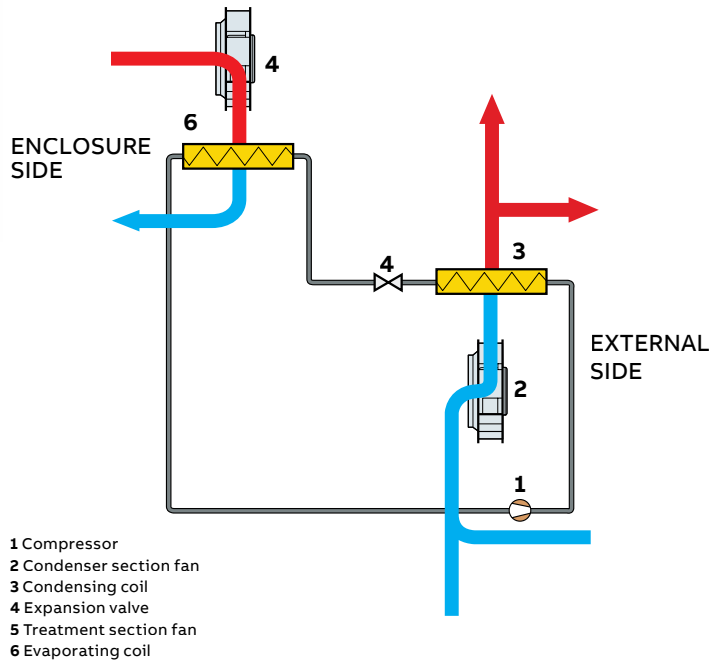
Air conditioner for mounting on roof



Model		VZ8501K	VZ1401K
Standard electrical power supply	V~(single-phase)	230	230
Frequency	Hz	50	60
Refrigerating yield	W	810	900
Total power consumption	W	400	450
Absorbed current	on inrush	A	12,5
	operating	A	2,5
Current protection	A	5,9	8
Air evaporator capacity	m <sup>3</sup> /h	350	350
Air condenser capacity	m <sup>3</sup> /h	400	600
Degree of protection on enclosure side	IP	54	54
Refrigerating gas (standard)		R 134 A	R 134 A
Permissible external temperature	°C	55	55
Noise	dB(A)	64	66
Dimensions HxWxD	mm	350x600x400	350x600x400
Approximate weight	kg	33	34
Standard painting	RAL	7035 orange peel	7035 orange peel



Basic cooling circuit diagram



## In-depth technical information

### Ventilation and air conditioning

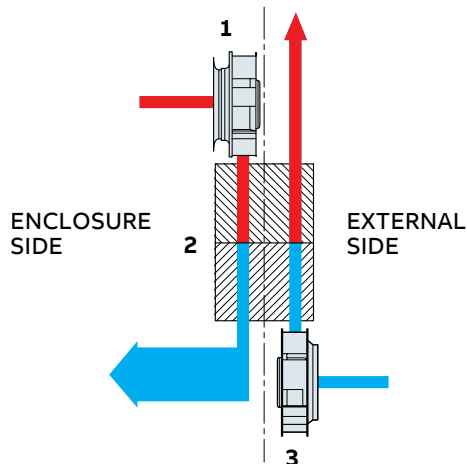
Air conditioner for mounting on roof



Model		VZ8501K	VZ1401K
Specific thermal yield	W/K	35	85
Total power consumption	W	117/150	170/180
Power supply standard	V~(monofase)	230	230
Frequency	Hz	50/60	50/60
Absorbed current	A	0,52/0,68	0,77/0,80
Internal circuit fan air capacity	m <sup>3</sup> /h	200	200
External circuit fan air capacity	m <sup>3</sup> /h	200	300
Degree of protection on enclosure side		IP 54	IP 54
Permissible external temperature	°C	55	55
Dimensions HxWxD	mm	735x370x155	845x475x195
Approximate weight	kg	15	21
Standard painting	RAL	7035 orange peel	7035 orange peel



Basic cooling circuit diagram





## In-depth technical information

### Ventilation and air conditioning

#### Air conditioner for mounting on roof



Characteristic	U.m.	EN1105K	EN2105K	EN1150K	EN2150K	EN1204K
Capacity air	m <sup>3</sup> /h	23/30	23/30	57/61	57/61	120/135
Standard power supply (single-phase)	V a.c.	230	115	230	115	230
Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Total power consumption	W	10/8	9/7	20/19	20/19	17/15
Rated current	A	0.07/0.055	0.115/0.092	0.125/0.110	0.210/0.180	0.100/0.090
Rotation speed	rpm	2700	2700	2650	2650	2700
Noise	dB(A)	33/38	33/38	46/49	46/49	46/50
Operating temperature	°C	-10+50	-10+50	-10+50	-10+50	-10+50
Electrical life	h	45.000	45.000	45.000	45.000	45.000
Degree of protection	IP	54	54	54	54	54
Class		I	I	I	I	I
Weight	Kg	0,5	0,5	0,8	0,8	1,1
Protection		Impedance	Impedance	Impedance	Impedance	Impedance
Electric connection		Wires	Wires	2-pole term.	2-pole term.	3-pole term.
Mounting		No screws	No screws	No screws	No screws	No screws
Flow direction		Reversible	Reversible	Reversible	Reversible	Reversible
Bearing		Bearings	Bearings	Bearings	Bearings	Bearings
Dimensions	mm (lxhxp)	105x105x67	105x105x67	150x150x71	150x150x71	204x204x98
Colour	RAL	7035	7035	7035	7035	7035
Approvals		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL

Characteristic	U.m.	EN2204K	EN1250K	EN2250K	EN2325K	EN3325K
Capacity air	m <sup>3</sup> /h	120/135	240/270	240/270	520/580	520/580
Standard power supply (single-phase)	V a.c.	115	230	115	230	115
Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Total power consumption	W	17/15	29/29	30/30	67/87	50/64
Rated current	A	0.200/0.160	0.132/0.130	0.265/0.274	0.300/0.382	0.540/0.650
Rotation speed	giri/min	2700	2800	2800	2770	3120
Noise	dB(A)	46/50	50/55	50/55	65/68	66/69
Operating temperature	°C	-10+50	-10+50	-10+50	-10+50	-10+55
Electrical life	h	45.000	45.000	45.000	50.000	53.000
Degree of protection	IP	54	54	54	54	54
Class		I	I	I	I	I
Weight	Kg	1,1	1,7	1,7	3,7	3,7
Protection		Impedance	Thermal	Thermal	Thermal	Thermal
Electric connection		3-pole term.	3-pole term.	3-pole term.	3-pole term.	3-pole term.
Mounting		No screws	No screws	No screws	No screws	No screws
Flow direction		Reversible	Reversible	Reversible	Reversible	Reversible
Bearing		Bearings	Bearings	Bearings	Bearings	Bearings
Dimensions	mm (lxhxp)	204x204x98	250x250x121	250x250x121	325x325x161	325x325x161
Colour	RAL	7035	7035	7035	7035	7035
Approvals		CE, UL	CE, UL	CE, UL	CE	CE

In any forced ventilation kit, the fan wheel is balanced.  
 In the larger sizes ( cod. EN2325K and cod. EN3325K ) there is the balancing clip.  
 The balanced fan wheel ensures less noise and absorption.



## In-depth technical information

### Ventilation and air conditioning

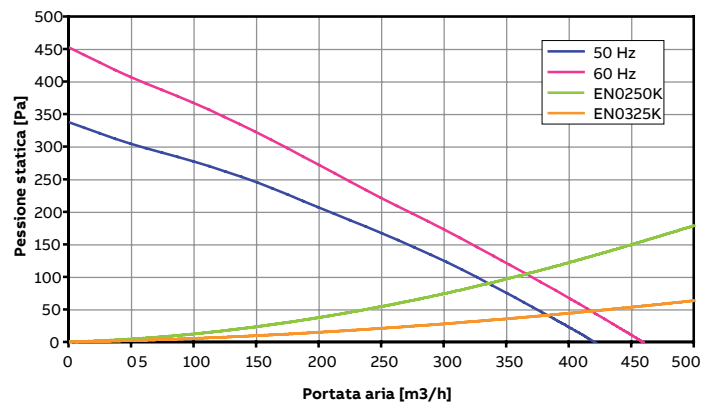
#### Ventilation towers



Characteristic	U.m.	EN0480K	EN0482K	EN0484K	EN0485K
Capacity air	m <sup>3</sup> /h	550/590	550/590	*420/490	*420/490
Standard power supply (single-phase)	V a.c.	230	115	115	230
Frequency	Hz	50/60	50/60	50/60	50/60
Total power consumption	W	62/78	58/71	66/74	70/83
Absorbed current	A	0.290/0.340	0.530/0.620	0.620/0.640	0.309/0.360
Rotation speed	rpm	2535	2500	2470	2510
Noise	dB(A)	68/71	61	68/71	68/71
Operating temperature	°C	-20+60	-20+60	-10+60	-10+60
Electrical life	h	50.000	50.000	75.000	59.000
Degree of protection	IP	23	23	54	54
Class		I	I	I	I
Weight	Kg	5,29	5,29	2,1	2,1
Protection		Thermal	Thermal	Thermal	Thermal
Electric connection		Wires	Wires	3-pole term.	3-pole term.
Mounting		Screws	Screws	Screws	Screws
Flow direction		Inside-out	Inside-out	Inside-out	Inside-out
Bearing		Bearings	Bearings	Bearings	Bearings
Dimensions	mm (l x h x p)	375x295x119	375x295x119	324x324x94	324x324x94
Colour	RAL	7035	7035	7035	7035
Approvals		CE	CE	CE	CE



\* Sample air flow m<sup>3</sup>/h



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## In-depth technical information

### Ventilation and air conditioning

#### Declaration of conformity

##### **Air conditioners and heat exchangers**

Under their full and exclusive responsibility, ABB declares that the air conditioners and heat exchangers they market comply with the provisions of the following directives 89/392/CEE, 89/337/CEE, 91/368/CEE, 93/47/CEE.

Reference Standards: UNI EN 292, UNI EN 294, CEI 50081-2, IEC 50082-2, IEC 55011, IEC 60204-1.

##### **Thermostats**

Under their full and exclusive responsibility, ABB declares that the thermostats for temperature regulation they market comply with the provisions of the following directives 2006/95/CE (which replaces the 73/23/EEC and subsequent amendments).

Reference Standards: IEC 60730, 60730-1 "Automatic electrical controls for household and similar use".

##### **Anti-condensation heaters**

ABB declares that anti-condensation heaters are in accordance with what expected by the following EU directives, including all the applicable changes:

- Low Voltage Directive 73/23/CEE (replaced by 2006/95/CEE)
- EMC Directive 2004/108/CEE

And that all the following requirements and/or technical specifics were applied:

- CEI EN 60335-1, Ed. 04/2004 "Safety of household and similar electrical appliances –part 1: General requirements"
- CEI EN 60335-1/A1/A11, Ed. 01/2006 "Safety of household and similar electrical appliances – Part 1: General requirements" A1:2004-12, A11:2004-02, IEC 60335-1:2002 variants.



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## **Chapter 5**

Overall dimensions

**5-2 IS2 enclosures**

**5-21 Busbars**

**5-23 Single plinth**

**5-24 Wiring ducts**

**5-28 Aeration/ventilation**

**5-30 Air conditioners**

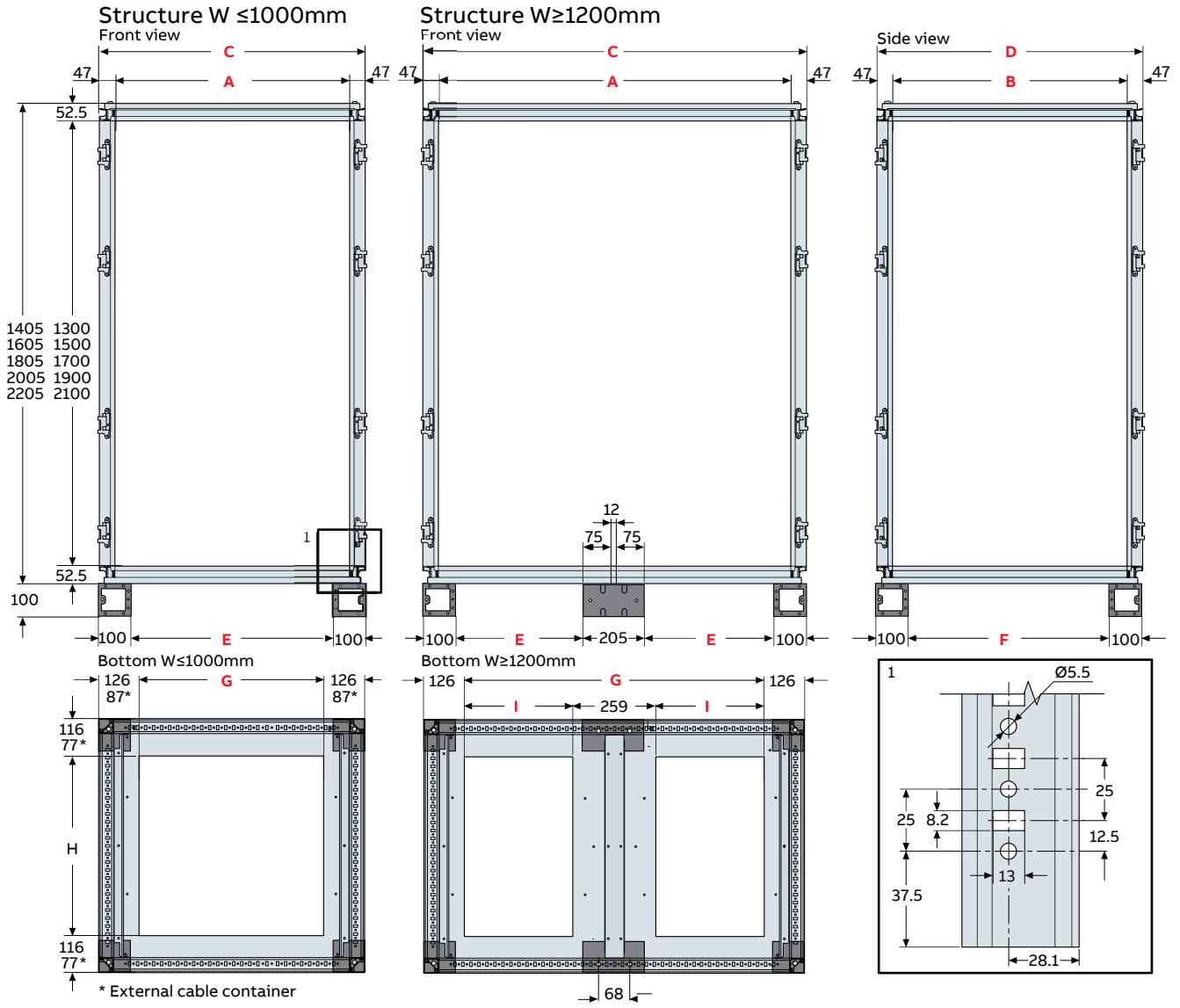
**5-33 Drillings**

**5-34 Accessorieeses**

# Overall dimensions

## IS2 enclosures

### Basic structure/External cable container



\* External cable container

A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H	I
200	300		394		238		239	900	300		394		188		162	
	400		494		338		339		400		494		288		262	
	500	294	594	88	438	120	439		500	994	594	788	388	742	362	
	700		794		638		639		700		794		588		562	
	900		994		838		839		900		994		788		762	
300	300		394		238		162	1100	300		394		188		162	
	400		494		338		262		400		494		288		262	
	500	394	594	188	438	142	362		500	1194	594	391,5	388	942	362	341,5
	700		794		638		562		700		794		588		562	
	900		994		838		762		900		994		788		762	
500	300		394		238		162	1500	300		394		188		162	
	400		494		338		262		400		494		288		262	
	500	594	594	388	438	342	362		500	1594	594	591,5	388	1342	362	541,5
	700		794		638		562		700		794		588		562	
	900		994		838		762		900		994		788		762	
700	300		394		238		162		300		394		188		162	
	400		494		338		262		400		494		288		262	
	500	794	594	588	438	542	362		500		594		388		362	
	700		794		638		562		700		794		588		562	
	900		994		838		762		900		994		788		762	

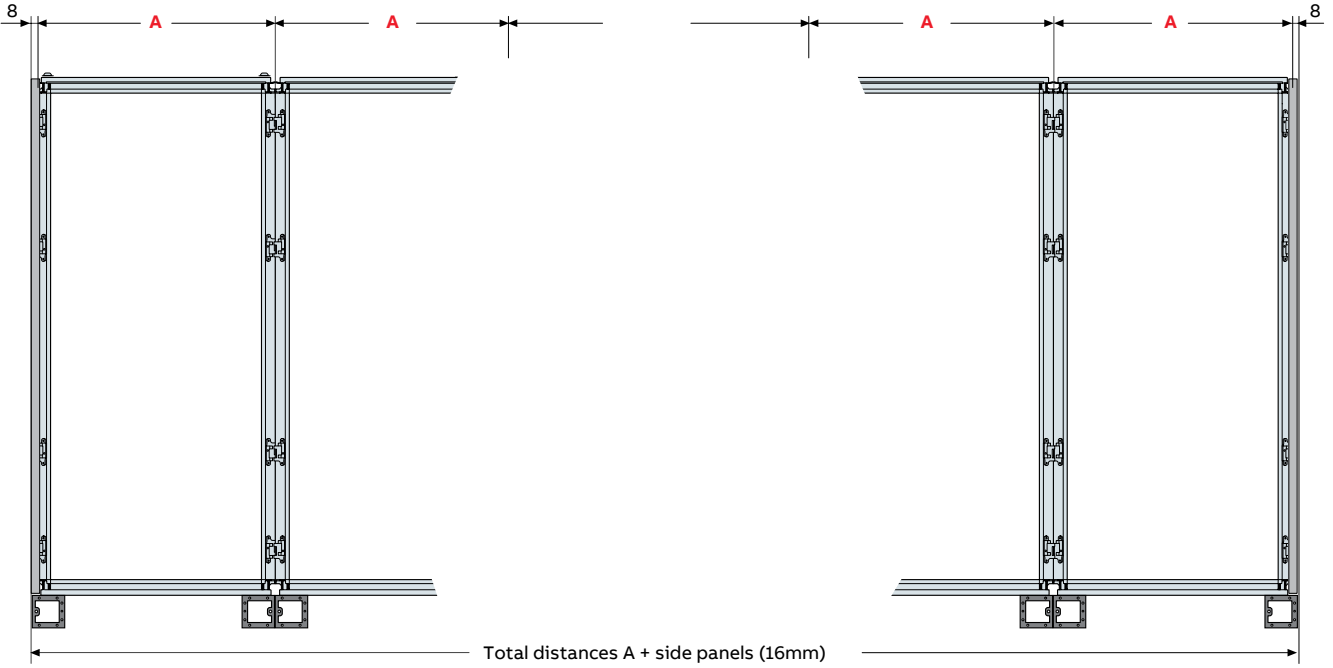
Measurements are in millimetres

# Overall dimensions

## IS2 enclosures

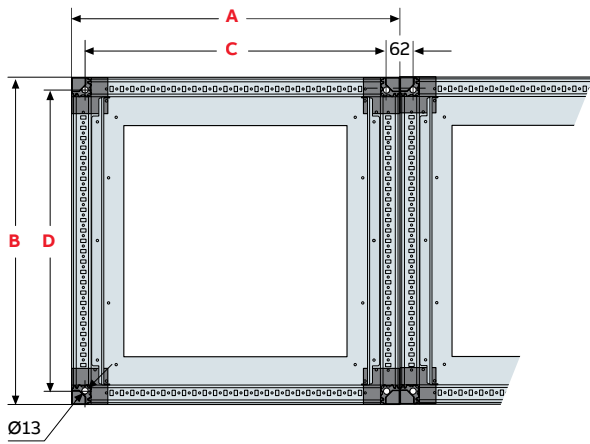
### Placing structures side by side and fixing to the floor

Overall dimensions of several structures side by side



### Fixing by means of plinth

For fixing, use M12 nut + dolly block

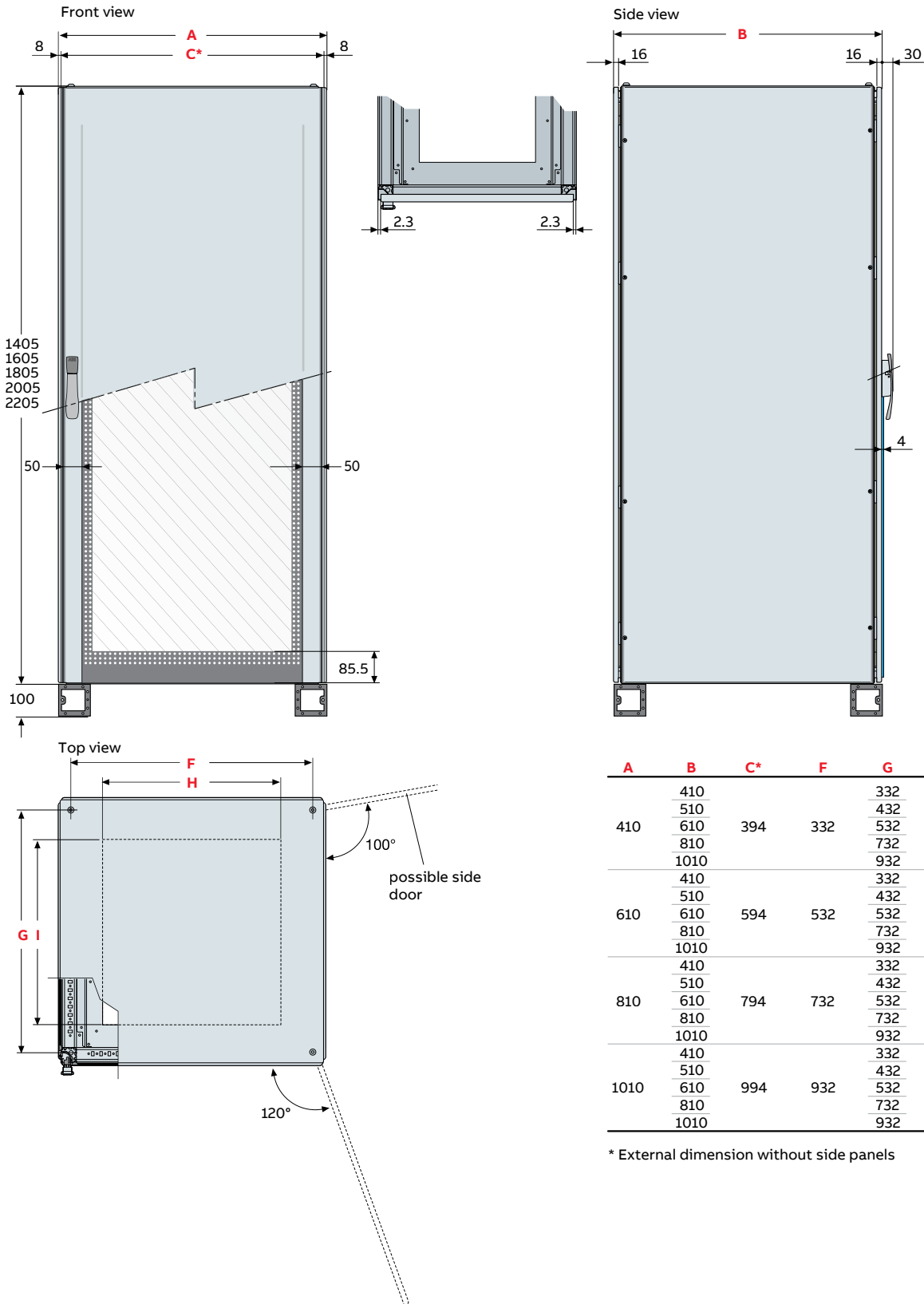


A	B	C	D
394	394	332	332
	494		432
	594		532
	794		732
	994		932
594	394	532	332
	494		432
	594		532
	794		732
	994		932
794	394	732	332
	494		432
	594		532
	794		732
	994		932
994	394	932	332
	494		432
	594		532
	794		732
	994		932
1194	394	1132	332
	494		432
	594		532
	794		732
	994		932
1594	394	1532	332
	494		432
	594		532
	794		732
	994		932

# Overall dimensions

## IS2 enclosures

### Version with blind or glazed door



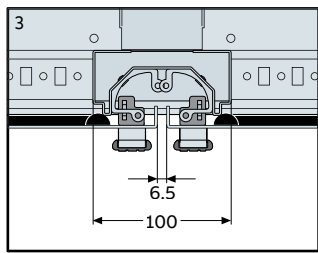
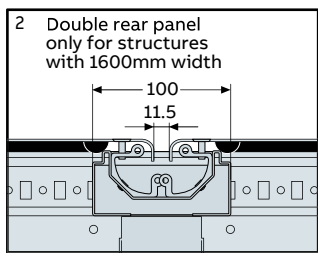
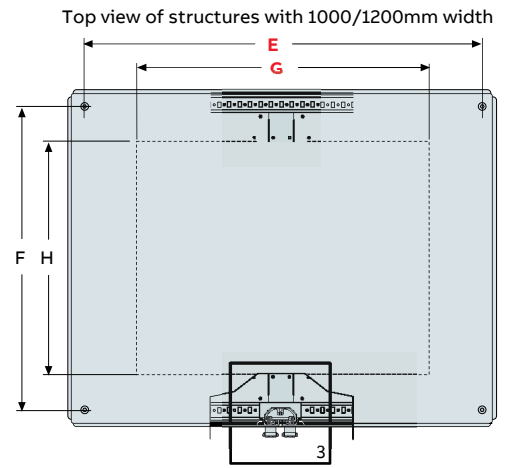
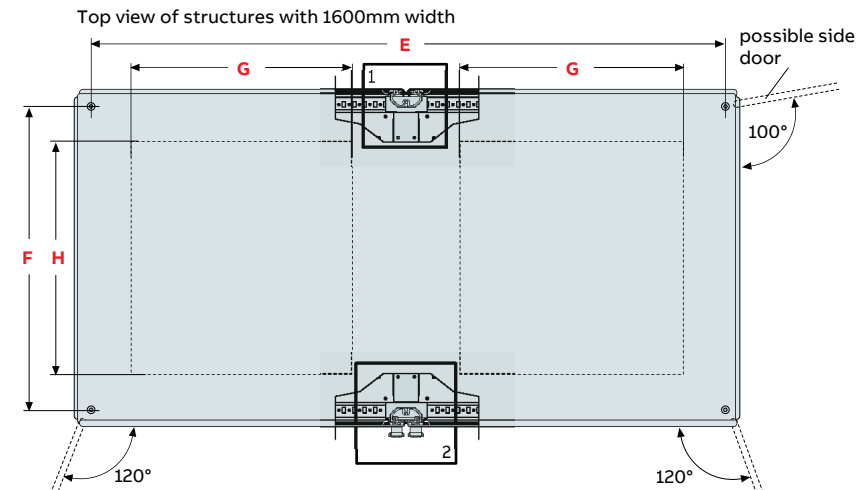
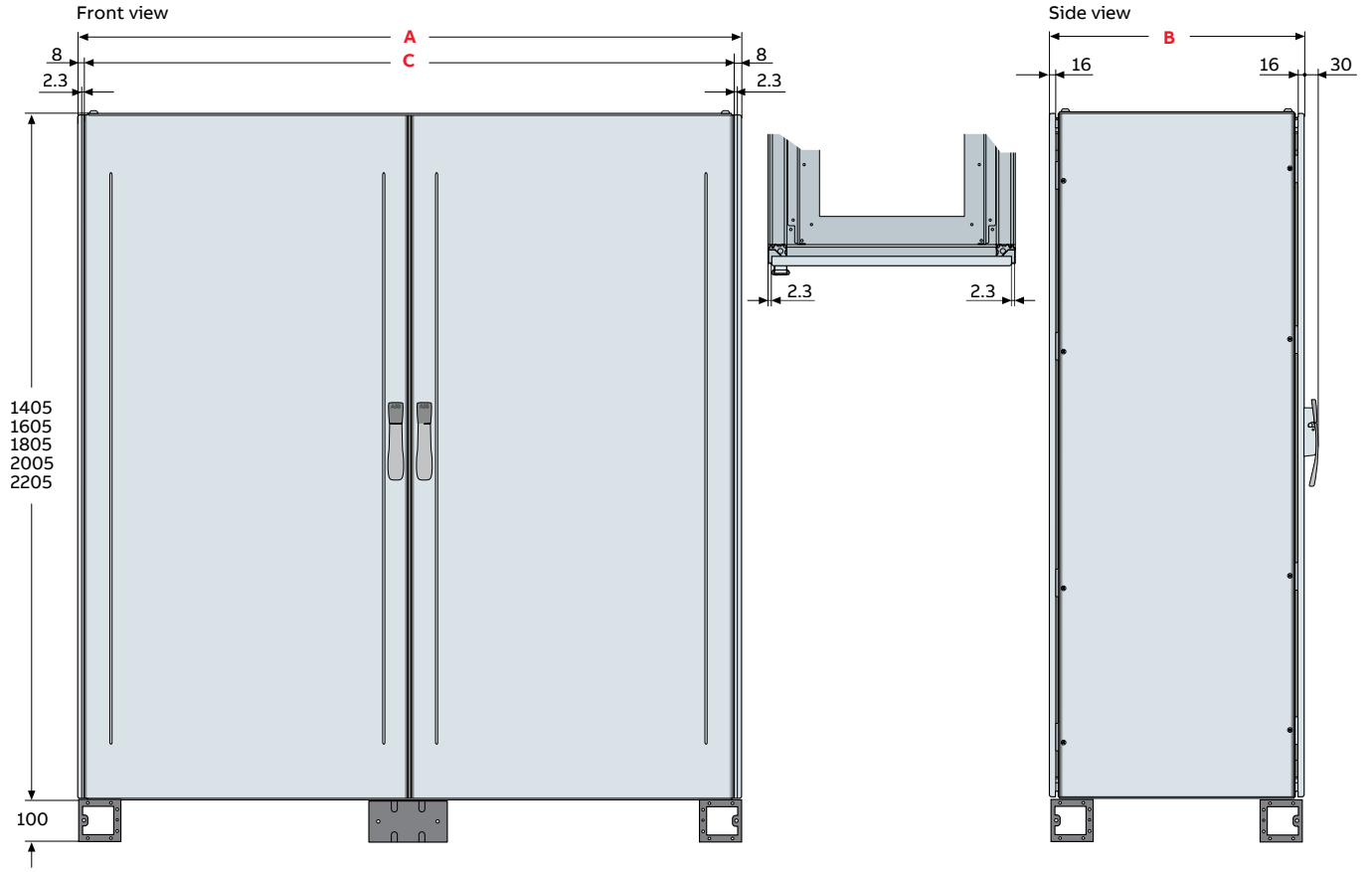
\* External dimension without side panels



# Overall dimensions

## IS2 enclosures

### Version with double blind door



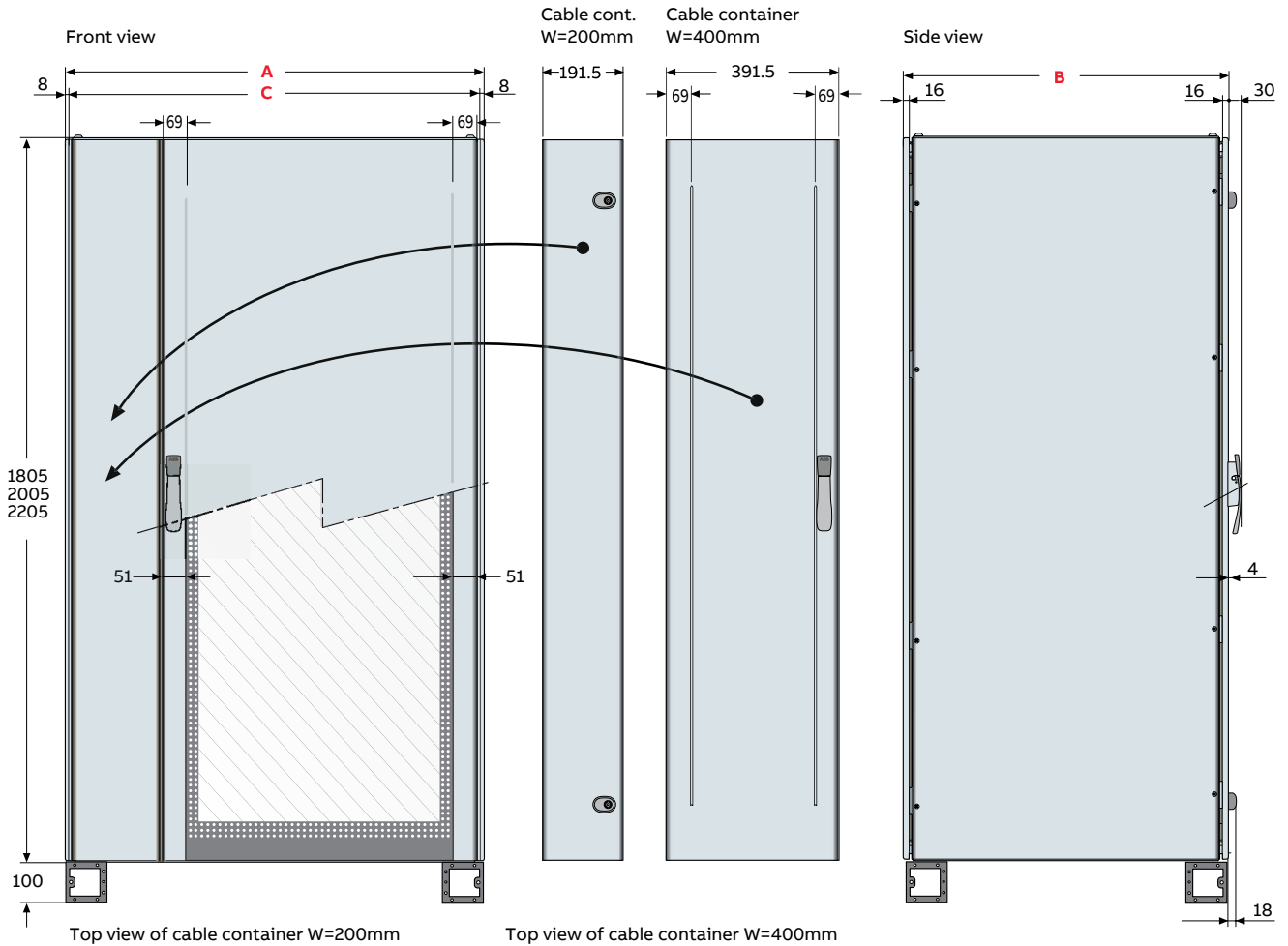
	A	B	C	E	F	G	H
1010		410			332		162
		510			432		262
		610	994	932	532	742	362
		810			732		562
1210		1010			932		762
		410			332		162
		510	1194	1132	432	942	262
		610			532		362
1610		810			732		562
		410			332		162
		510	1594	1532	432	1342	262
		620			532		362
	810			732		562	

Measurements are in millimetres

# Overall dimensions

## IS2 enclosures

### Version with cable container



	A	B	C
810		410	
		510	
		610	794
1010		810	
		410	
		510	994
1210		610	
		810	
		410	1194
		510	
		610	
		810	

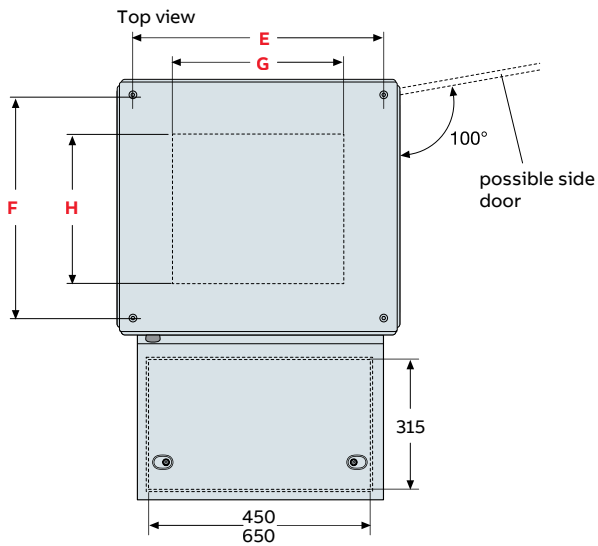
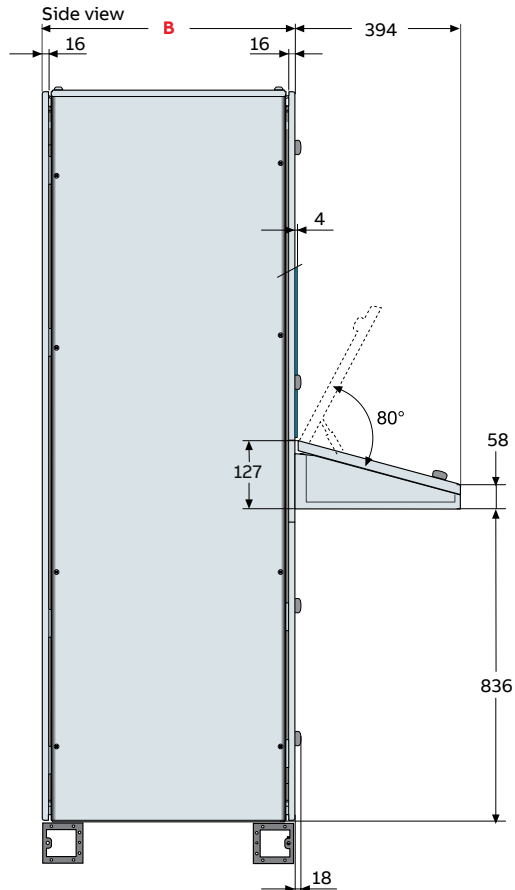
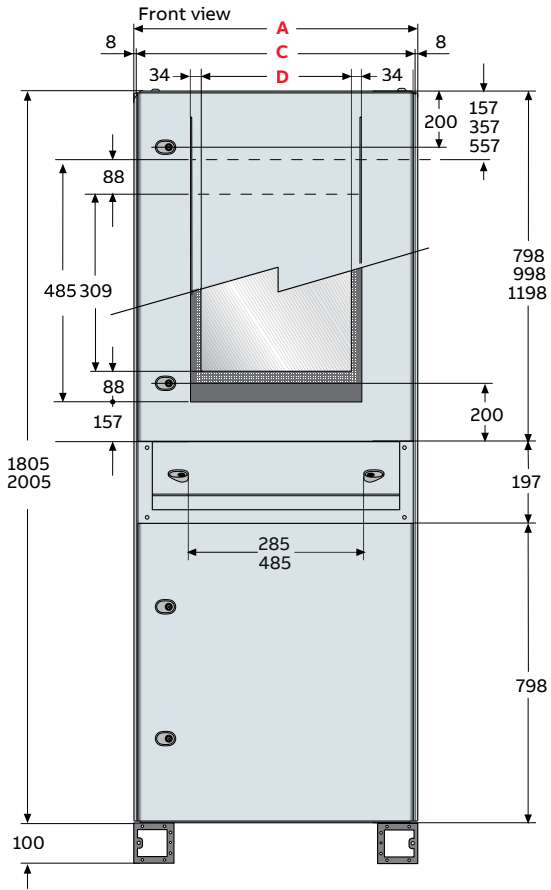
Measurements are in millimetres

# Overall dimensions

## IS2 enclosures

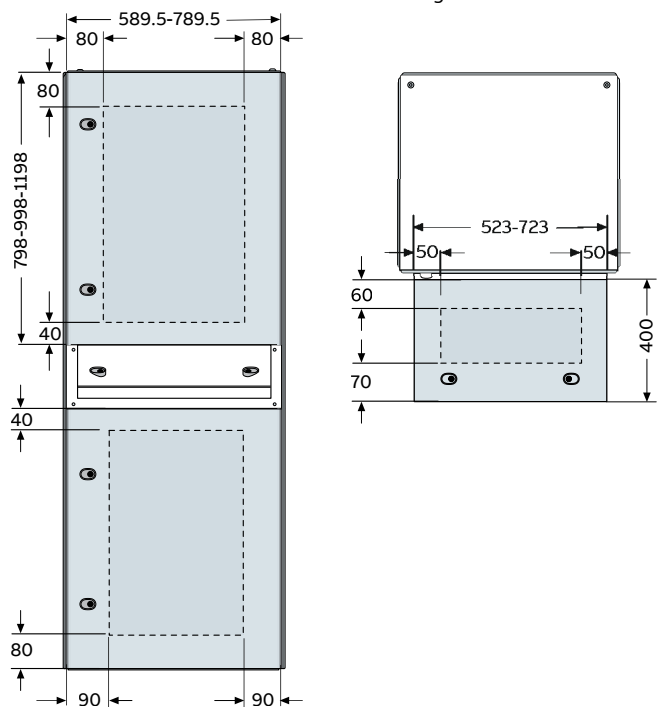
### Cabinet with console

Note: for glass dimensions, please refer to the table below.



### Cabinet with console drillings

Maximum useful overall dimensions for the drillings



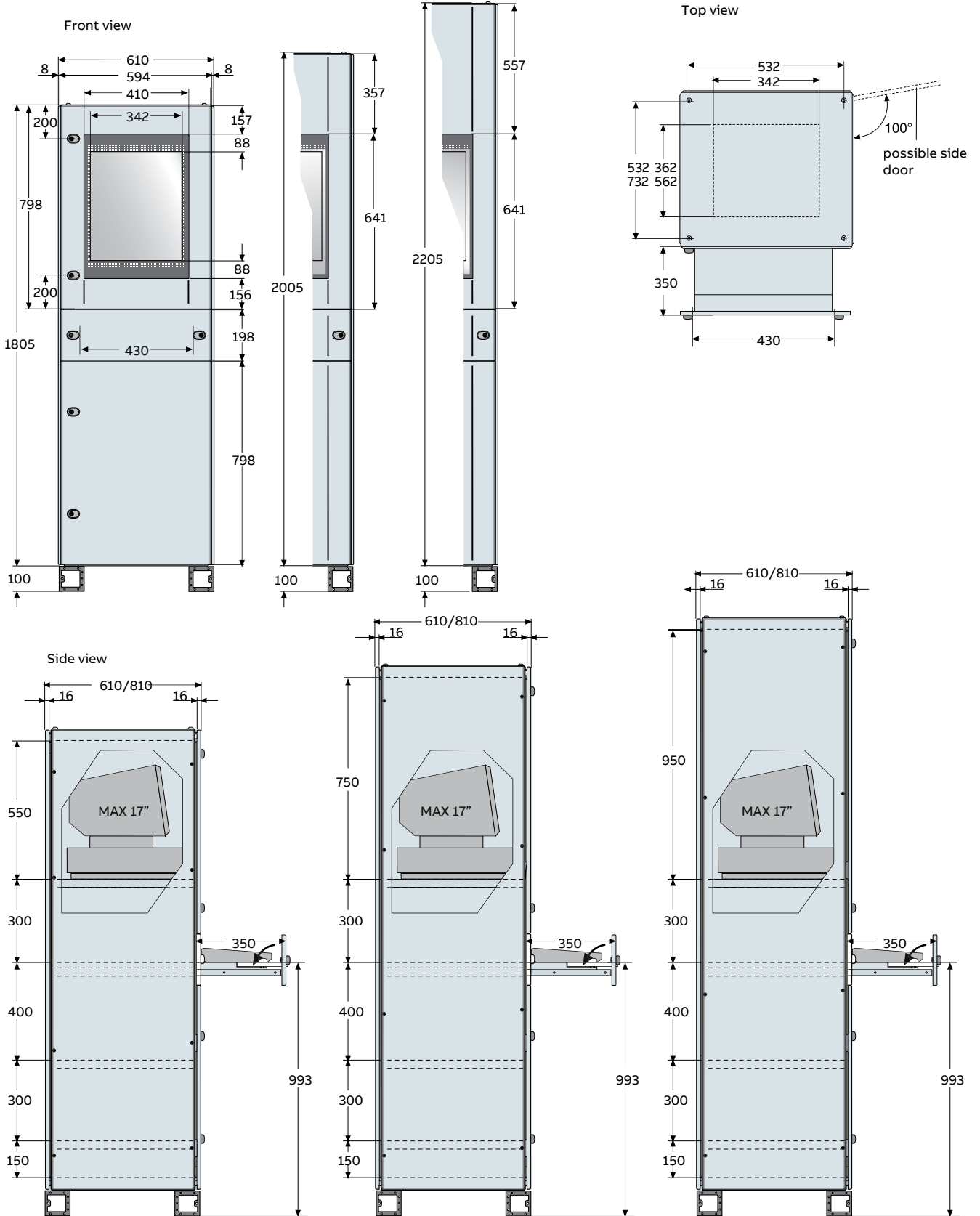
	A	B	C	D	E	F	G	H
	410					332		162
605.5	510					432		262
	610	589.5	342	532		532	342	362
	810					732		562
	410					332		162
805.5	510	789.5	542	732		432	542	262
	610					532		362
	810					732		562

Measurements are in millimetres

# Overall dimensions

## IS2 enclosures

### PC cabinet



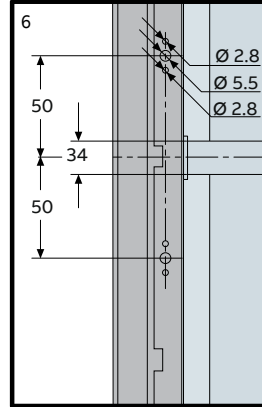
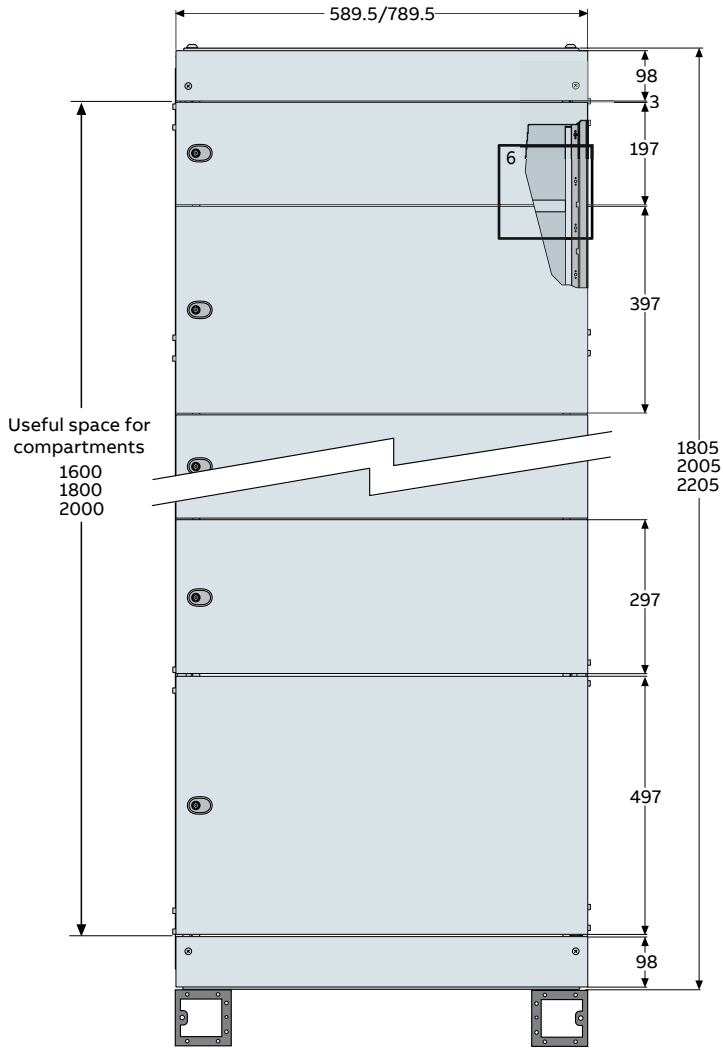
Measurements are in millimetres

# Overall dimensions

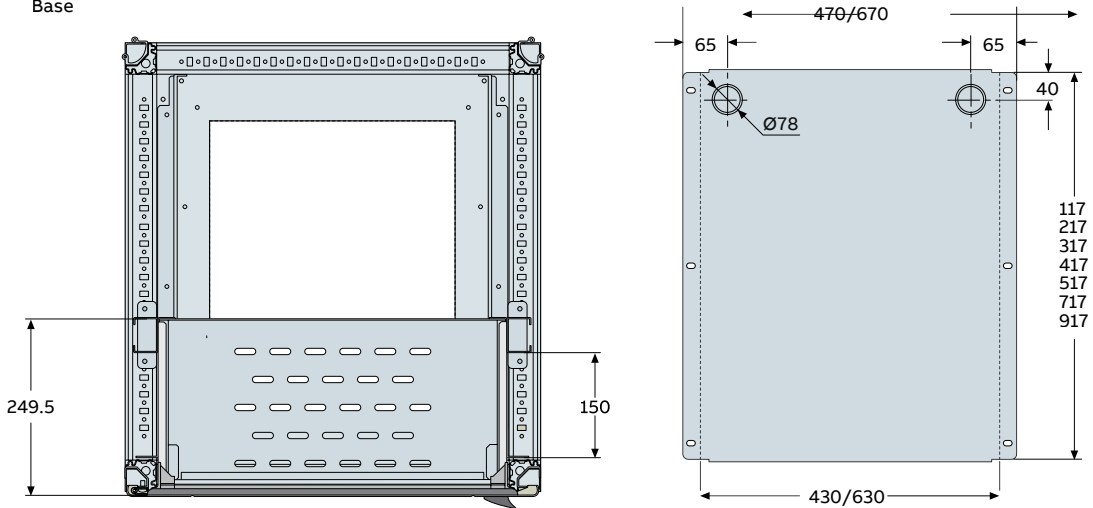
## IS2 enclosures

### Compartment Configuration

Front view



Base



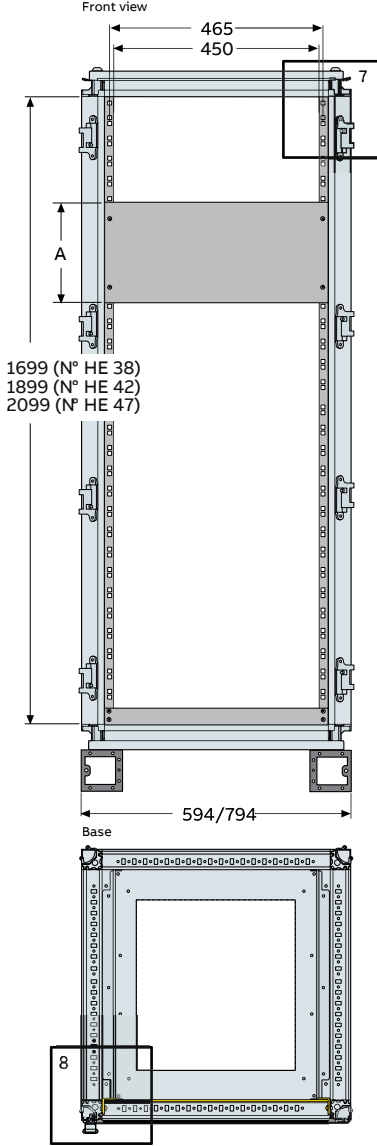
Measurements are in millimetres

# Overall dimensions

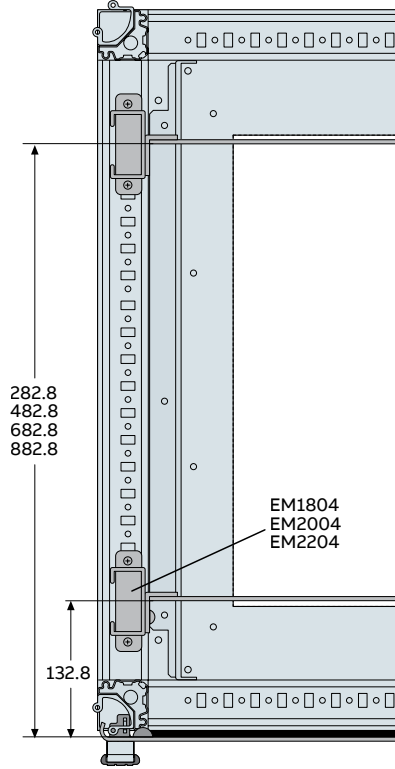
## IS2 enclosures

### 19" Rack frames

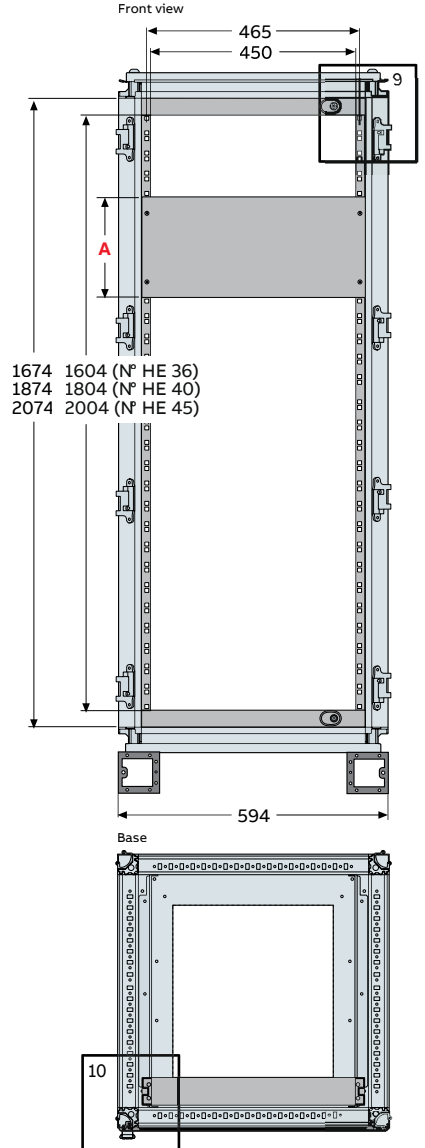
Fixed rack frame



Swing rack frame fixed rack frame

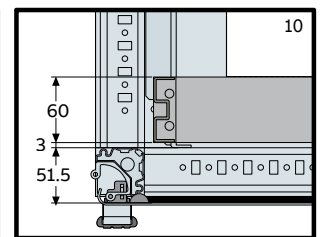
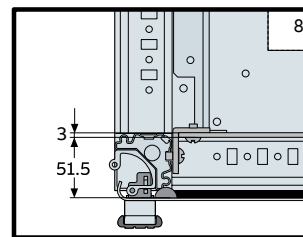
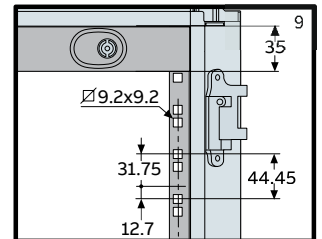
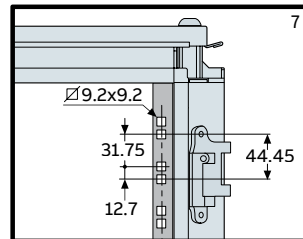


Swing rack frame W=600mm



### Panels for 19" rack frames

Code	A	No. HE
EG1991	44.45	1
EG1902	89	2
EG1903	133	3
EG1904	177.5	4
EG1905	222	5
EG1906	266.5	6
EG1907	311	7
EG1908	355.5	8
EG1909	400	9
EG1910	444.5	10
EG1911	488	11
EG1912	533	12
EG1913	577.5	13
EG1914	622	14
EG1915	666	15
EG1916	711	16
EG1917	755.5	17
EG1918	800	18
EG1999	844.5	19
EG1920	889	20



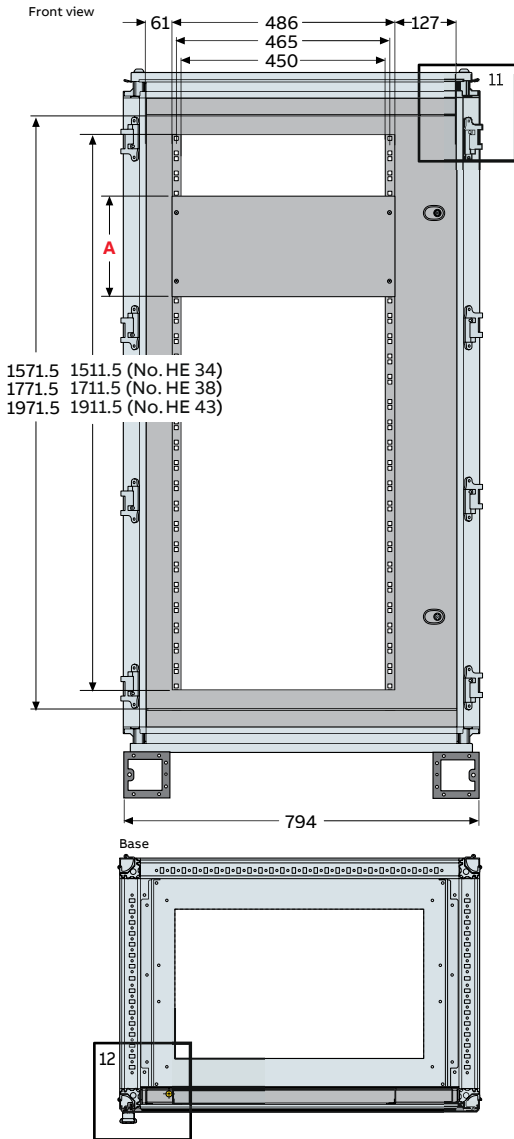
Measurements are in millimetres

# Overall dimensions

## IS2 enclosures

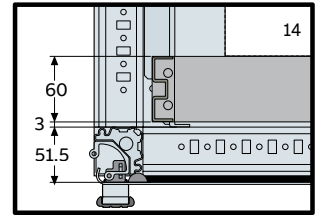
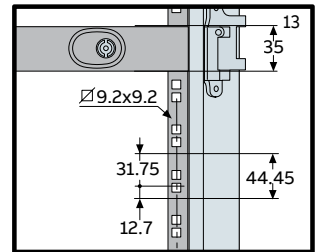
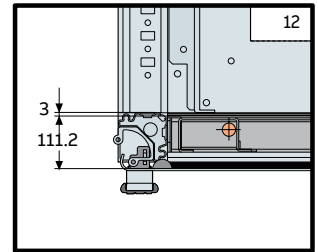
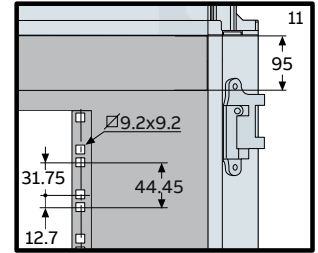
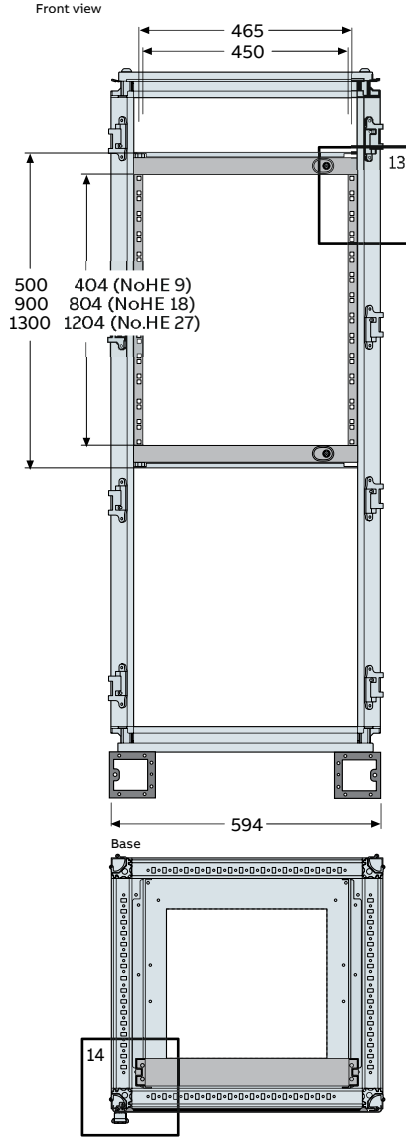
### 19" Rack frames

Rack frame in structure W=800mm



1571.5 1511.5 (No. HE 34)  
 1771.5 1711.5 (No. HE 38)  
 1971.5 1911.5 (No. HE 43)

Partial swing rack frame

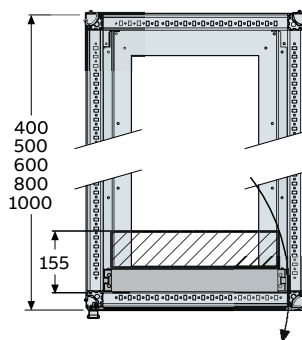


### Panels for 19" rack frames

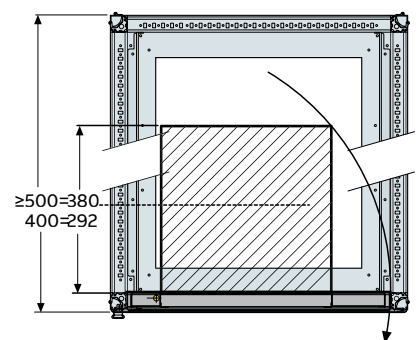
Code	A	No. HE
EG1901	44.45	1
EG1902	89	2
EG1903	133	3
EG1904	177.5	4
EG1905	222	5
EG1906	266.5	6
EG1907	311	7
EG1908	355.5	8
EG1909	400	9
EG1910	444.5	10
EG1911	488	11
EG1912	533	12
EG1913	577.5	13
EG1914	622	14
EG1915	666	15
EG1916	711	16
EG1917	755.5	17
EG1918	800	18
EG1999	844.5	19
EG1920	889	20

### Maximum overall apparatus installation dimensions in 19" swing rack frames

Swing rack frame with 90° opening



Swing rack frame with 150° opening



Rack frame in structure W=600mm

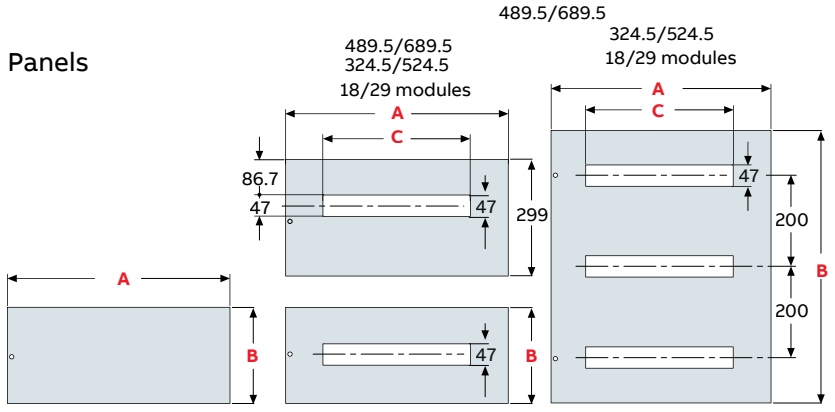
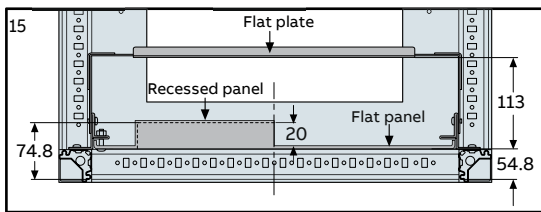
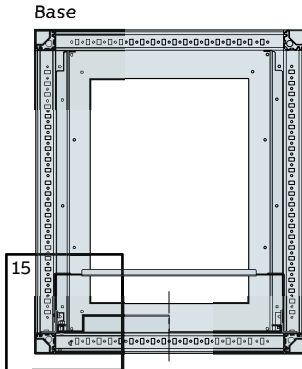
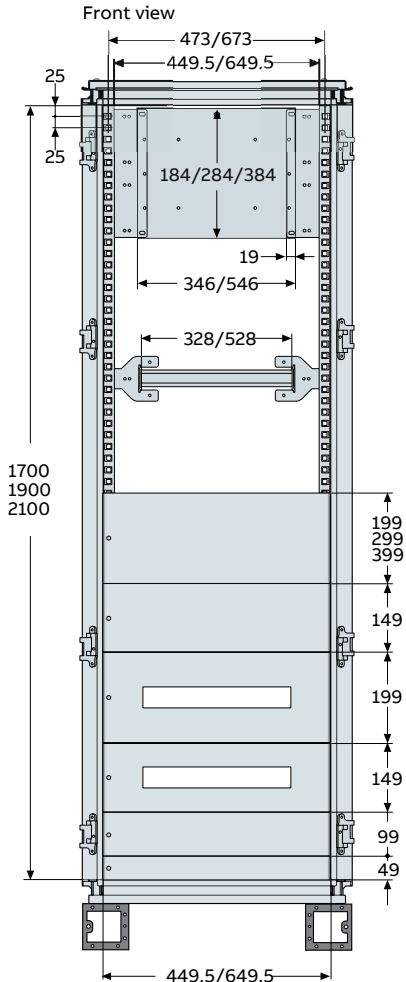
Track frame eccentric in structure W=800mm

Measurements are in millimetres

# Overall dimensions

## IS2 enclosures

### Version with kit for modular apparatus

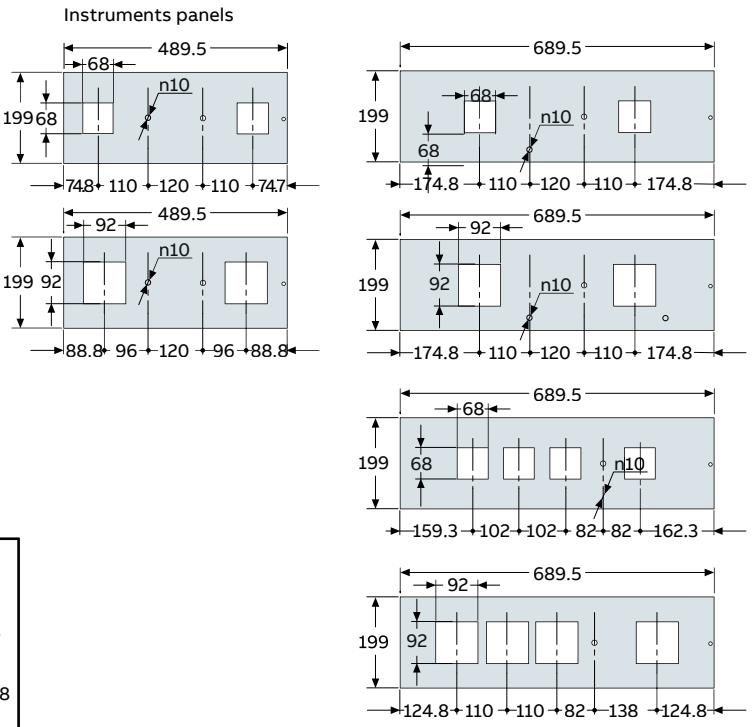


Blind panels

Code	A	B
EH0562K	489.5	49
EH1062K	489.5	99
EH1562K	489.5	149
EH2062K	489.5	199
EH3063K	489.5	299
EH4062K	489.5	399
EH5062K	489.5	499
EH6062K	489.5	599
EH0582K	689.5	49
EH1082K	689.5	99
EH1582K	689.5	149
EH2082K	689.5	199
EH3082K	689.5	299
EH4082K	689.5	399
EH5082K	689.5	499
EH6082K	689.5	599

Panel for modular instruments

1 DIN row				
Code	A	B	C	No. mod.
EH1518K	489.5	149	324.5	18
EH2018K	489.5	199	324.5	18
EH3018K	489.5	299	324.5	18
EH1529K	689.5	149	524.5	29
EH2029K	689.5	199	524.5	29
EH3029K	689.5	299	524.5	29
EH1524K	489.5	149	432	24
EH2024K	489.5	199	432	24
EH1536K	689.5	149	634	36
EH2036K	689.5	199	634	36
3 DIN rows				
Code	A	B	C	No. mod.
EH6018K	489.5	599	324.5	18
EH6029K	689.5	599	524.5	29
EH6025K	489.5	599	432	24
EH6036K	689.5	599	634	36



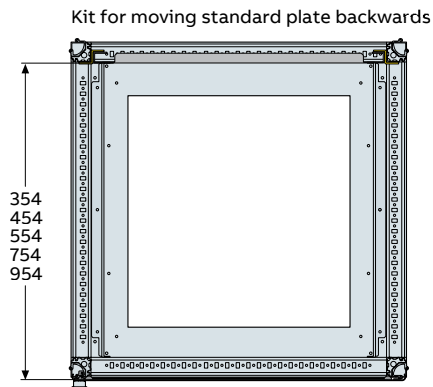
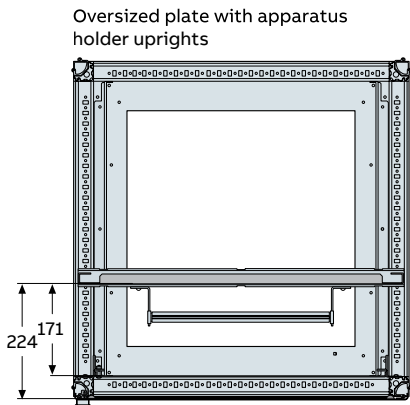
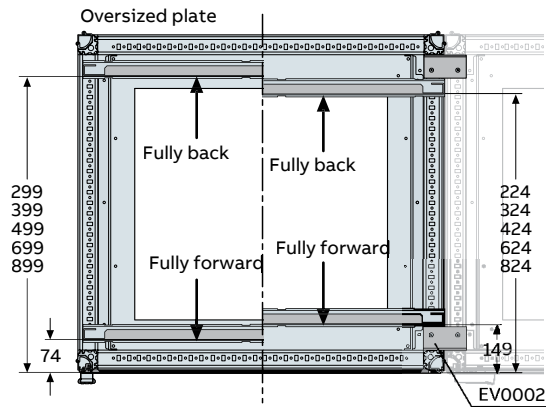
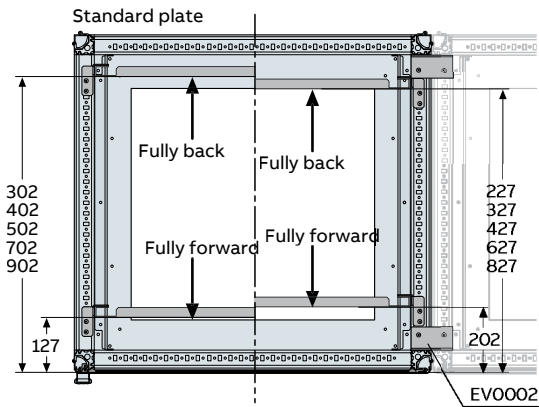
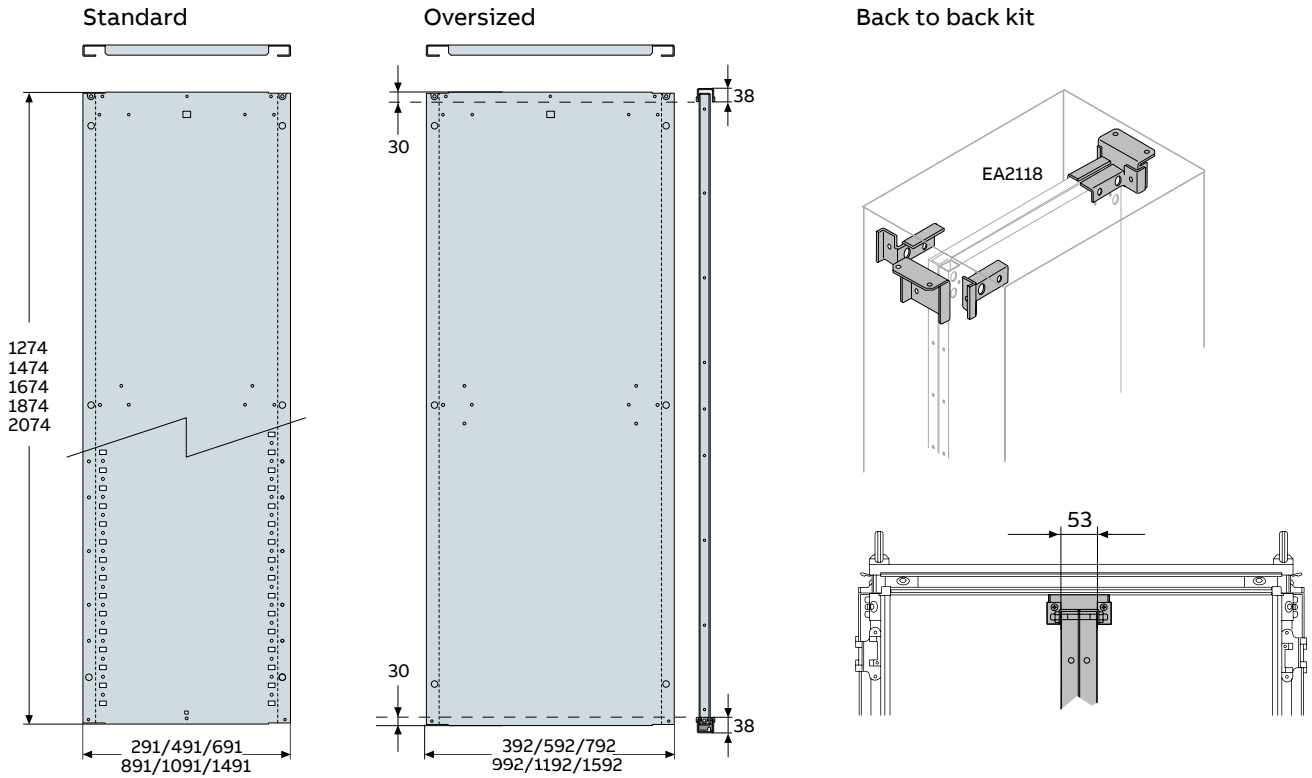
Measurements are in millimetres



# Overall dimensions

## IS2 enclosures

### Back plates

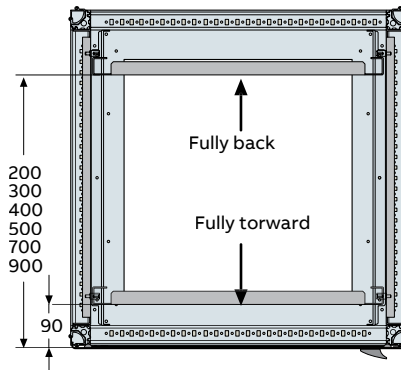
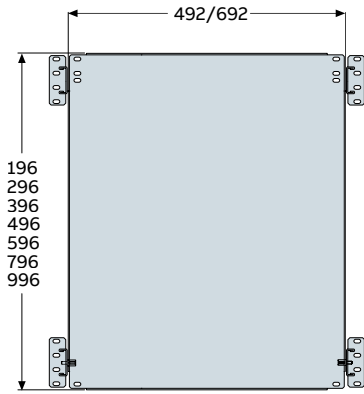


# Overall dimensions

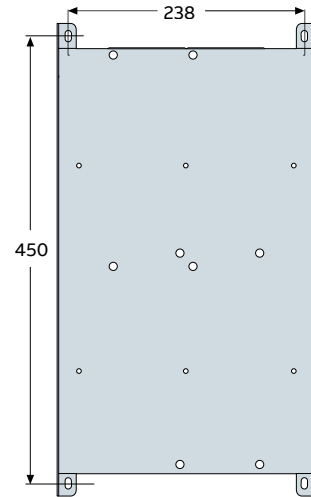
## IS2 enclosures

### Back plates

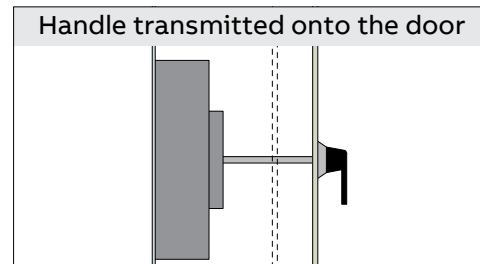
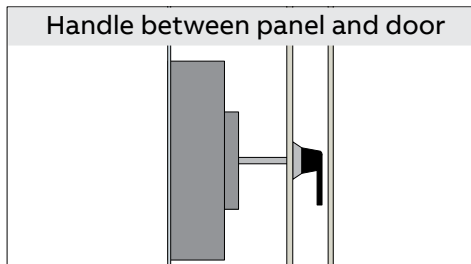
Partial back plates  
Do not require the depthwise upright



Back plates for condensers



Selection of partial back plate and panels according to the apparatus to be installed



### Switch-disconnectors

	Structures W=600mm			Structures W=800mm		
	Partial back plate	Panel	H (mm)	Partial back plate	Panel	H (mm)
OT200/250	EA2062	EH2062K	200	EA2081	EH2082K	200
OT315/400	EA3061	EH3063K	300	EA3081	EH3082K	300
OT630/800	EA4061	EH4062K	400	EA4081	EH4082K	400

	Structures W=600mm			Structures W=800mm		
	Partial back plate	Panel	H (mm)	Partial back plate	Panel	H (mm)
	EH2065 <sup>(2)</sup>	EH2062K	200	EH2085 <sup>(2)</sup>	EH2082K	200
	EA3061	EH3063K	300	EA3081	EH3082K	300
	EA4061	EH4062K	400	EA4081	EH4082K	400

### Circuit-breakers

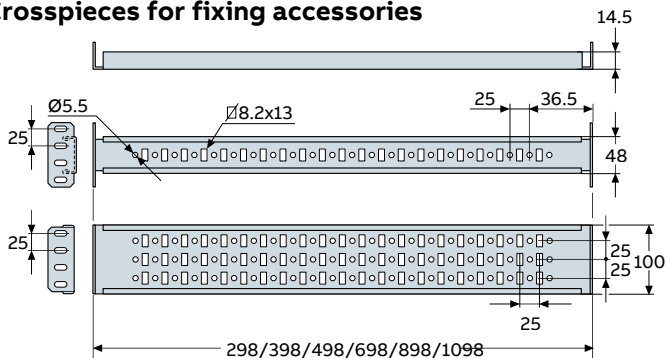
Tmax T1-T2 - T 3	EA2062	EH2063K <sup>(1)</sup>	200	EA2083 <sup>(1)</sup>	EH2083K	200
Tmax XT1-XT2-XT3-XT4	EA2062	EH2062K	200	EA2081	EH2082K	200
Tmax T4-T5	EA4061	EH4062K	400	EA4081	EH4082K	200
Tmax T6	EA5061	EH5062K	500	EA5081	EH5082K	500

	EH2065 <sup>(2)</sup>	EH2062K	200	EH2085 <sup>(2)</sup>	EH2082K	200
	EA4061	EH4062K	400	EA4081	EH4082K	200
	EA5061	EH5062K	500	EA5081	EH5082K	500

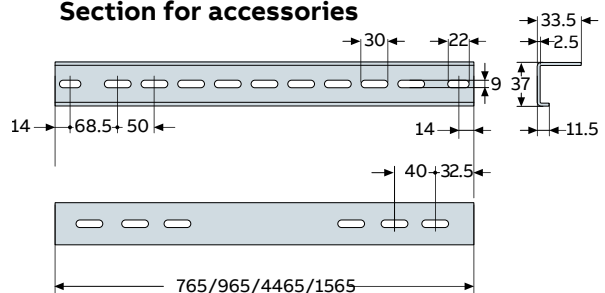
<sup>(1)</sup> Blind recessed panel

<sup>(2)</sup> Blind apparatus-holder back plate

### Crosspieces for fixing accessories



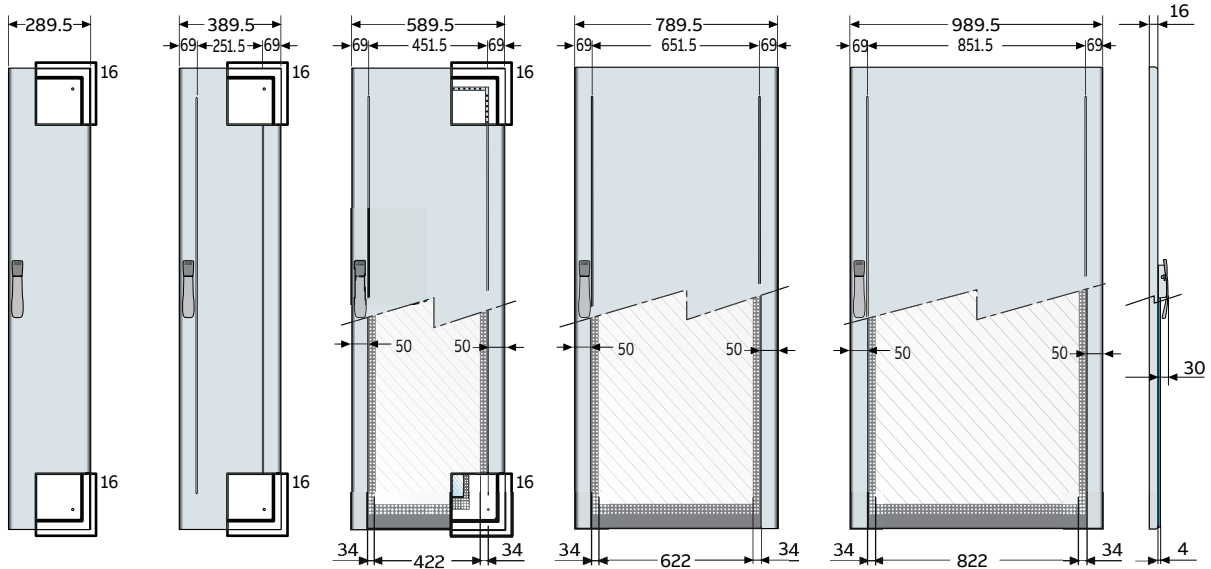
### Section for accessories



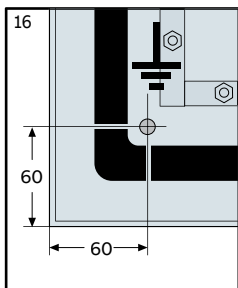
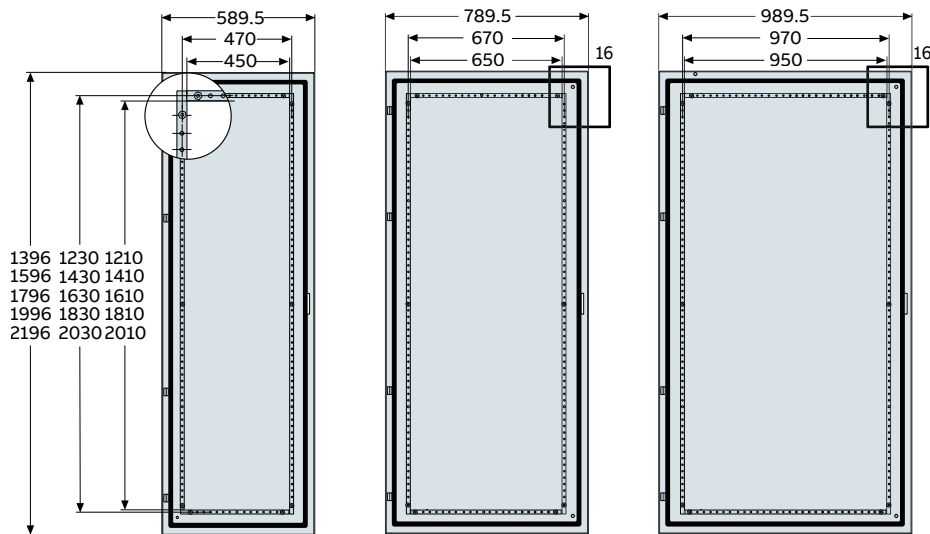
# Overall dimensions

## IS2 enclosures

### Front or rear doors



Inside of blind door (W≥600mm)



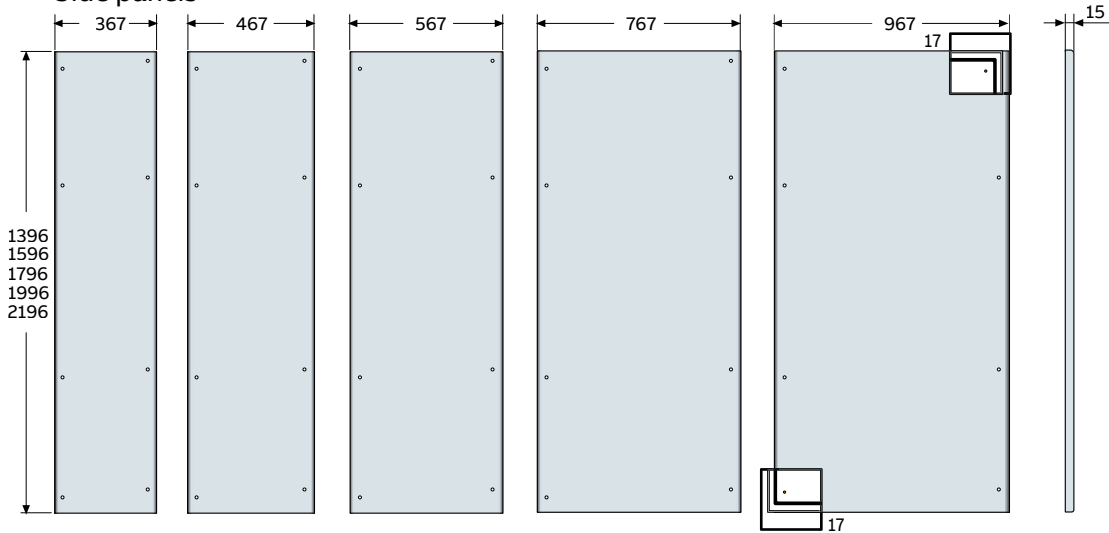
Measurements are in millimetres

# Overall dimensions

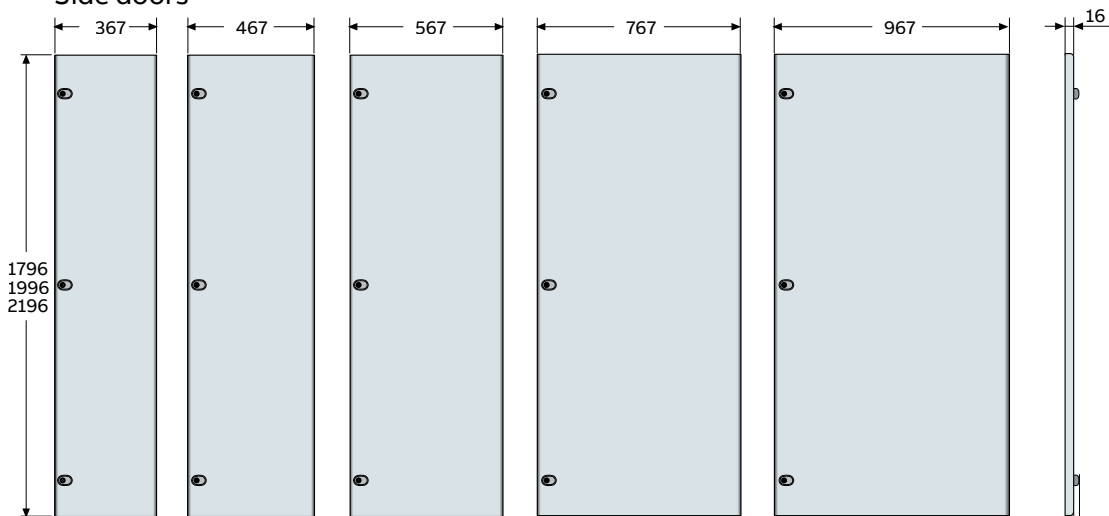
## IS2 enclosures

### Side covers

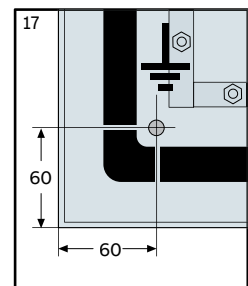
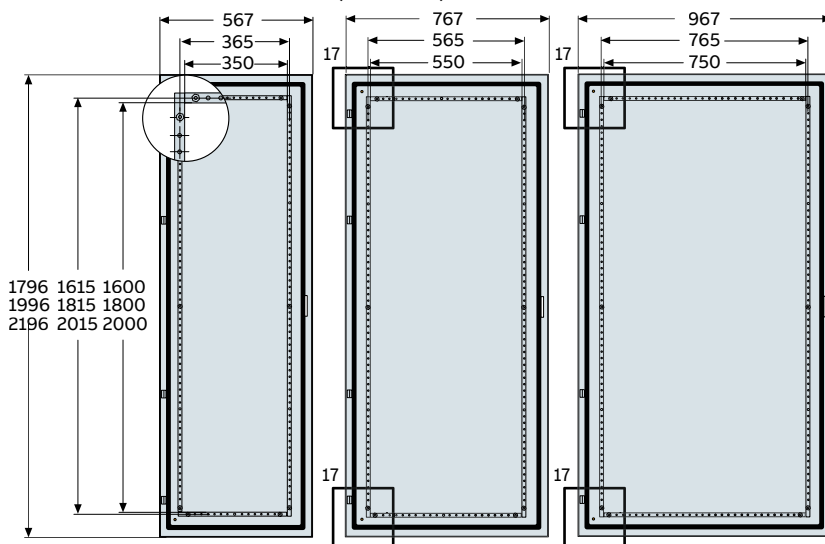
#### Side panels



#### Side doors



#### Inside of blind door (W≥600mm)



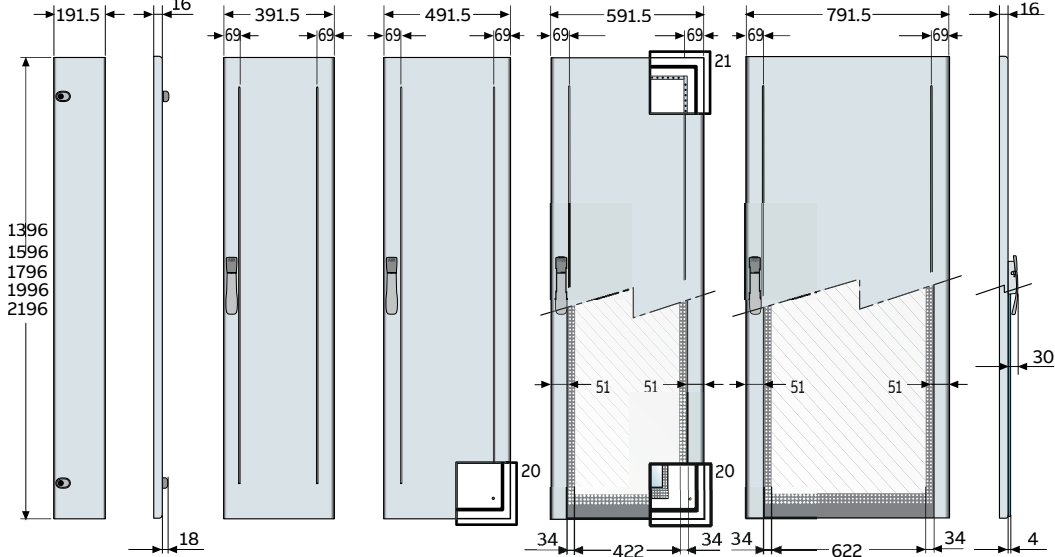
Measurements are in millimetres

5

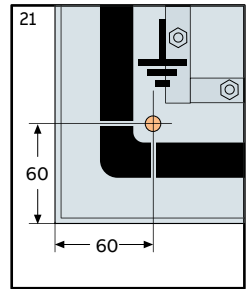
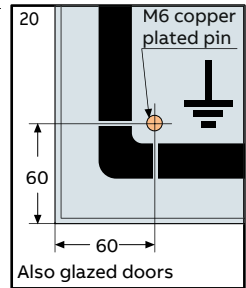
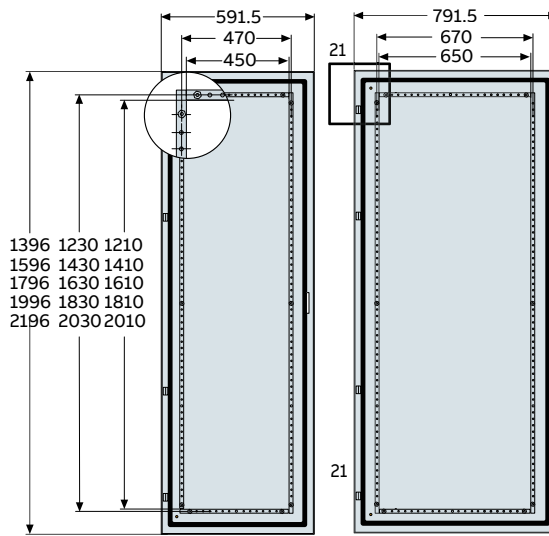
# Overall dimensions

## IS2 enclosures

### Double front or rear doors

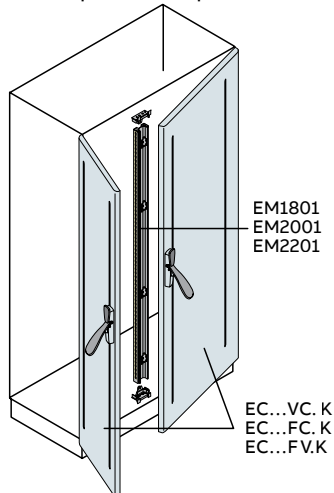


Inside of double blind door (W≥600mm)



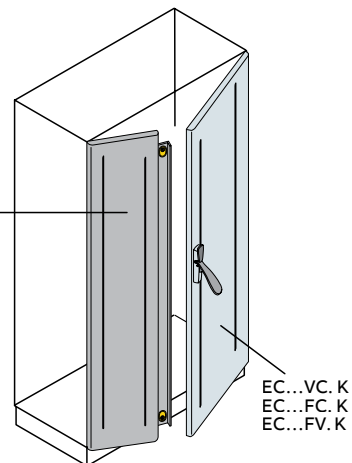
### Example of use of double doors

Mounting with intermediate upright and crosspieces in depth



Mounting with blind doors with overlapping cosure (without intermediate upright and crosspieces in depth)

- ED1412S K
- ED1612S K
- ED1802S K
- ED1804S K
- ED1810S K
- ED1812S K
- ED1816S K
- ED2002S K
- ED2004S K
- ED2010S K
- ED2012S K
- ED2016S K
- ED2202S K
- ED2204S K
- ED2210S K
- ED2212S K
- ED2216S K

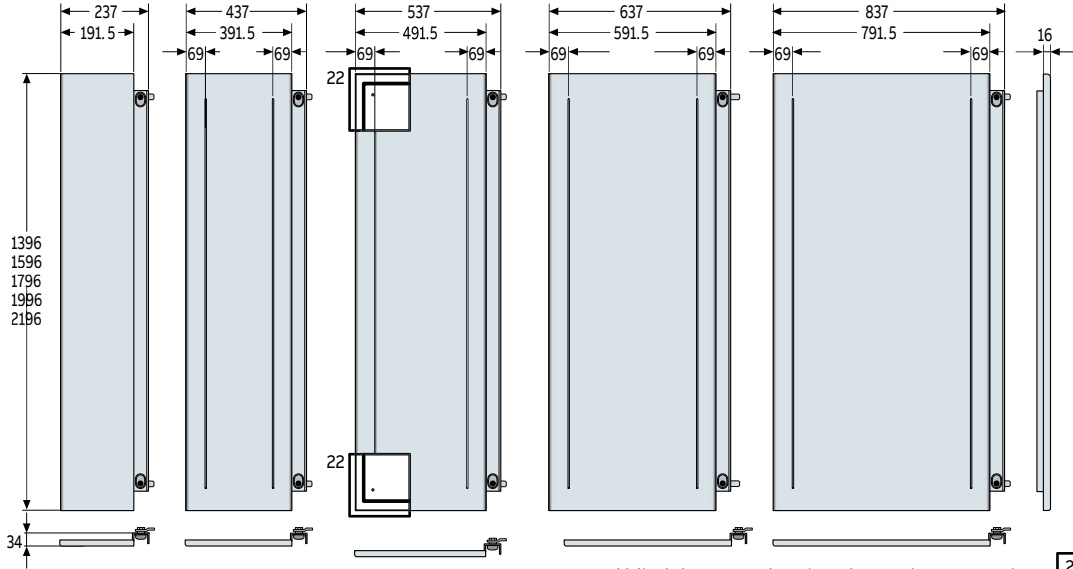


Measurements are in millimetres

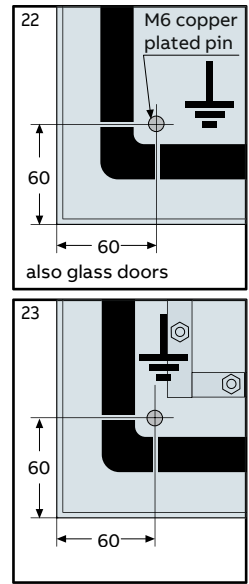
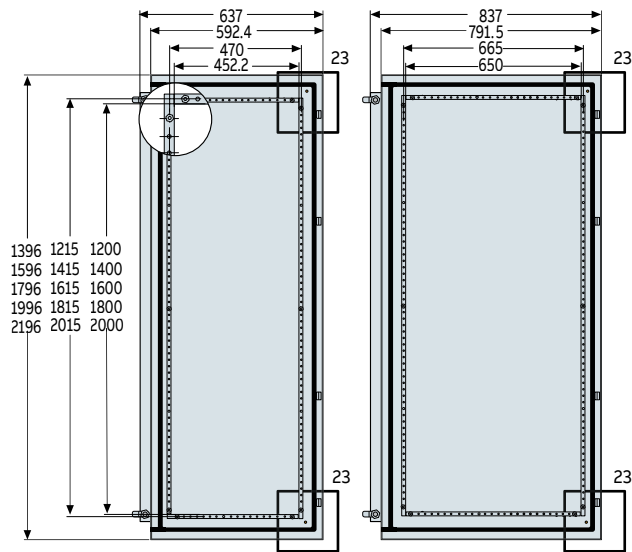
# Overall dimensions

## IS2 enclosures

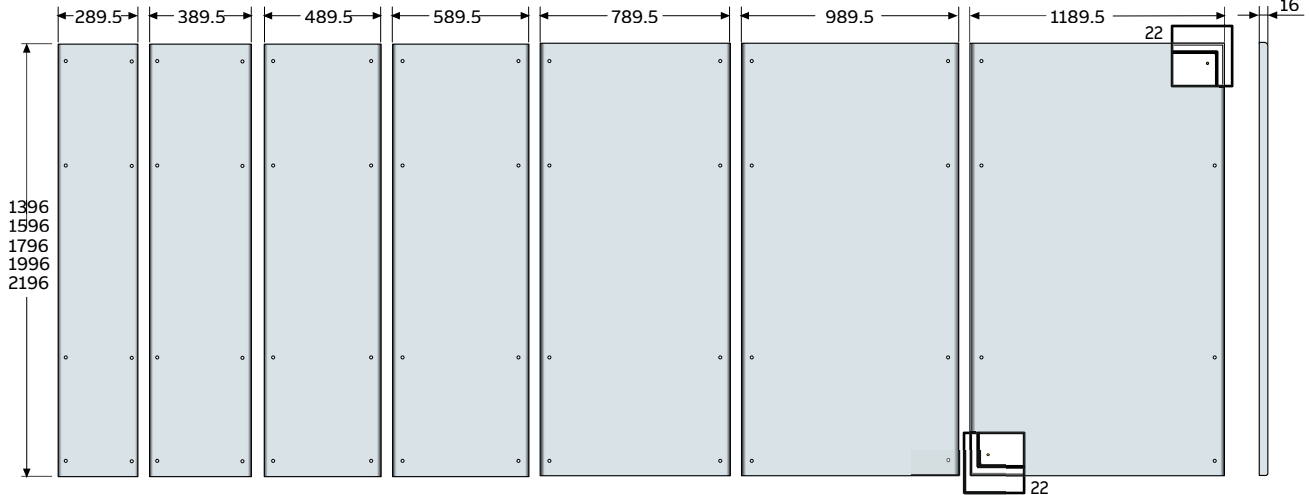
### Blind doors with overlapping closure



### Internal blind doors overlapping closure (W≥600mm)



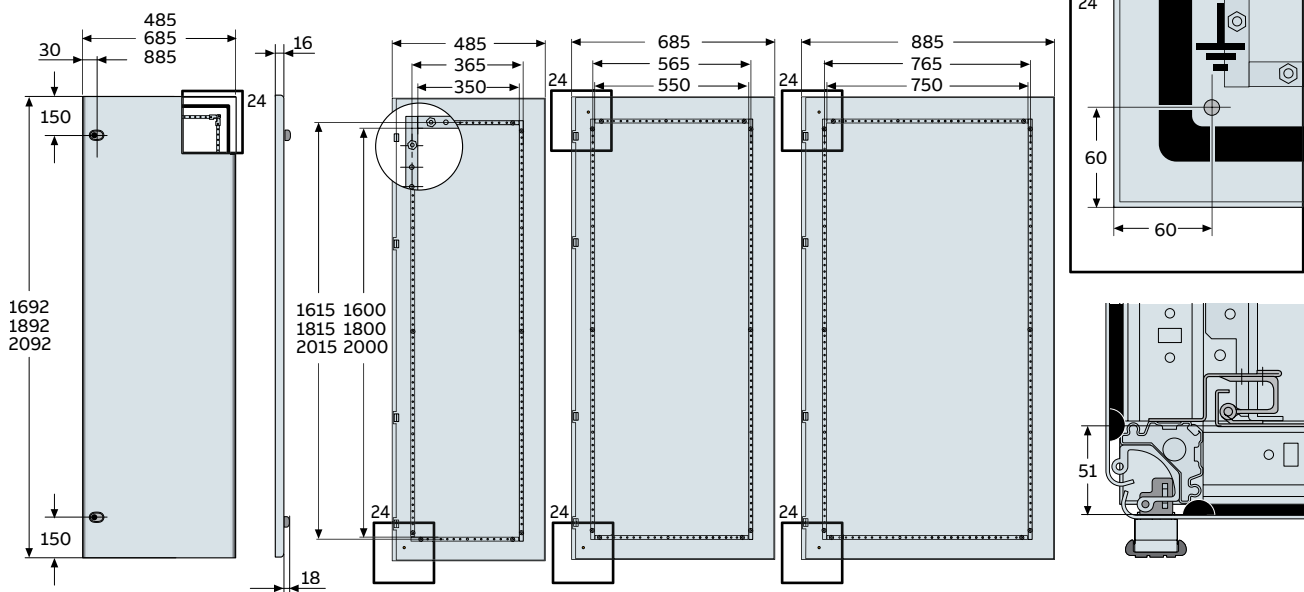
### Rear panels



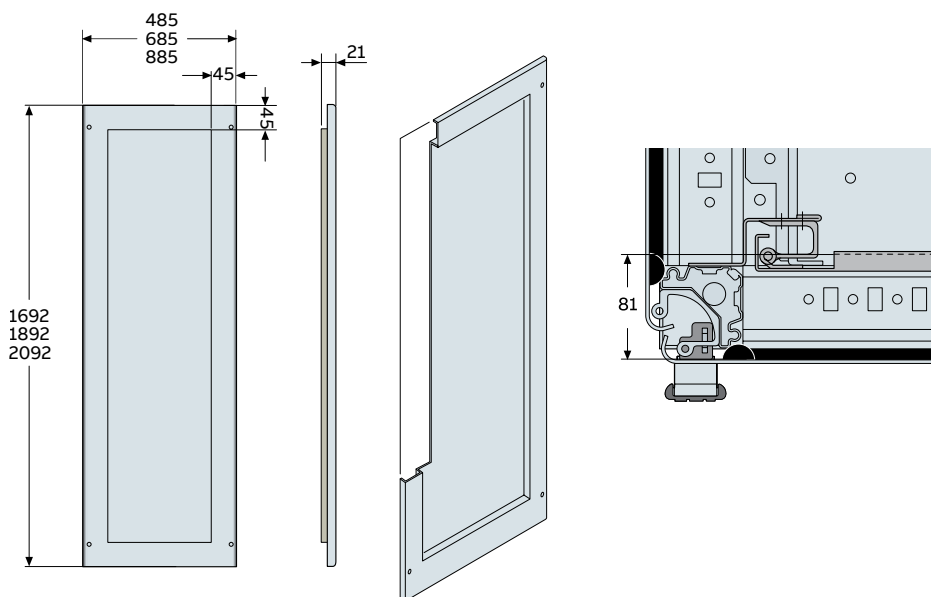
## Overall dimensions

### IS2 enclosures

#### Internal counterdoor



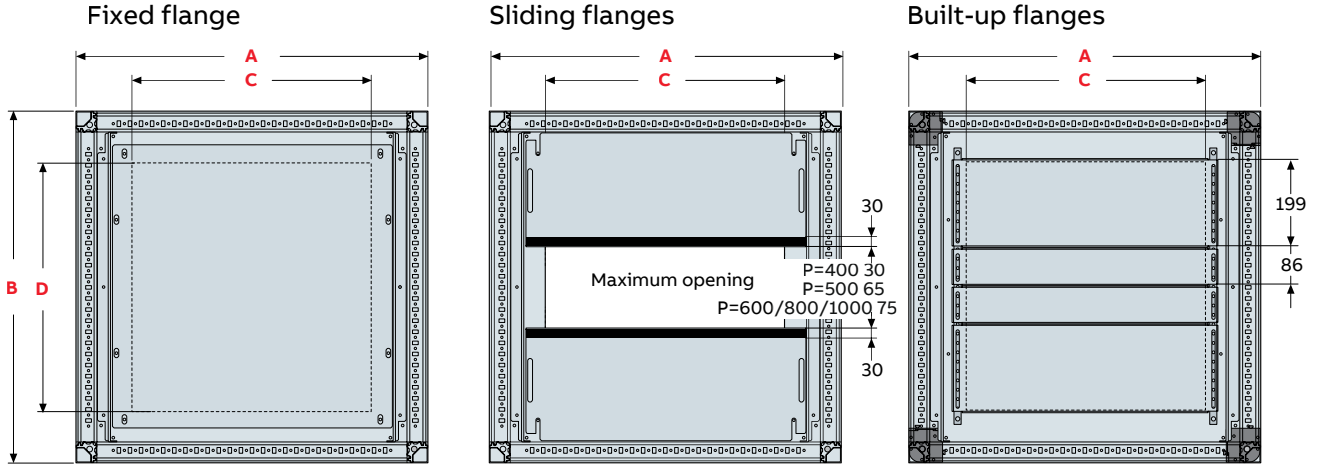
#### Internal edged counterdoor



# Overall dimensions

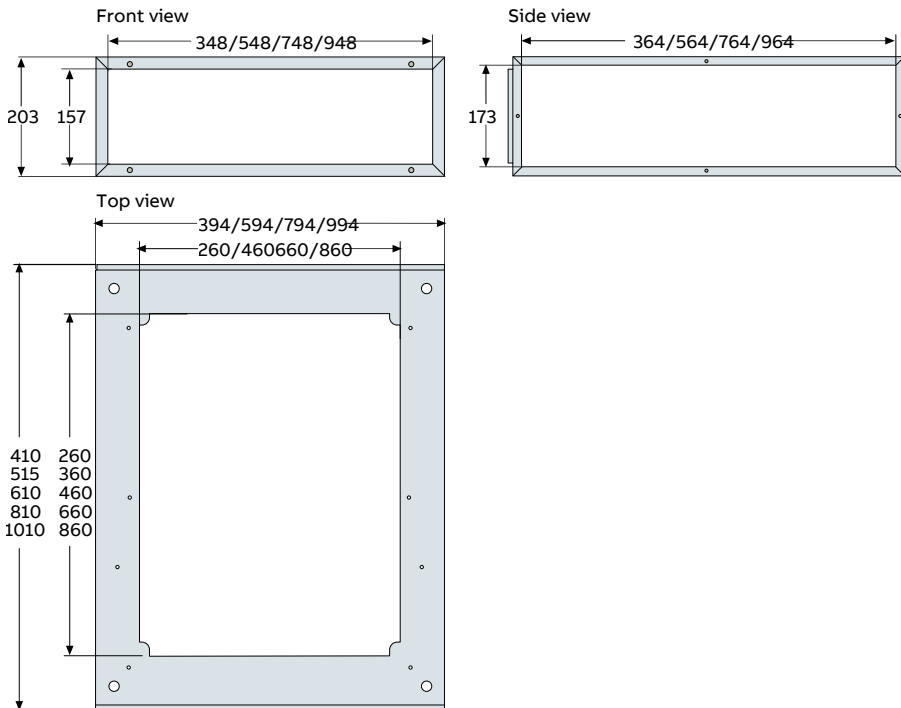
## IS2 enclosures

### Flanges for cable passage



A	B	C	D	Built-up flanges		A	B	C	D	Built-up flanges	
				No. flanges H=199mm	No. flanges H=86mm					No. flanges H=199mm	No. flanges H=86mm
394	394	142	162	-	2	994	394	742	162	-	2
	494		262	1	1		494		262	1	1
	594		362	1	2		594		362	1	2
	794		562	2	2		794		562	2	2
	994		762	3	2		994		762	3	2
594	394	342	162	-	2	1194	394	942	162	-	2
	494		262	1	1		494		262	1	1
	594		362	1	2		594		362	1	2
	794		562	2	2		794		562	2	2
	994		762	3	2		994		762	3	2
794	394	542	162	-	2	1594	394	1342	162	-	2
	494		262	1	1		494		262	1	1
	594		362	1	2		594		362	1	2
	794		562	2	2		794		562	2	2
	994		762	3	2		994		762	3	2

### Top container for cable connection



Measurements are in millimetres

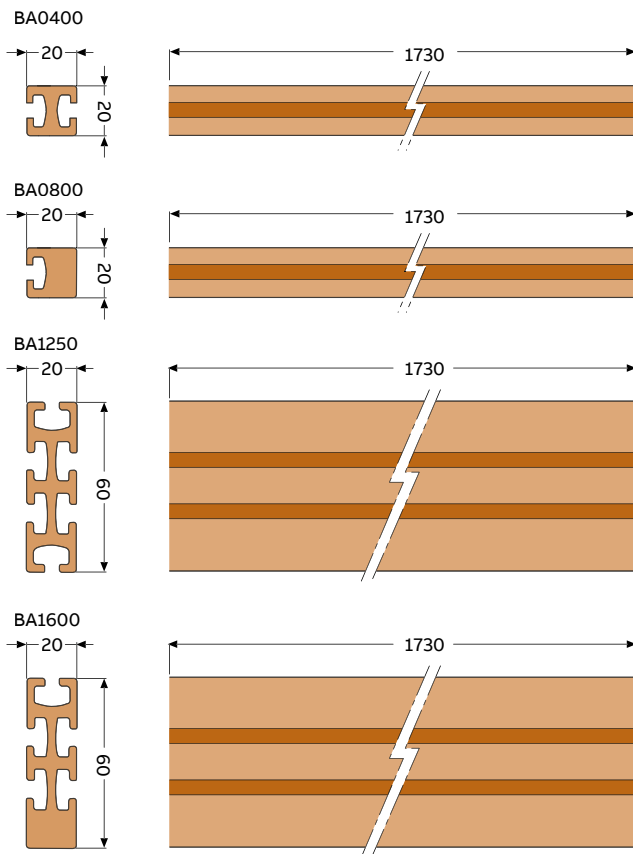


# Overall dimensions

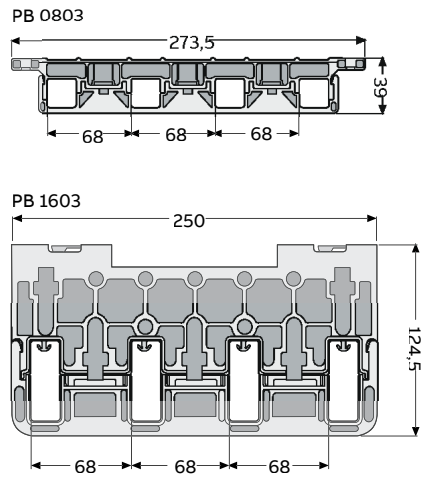
## Busbars

### Busbars with shaped section

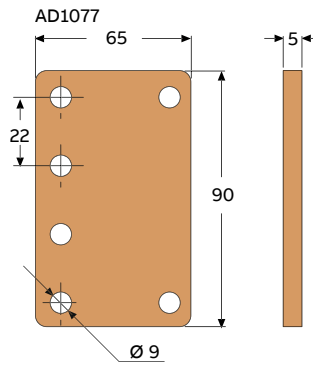
#### Busbar



#### Insulator



#### Accessories

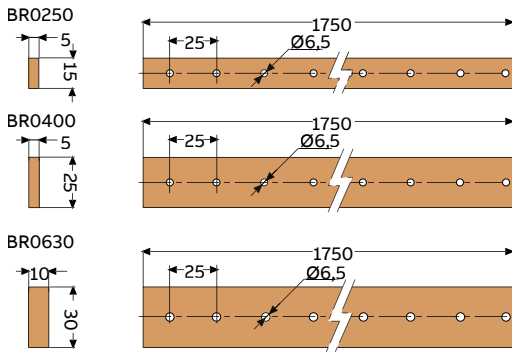


# Overall dimensions

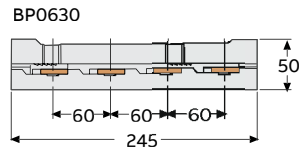
## Busbars

### Flat busbars

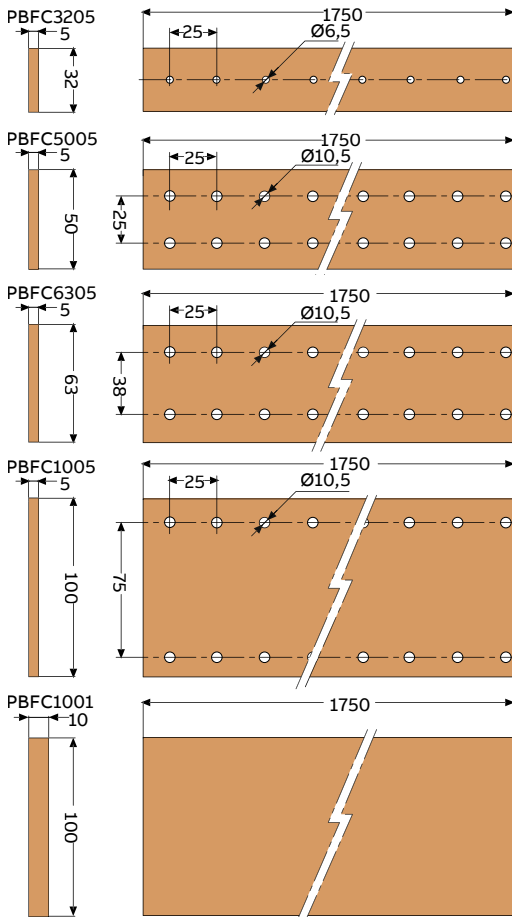
#### Busbar up to 630A



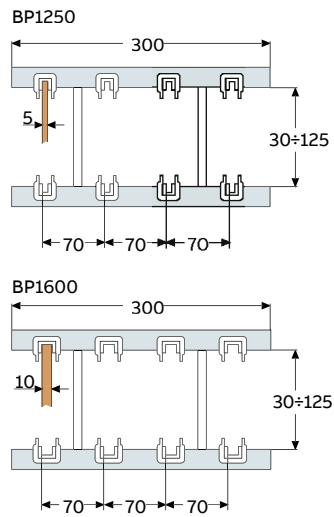
#### Insulators for busbars up to 630A



#### Busbar up to 1600A



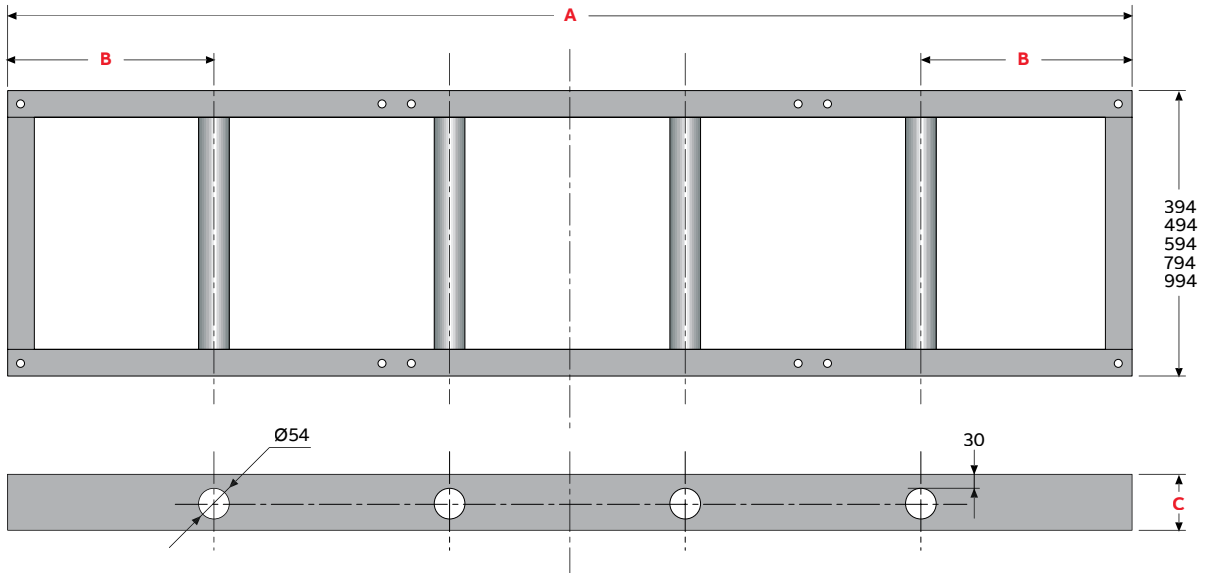
#### Insulators for busbars up to 1600



# Overall dimensions

## Single plinth

### Single plinth

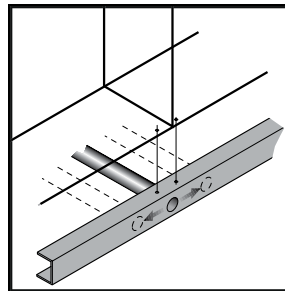


394  
494  
594  
794  
994

Ø54

30

C

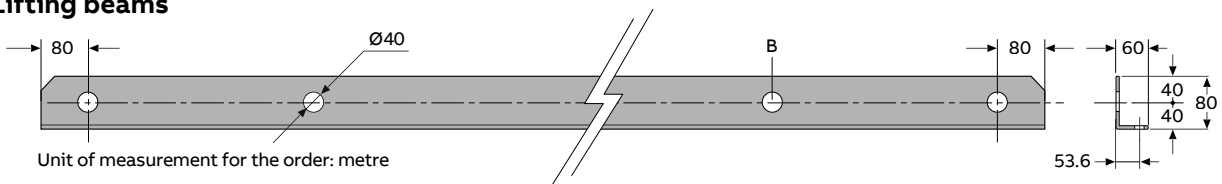


Should the reinforcement tube be in correspondence with switchgear fixing to the plinth, it will be moved at the execution stage.

Reinforcement tube [No.]	A [metres]	B [mm]	C [mm]
2	1.78 ÷ 2.78	665	100/200
2	2.78,1 ÷ 3.78	865	100/200
3	3.78,1 ÷ 4.78	950	100/200
4	4.78,1 ÷ 5.78	1195	100/200

Unit of measurement for the order: metre

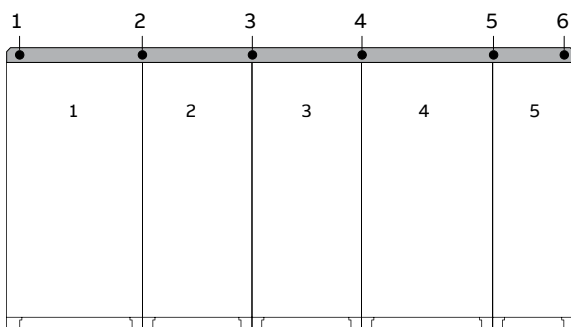
### Lifting beams



Unit of measurement for the order: metre

The holes for lifting are positioned in correspondence with the side-by-side position of the switchgear.  
The amount of B holes in the beam is equal to the number of structures + 1.

Example: No. 5 structures side by side = No. 6 holes for lifting.

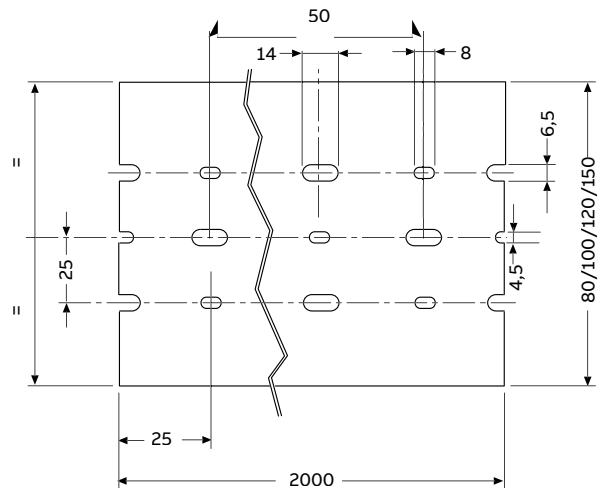
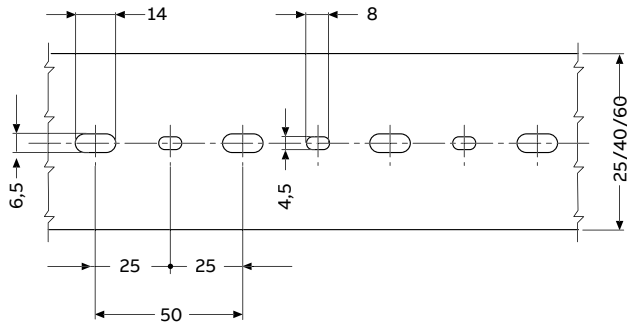
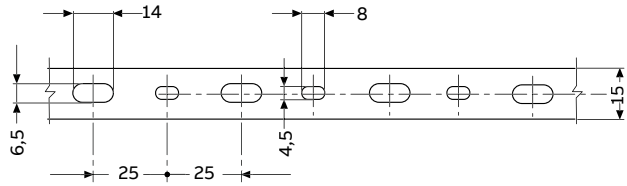
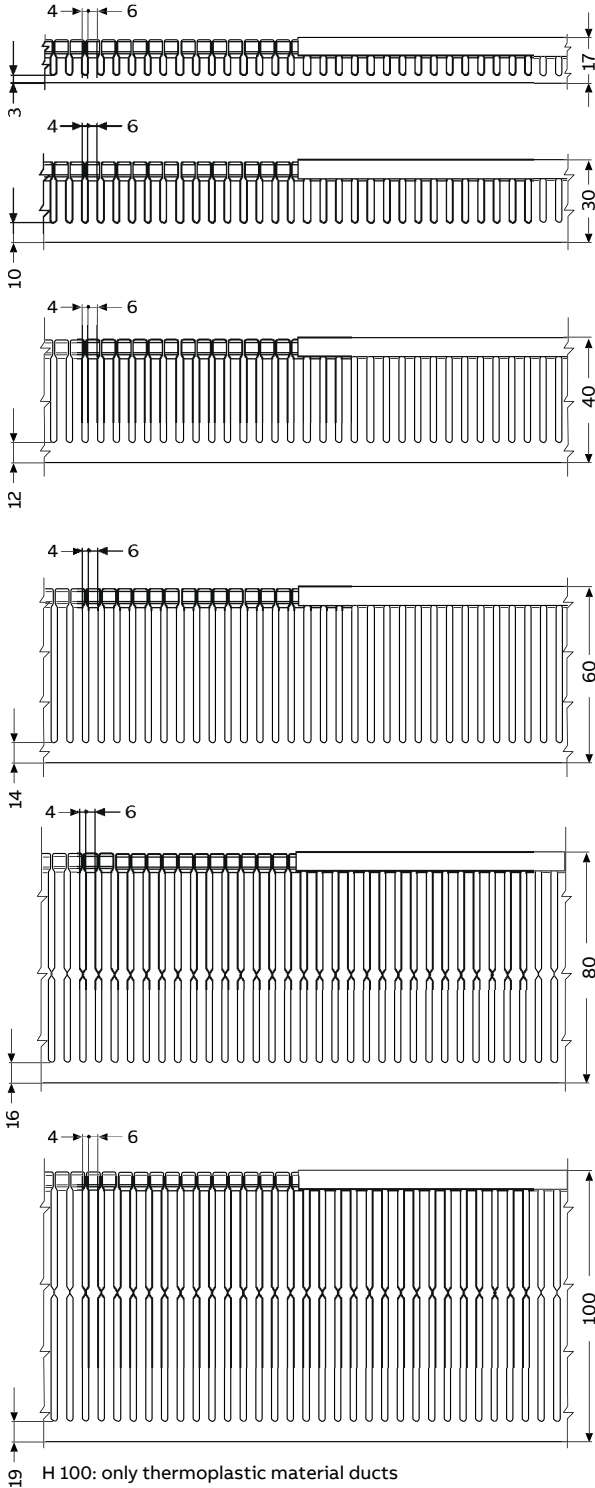


# Overall dimensions

## Wiring ducts

### Thermoplastic and halogen free wiring ducts with 4/6 mm slots

CEI 23-22 Standard applies to plastic wiring ducts and their accessories to be used in the mechanical protection and support of cables in switchboards, in applications with a maximum rated voltage of 1000 V in alternating current and 1500 V in direct current. Thermoplastic wiring ducts have obtained the IMQ certification.

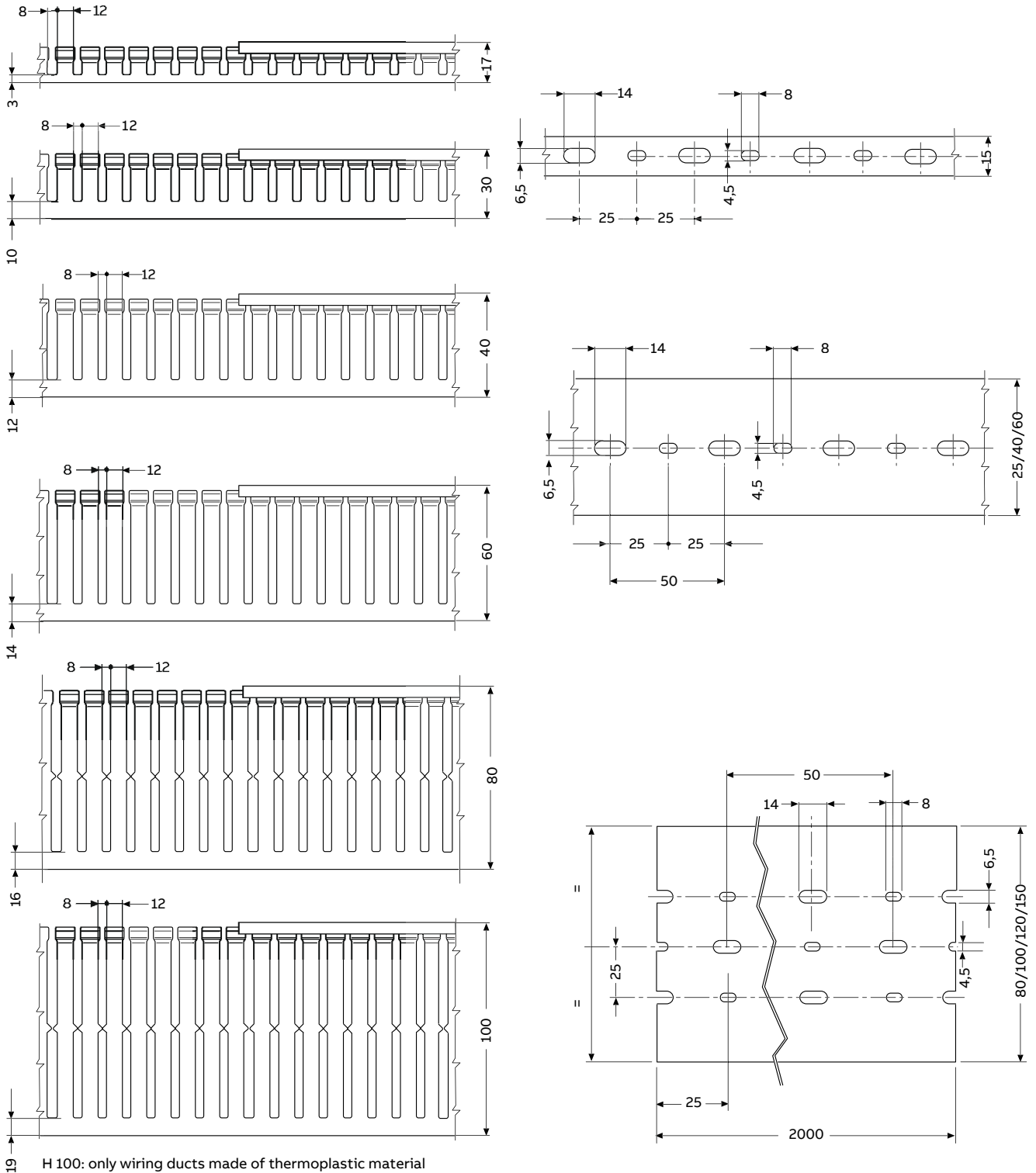


## Overall dimensions

### Wiring ducts

#### Thermoplastic and halogen free wiring duct with 8/12 mm slot

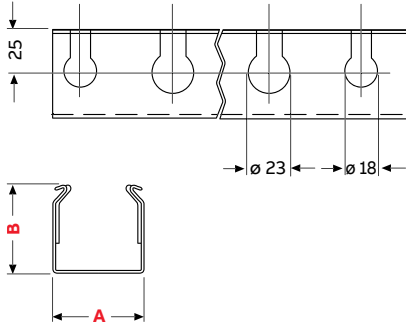
CEI 23-22 Standard applies to plastic wiring ducts and their accessories to be used in the mechanical protection and support of cables in switchboards, in applications with a maximum rated voltage of 1000 V in alternating current and 1500 V in direct current. Thermoplastic wiring ducts have obtained the IMQ certification.



## Overall dimensions

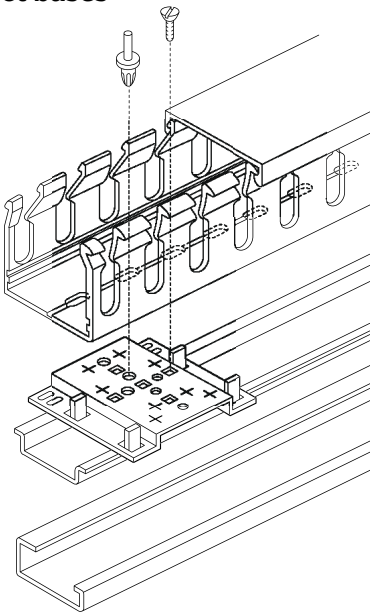
### Wiring ducts

#### Ducts with round holes



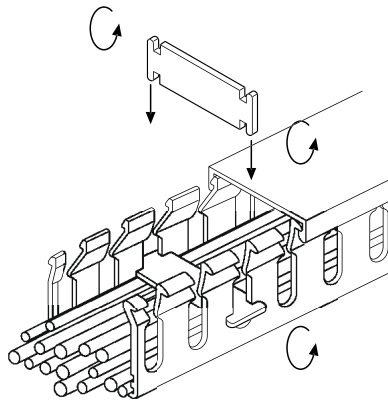
Code	A	B
05 330	50	50
05 331	100	60

#### Plastic rivets and wiring duct bases



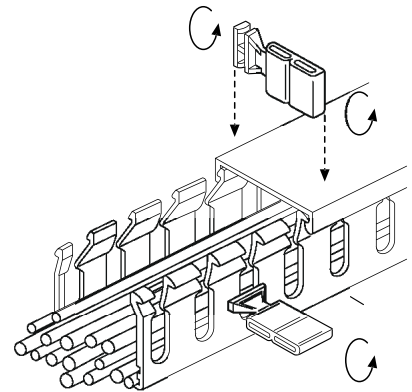
Code
05 214 - 05 216 - 05 210

#### Plastic cable retainers



Code
05 224 - 05 226 - 05 228 - 05 230

#### Plastic label tag

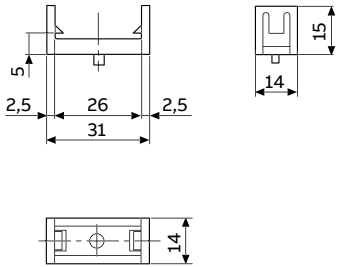


Code
05 240

## Overall dimensions

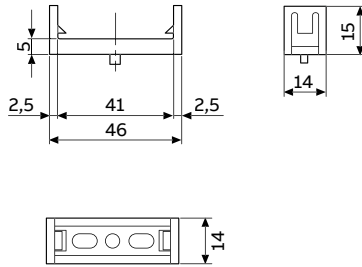
### Wiring ducts

**Clip for wiring ducts**  
base 25



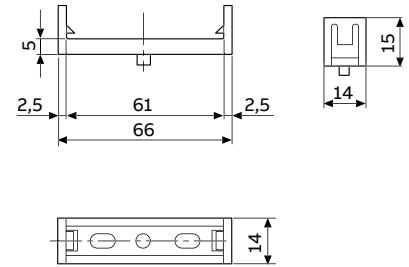
Code \_\_\_\_\_  
05 250

**Clip for wiring ducts**  
base 40



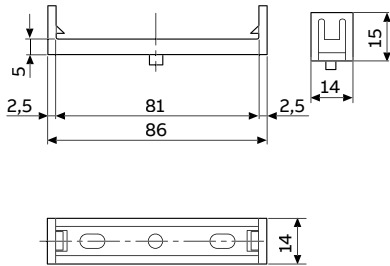
Code \_\_\_\_\_  
05 252

**Clip for wiring ducts**  
base 60



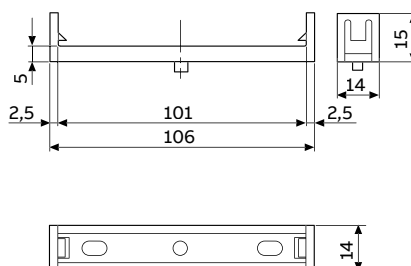
Code \_\_\_\_\_  
05 254

**Clip for wiring ducts**  
base 80



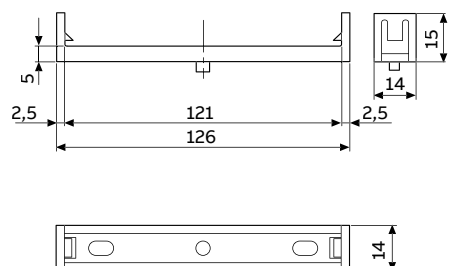
Code \_\_\_\_\_  
05 256

**Clip for wiring ducts**  
base 100



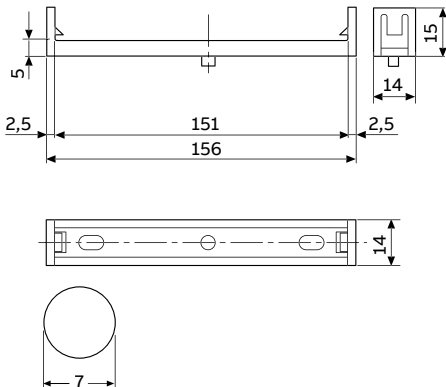
Code \_\_\_\_\_  
05 258

**Clip for wiring ducts**  
base 120



Code \_\_\_\_\_  
05 260

**Clip for wiring ducts**  
base 150

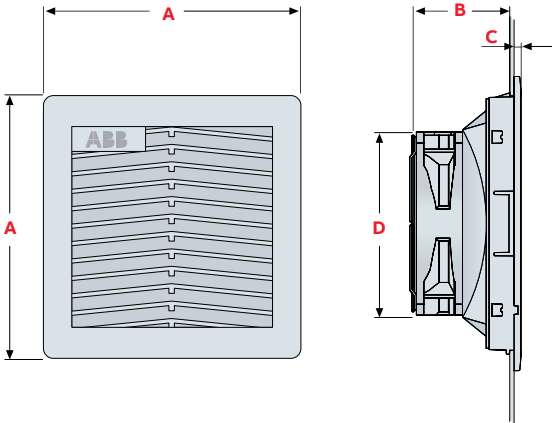


Code \_\_\_\_\_  
05 262

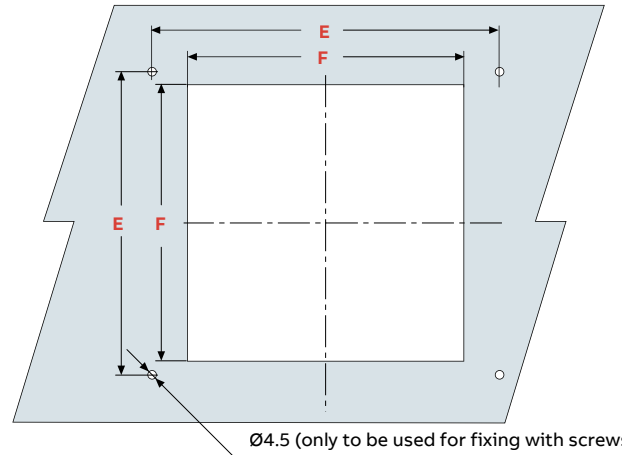
# Overall dimensions

## Aeration/ventilation

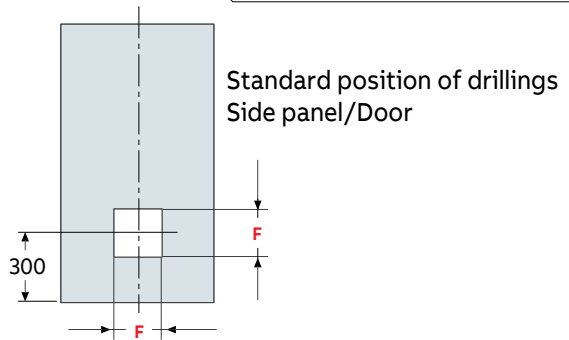
### Gratings



### Drilling template

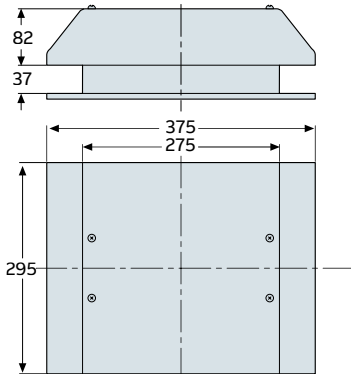


Code	A	B	C	D	E	F
EN0105K	105	60	7	80	95	92
EN1105K						
EN2105K						
EN0150K	150	64	7	124	131	125
EN1150K						
EN2150K						
EN0204K	204	90	8	127	185	177
EN1204K						
EN2204K						
EN0250K	250	113	8	172	230	223
EN1250K						
EN2250K						
EN0325K	325	24	9	255	302	291
EN2325K						
EN3325K		152	9	218	302	291

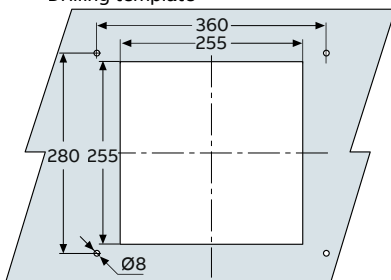


### Hood

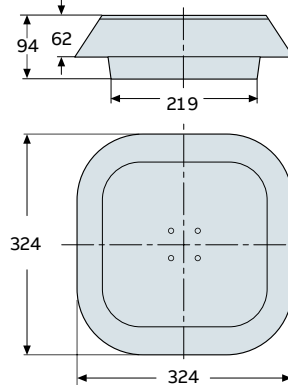
#### EN0480K-EN0481K-EN0482K



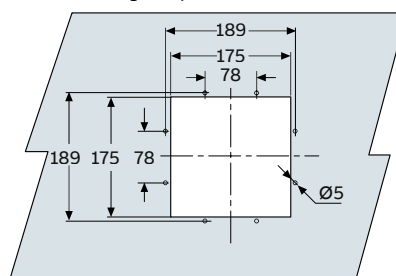
#### Drilling template



#### EN0483K-EN0484K-EN0485K



#### Drilling template

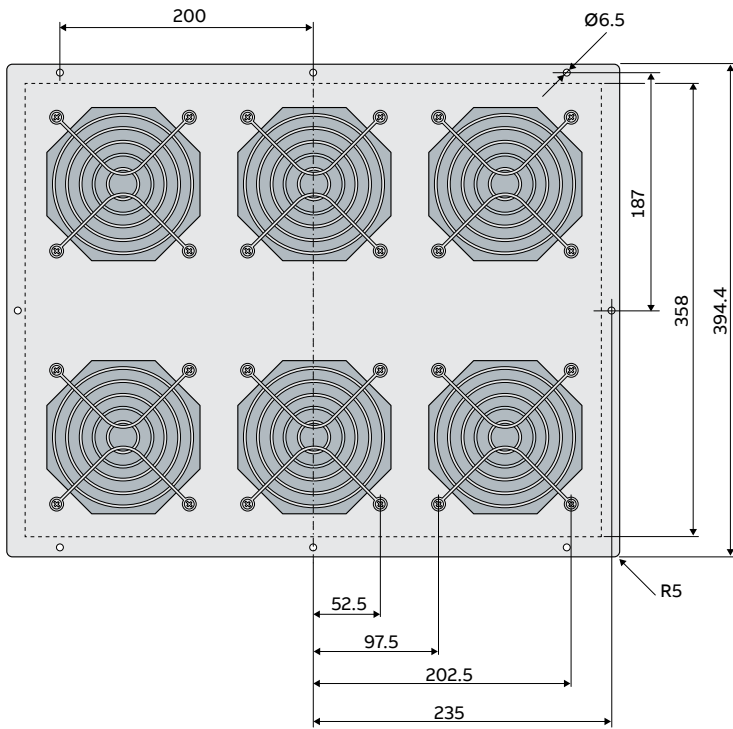
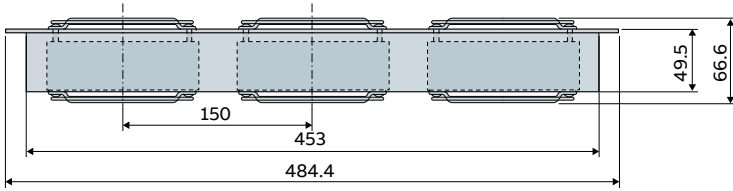




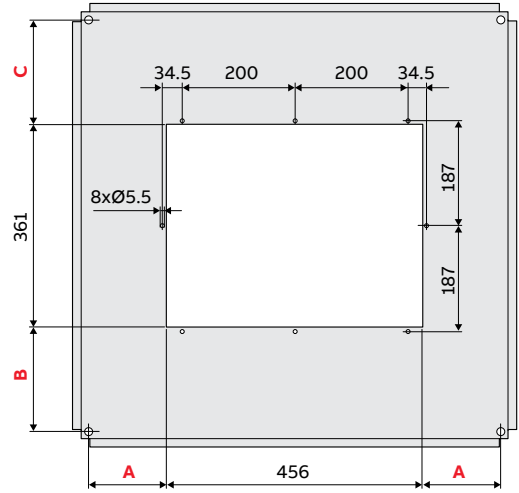
# Overall dimensions

## Aeration/ventilation

### Ventilation roof module



### Drilling template

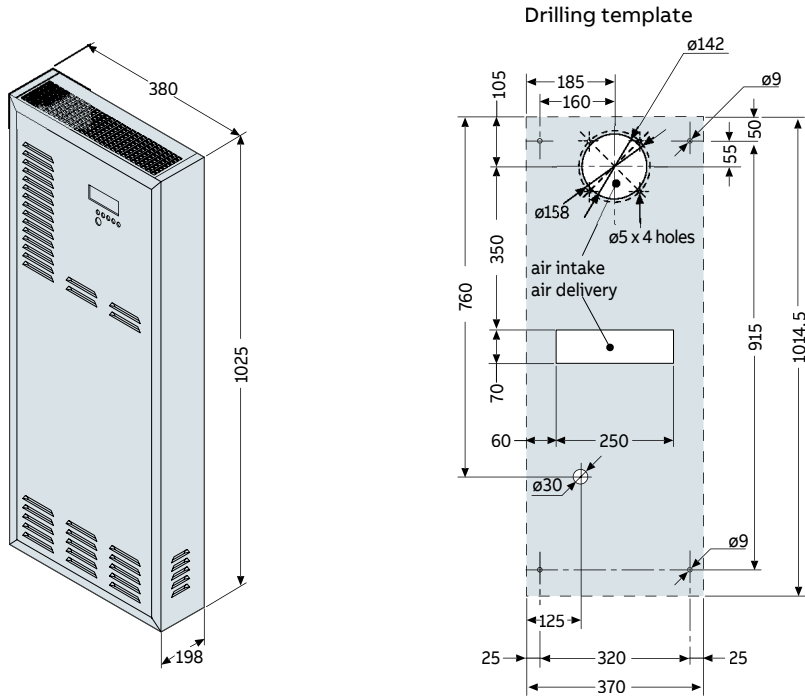


Roof WxDmm	Fix rack frame	Swing rack frame	A	B	C
600X600	■	-	38	85.5	85.5
600X800	■	-	38	185.5	185.5
600X1000	■	-	38	285.5	285.5
800X600	■	■	138	32	139
800X600	■	-	138	85.5	85.5
800X800	■	■	138	185.5	185.5
800X1000	■	■	138	285.5	285.5

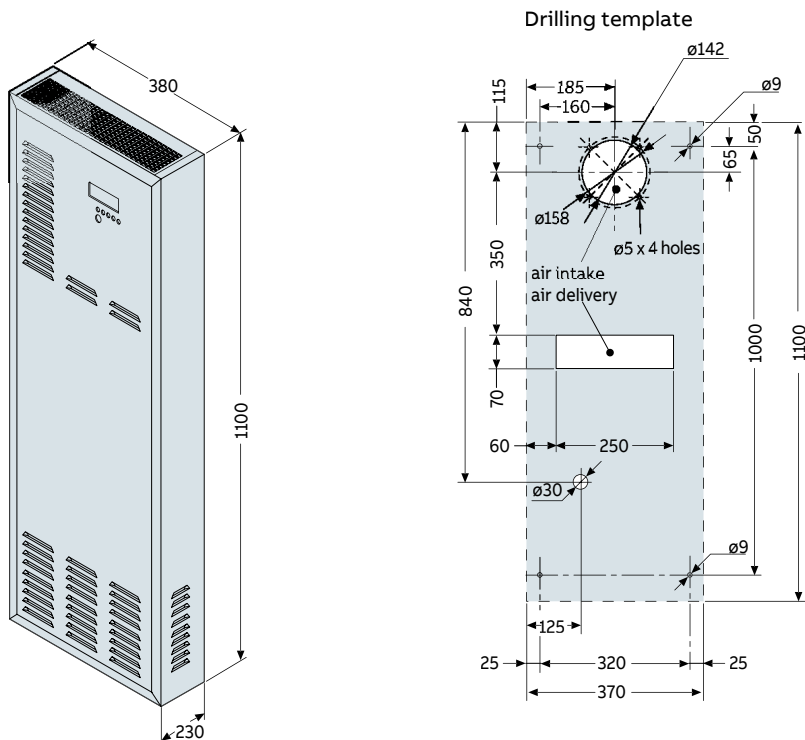
# Overall dimensions

## Air conditioner

Air conditioners for wall or door mounting VZ1550K - VZ1850K - VZ1400K



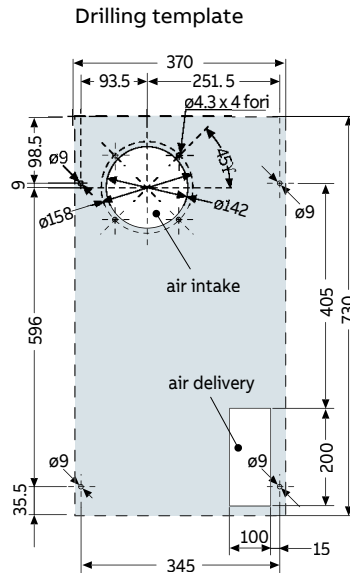
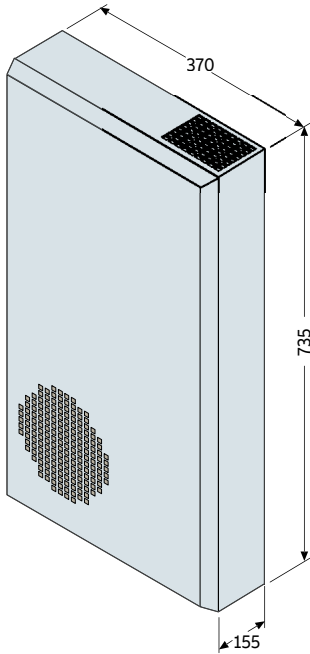
Air conditioners for wall or door mounting VZ2000K



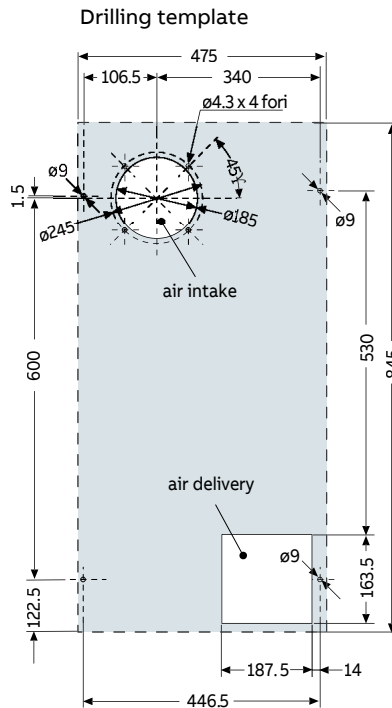
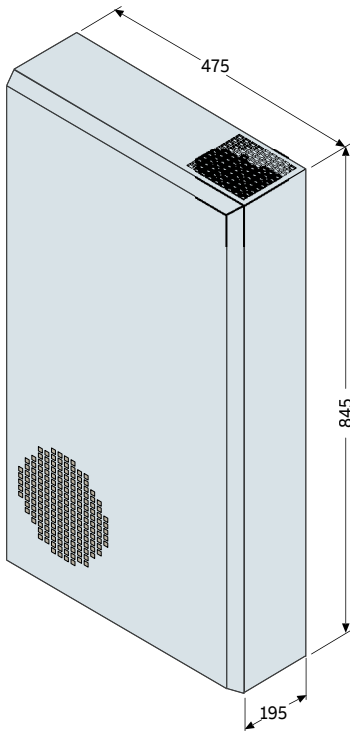
## Overall dimensions

Air conditioner

### Heat exchangers for wall or door mounting VS4235K



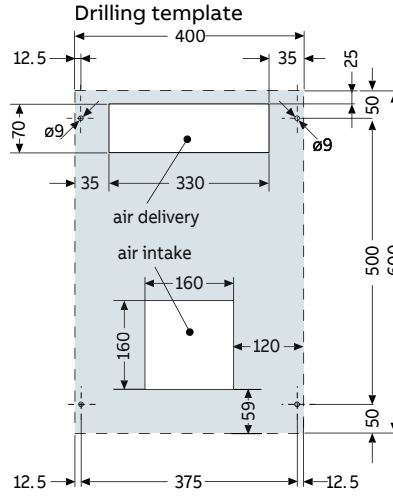
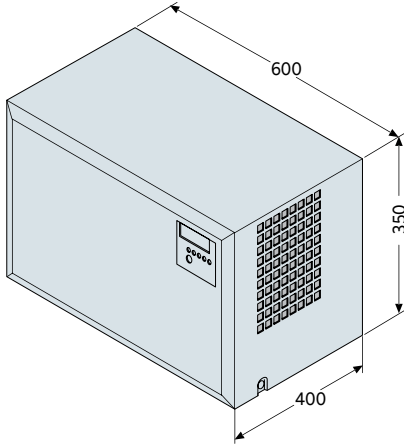
### Heat exchangers for wall or door mounting VS6285K



# Overall dimensions

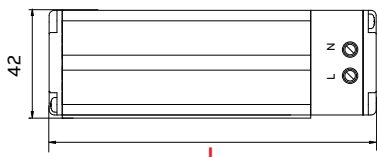
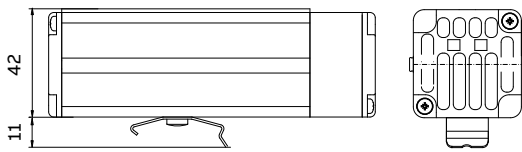
## Air conditioner

### Air conditioners for mounting on roof VZ8501K-VZ1401K



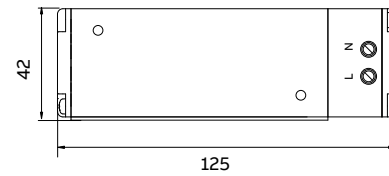
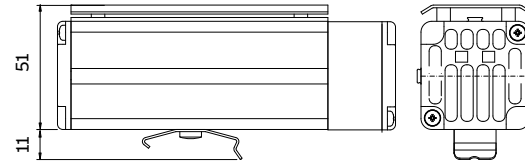
### IP20 heaters

VA7930 / VA7950 / VA7975

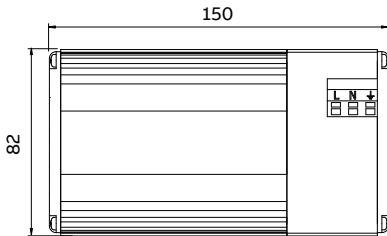
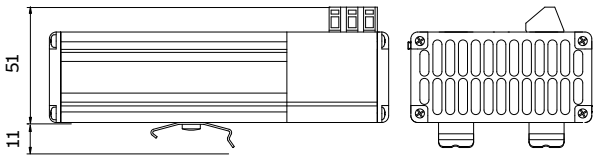


	L (mm)
VA7930	125
VA7950	150
VA7975	150

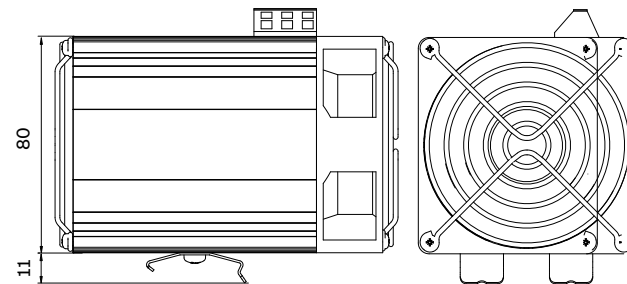
VA7910



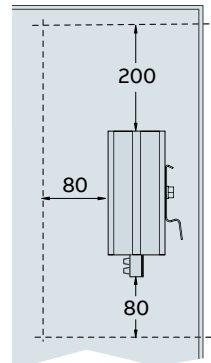
VA7915



VA8300



### Minimum mounting distances



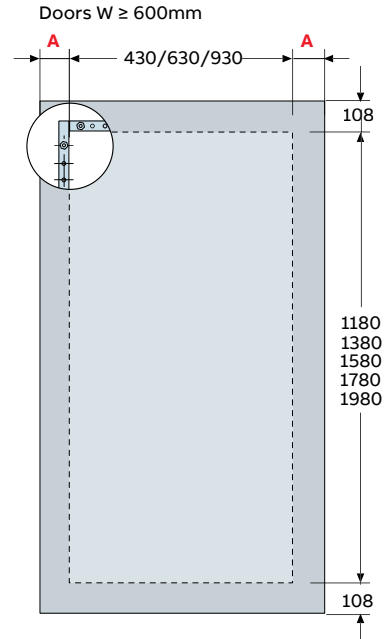
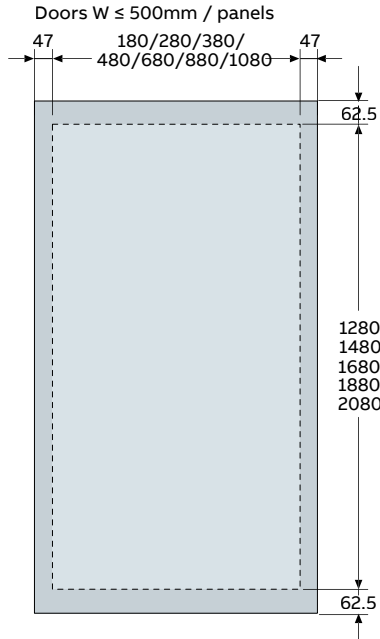
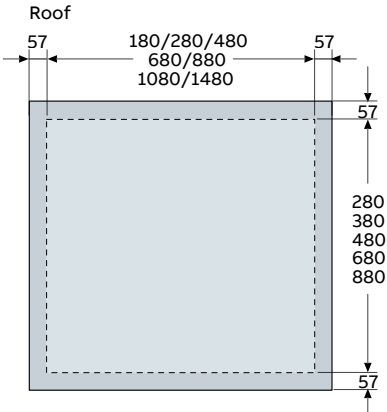
# Overall dimensions

## Drillings

### IS2 Enclosure drillings

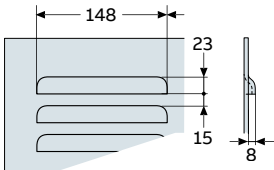


Maximum useful overall dimensions for the drillings



### Roof/door/panel finning

Attach the drawing with No. rows and No. of fins per row to the order.



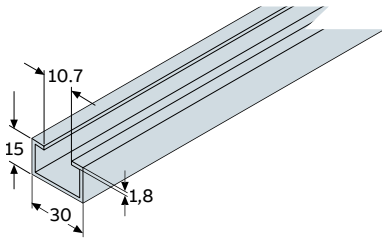
Aeration surface for 8 cm<sup>2</sup> fin.  
For request of finning it's necessary manage it with special offer

	<b>A</b>
Front door	75
Side door	118.5

# Overall dimensions

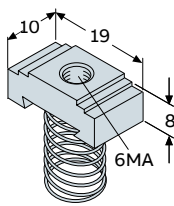
## Accessories

### Aluminium section EV1050

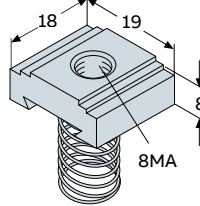


### Aluminium nuts for EV1050

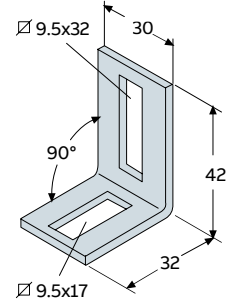
EV1056



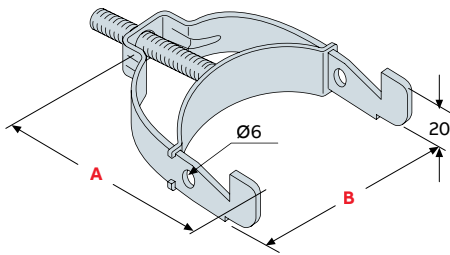
EV1058



### Angles for busbars EV1051



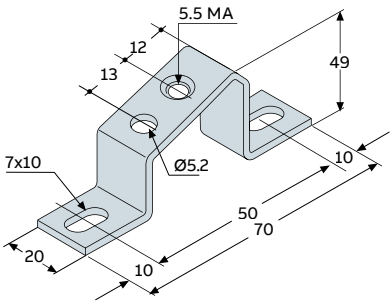
### Brackets for cables EV1090 / EV1091



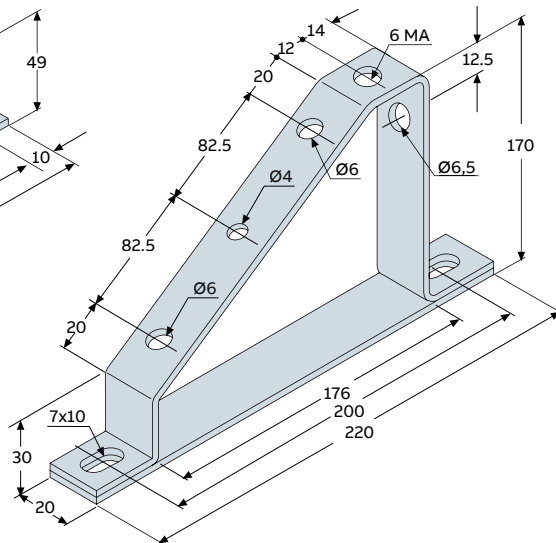
	A	B
EV1090	49	20
EV1091	65	36
EV1092	85	51
EV1093	106	80

### Terminal box supports

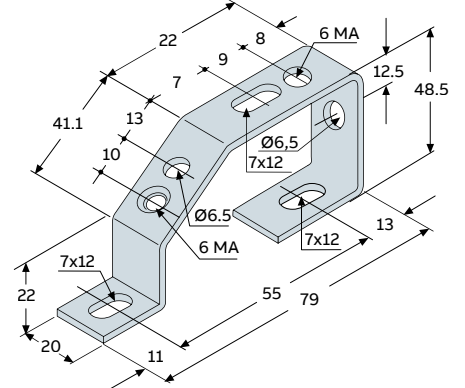
EV1110-EV2110-EV1113



EV1111



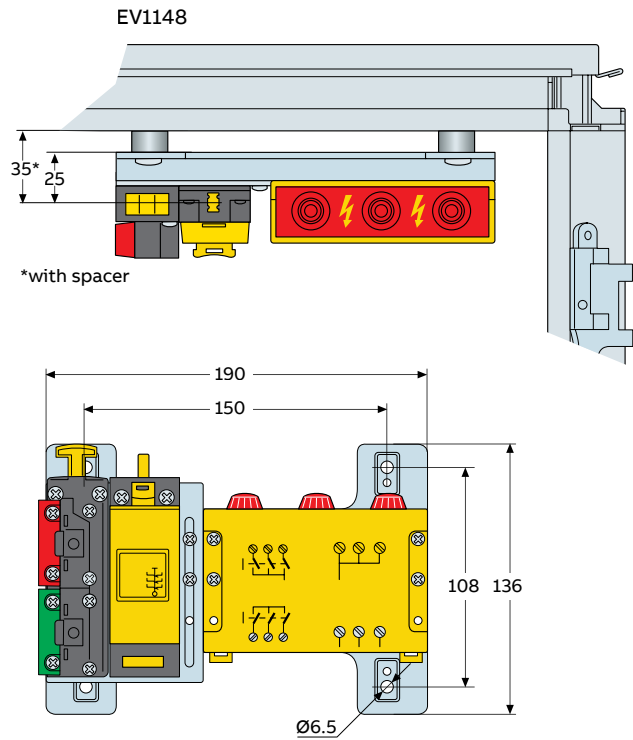
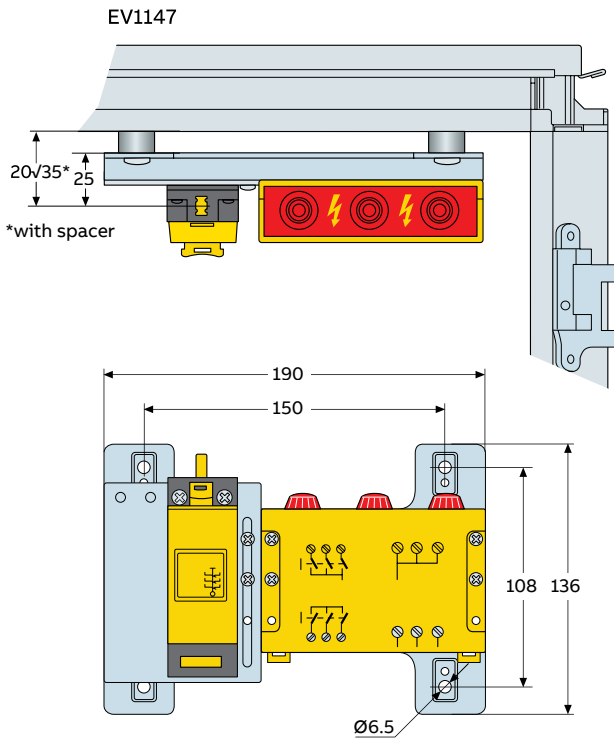
EV1112-EV2112



# Overall dimensions

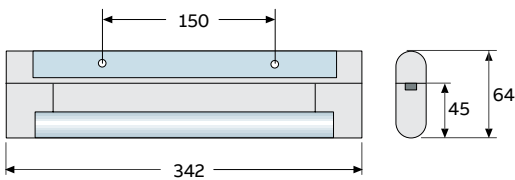
## Accessories

### Voltage indicator

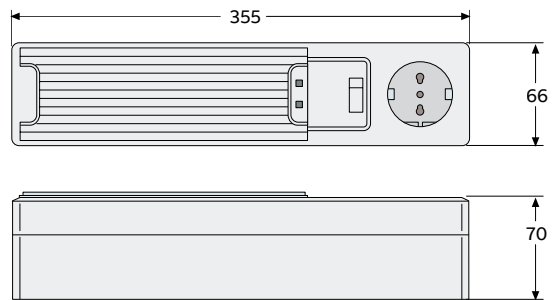


### Fluorescent lights

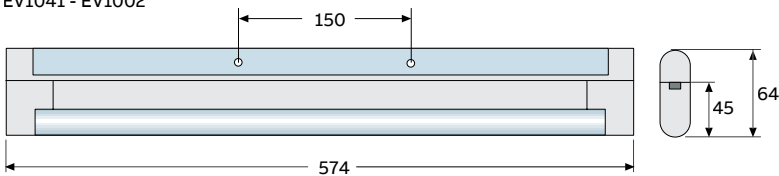
EV1040 - EV1001



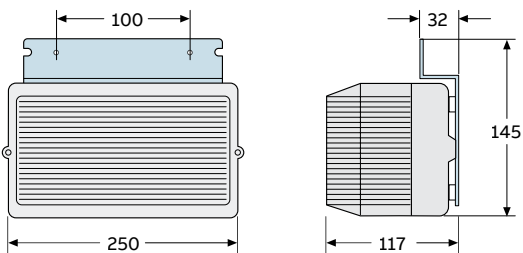
EV1043



EV1041 - EV1002



EV1048

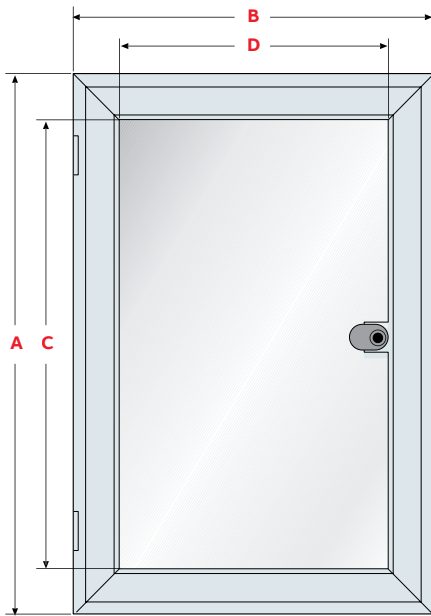


Measurements are in millimetres

## Overall dimensions

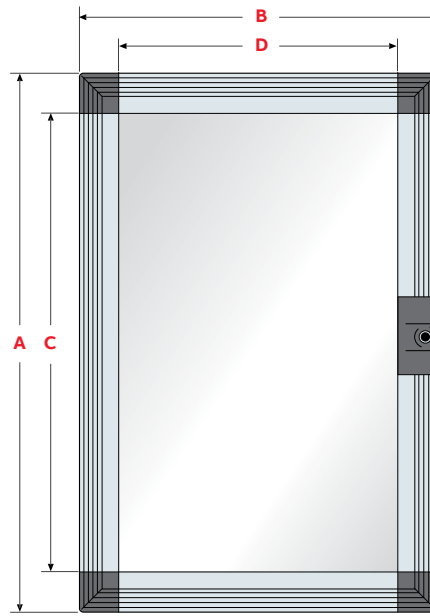
### Accessories

#### IP20 protective window with frame



	A	B	C	D	E	F	G
EV1081	400	400	330	330	79	61	70
EV1082	600	200	530	130	48	30	40
EV1083	600	200	530	130	79	61	70
EV1085	600	400	530	330	79	61	70
EV1087	600	600	530	530	79	61	70

#### IP54 protective window without frame



	A	B	C	D	E	F
EV8880	400	400	303	303	26	15
EV8881	600	600	503	503	26	15
EV8882	600	400	503	303	26	15



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## **Chapter 6**

List of codes

**6-2 IS2 enclosures**

**6-15 Wiring ducts**

## List of codes

### IS2 enclosures

Oder code	Page	Weight Kg	Oder code	Page	Weight Kg	Oder code	Page	Weight Kg
06652	5/95	12,00	1STQ005329B0000	5/49	16,25	1STQ005389B0000	5/32	87,25
07241	5/94	27,36	1STQ005329B0000	5/49	16,25	1STQ005390B0000	5/32	89,00
07242	5/94	33,46	1STQ005330B0000	5/49	14,25	1STQ005391B0000	5/34	100,47
07243	5/94	44,16	1STQ005331B0000	5/49	17,25	1STQ005392B0000	5/32	86,00
07244	5/94	41,76	1STQ005332B0000	5/84	5,38	1STQ005393B0000	5/32	92,00
07245	5/94	61,00	1STQ005333B0000	5/84	6,38	1STQ005394B0000	5/32	89,00
07246	5/94	83,70	1STQ005334B0000	5/111		1STQ005395B0000	5/32	97,00
07247	5/94	81,84	1STQ005346B0000	5/32	56,00	1STQ005426B0000	5/56	
07855	5/95	14,00	1STQ005347B0000	5/32	66,00	1STQ005427B0000	5/56	
1SL9037A00	5/94	19,39	1STQ005348B0000	5/32	72,00	1STQ005428B0000	5/56	
1SL9816A00	5/94	18,12	1STQ005349B0000	5/32	55,00	1STQ006248B0000		28,2
1SL9817A00	5/94	18,84	1STQ005350B0000	5/32	53,00	1STQ006249B0000		31,5
1SL9818A00	5/94	23,28	1STQ005351B0000	5/32	69,00	1STQ006250B0000		34,8
1SL9819A00	5/94	13,80	1STQ005352B0000	5/32	75,00	1STQ006251B0000		6,8
1SL9820A00	5/94	18,19	1STQ005353B0000	5/34	81,02	AA1560	5/106	0,02
1SL9836A00	5/94	24,79	1STQ005354B0000	5/37	57,97	AA1570	5/106	0,03
1SL9838A00	5/94	30,00	1STQ005355B0000	5/37	54,06	AA6100	5/106	0,01
1SL9839A00	5/94	17,16	1STQ005356B0000	5/37	63,57	AA6100	5/113	0,01
1SL9840A00	5/94	21,54	1STQ005357B0000	5/32	58,16	AA6120	5/106	0,01
1SL9841A00	5/94	14,64	1STQ005358B0000	5/32	67,77	AA6140	5/106	0,01
1SL9842A00	5/94	17,10	1STQ005359B0000	5/32	77,93	AA6141	5/106	0,02
1SL9860A00	5/94	26,26	1STQ005360B0000	5/34	87,49	AA6160	5/106	0,02
1SL9861A00	5/94	27,02	1STQ005361B0000	5/32	56,00	AA6180	5/106	0,02
1SL9862A00	5/94	15,72	1STQ005362B0000	5/32	62,16	AA6190	5/106	0,02
1SL9863A00	5/94	17,88	1STQ005363B0000	5/32	69,77	AA6200	5/106	0,02
1SL9864A00	5/94	11,14	1STQ005364B0000	5/34	93,49	AA6840	5/92	0,01
1SL9865A00	5/94	15,00	1STQ005365B0000	5/32	58,00	AA6850	5/92	0,01
1SL9866A00	5/94	17,46	1STQ005366B0000	5/32	68,16	AA6880	5/92	0,01
1SL9880A00	5/95	48,60	1STQ005367B0000	5/32	72,77	AA6890	5/92	0,01
1SL9886A00	5/95	2,20	1STQ005368B0000	5/34	98,49	AA8004	5/106	0,01
1SL9887A00	5/95	2,80	1STQ005369B0000	5/32	52,98	AA9610	5/111	0,67
1SL9893A00	5/95	0,50	1STQ005370B0000	5/32	74,00	AD1009	5/78	0,09
1SL9904A00	5/95	6,18	1STQ005371B0000	5/32	69,00	AD1033	5/92	0,22
1SL9907A00	5/95	0,19	1STQ005372B0000	5/32	77,00	AD1033	5/115	0,22
1SL9910A00	5/95	2,27	1STQ005373B0000	5/32	86,00	AD1036	5/115	0,07
1SL9911A00	5/95	3,03	1STQ005374B0000	5/34	89,53	AD1037	5/78	0,35
1SL9912A00	5/95	3,79	1STQ005375B0000	5/37	59,82	AD1056	5/90	0,30
1SL9913A00	5/95	5,31	1STQ005376B0000	5/37	70,32	AD1058	5/106	0,01
1SL9914A00	5/95	6,82	1STQ005377B0000	5/32	75,00	AD1058	5/113	0,01
1SL9915A00	5/95	8,34	1STQ005378B0000	5/32	64,25	AD1064	5/90	0,26
1STQ005317B0000	5/46		1STQ005379B0000	5/32	81,00	AD1065	5/90	0,20
1STQ005318B0000	5/46		1STQ005380B0000	5/32	85,98	AD1068	5/90	1,07
1STQ005319B0000	5/46		1STQ005381B0000	5/34	96,47	AD1077	5/90	1,05
1STQ005320B0000	5/52		1STQ005382B0000	5/32	82,00	AD1086	5/82	3,51
1STQ005321B0000	5/51		1STQ005383B0000	5/32	74,25	AD1088	5/82	1,41
1STQ005322B0000	5/53		1STQ005384B0000	5/32	84,25	AD1089	5/82	2,08
1STQ005323B0000	5/53		1STQ005385B0000	5/32	92,00	AD1101	5/82	0,05
1STQ005324B0000	5/53		1STQ005386B0000	5/34	99,47	AD1102	5/82	0,02
1STQ005325B0000	5/53		1STQ005387B0000	5/32	77,00	AD1103	5/82	0,02
1STQ005328B0000	5/49	13,25	1STQ005388B0000	5/32	84,25	AD1104	5/82	0,02

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### IS2 enclosures

Oder code	Page	Weight Kg	Oder code	Page	Weight Kg	Oder code	Page	Weight Kg
AD1600	5/82	0,24	EA1580	5/65	29,14	EA2110	5/132	48,17
AD1800	5/82	0,36	EA1602	5/62	6,66	EA2112	5/65	57,06
AD3301	5/81	0,15	EA1603	5/63	4,27	EA2113	5/65	0,15
AD3302	5/81	0,15	EA1610	5/61	30,54	EA2115	5/63	0,13
AD3303	5/81	0,15	EA1612	5/61	36,47	EA2116	5/65	86,38
AD3304	5/81	0,15	EA1616	5/61	18,67	EA2117	5/61	0,48
AE1015	5/103	0,25	EA1619	5/61	24,60	EA2117	5/63	0,48
AP6000	5/78	0,01	EA1640	5/61	6,99	EA2118	5/62	0,48
BA0400	5/90	3,30	EA1710	5/65	38,57	EA2140	5/65	21,90
BA0800	5/90	4,50	EA1712	5/65	45,68	EA2161	5/65	31,00
BF1602	5/91	2,70	EA1740	5/65	17,20	EA2180	5/65	39,26
BF2502	5/91	4,20	EA1760	5/65	22,02	EA2200	5/61	8,76
BF4002	5/91	3,00	EA1780	5/65	31,44	EA2210	5/61	43,69
BF4012	5/91	6,50	EA1800	5/61	7,17	EA2212	5/61	52,54
BF6302	5/91	12,50	EA1810	5/61	35,75	EA2240	5/61	17,00
BF8002	5/91	19,10	EA1812	5/61	42,99	EA2260	5/61	25,82
BP0630	5/91	0,40	EA1841	5/61	13,91	EA2280	5/61	34,84
BP0632	5/91	0,55	EA1860	5/61	20,40	EA2280	5/133	34,84
BR0250	5/91	-	EA1860	5/126	20,40	EA2310	5/65	54,07
BR0400	5/91	2,80	EA1860	5/126	20,40	EA2312	5/65	62,77
BR0630	5/91	6,20	EA1880	5/61	26,00	EA2316	5/65	95,02
CRO180M	5/111	1,10	EA1910	5/65	44,24	EA2340	5/65	23,61
CRO181	5/111	1,10	EA1912	5/65	52,40	EA2360	5/65	33,41
EA0018	5/64	20,00	EA1916	5/65	77,74	EA2380	5/65	43,19
EA0020	5/64	2,78	EA1940	5/65	19,32	EA3061	5/66	4,46
EA0022	5/64	3,01	EA1960	5/65	27,90	EA3081	5/66	5,94
EA0400	5/62	1,78	EA1981	5/65	35,34	EA4061	5/66	5,94
EA0401	5/115	1,12	EA2000	5/61	7,97	EA4081	5/66	7,92
EA0501	5/115	1,52	EA2000	5/127	7,97	EA5011	5/64	31,11
EA0600	5/62	2,60	EA2000	5/128	7,97	EA5022	5/64	37,33
EA0601	5/115	1,91	EA2010	5/61	39,72	EA5061	5/66	7,43
EA0801	5/115	2,71	EA2010	5/133	39,72	EA5063	5/64	19,28
EA0802	5/62	3,39	EA2013	5/61	47,77	EA5081	5/66	9,92
EA1000	5/62	4,20	EA2013	5/128	47,77	EA5083	5/64	25,99
EA1001	5/115	3,38	EA2013	5/133	47,77	EA5310	5/64	32,54
EA1002	5/65	2,82	EA2040	5/61	15,45	EA5322	5/64	38,48
EA1003	5/63	2,53	EA2060	5/61	22,60	EA5360	5/64	25,00
EA1061	5/66	11,60	EA2060	5/126	22,60	EA5380	5/64	27,94
EA1081	5/66	20,79	EA2060	5/127	22,60	EA5413	5/64	
EA1200	5/62	4,99	EA2060	5/132	22,60	EA5461	5/64	
EA1202	5/65	3,41	EA2062	5/66	2,97	EA5480	5/64	
EA1203	5/63	3,12	EA2080	5/61	30,80	EA5610	5/64	
EA1411	5/61		EA2080	5/127	30,80	EA5616	5/64	
EA1412	5/61	31,81	EA2080	5/128	30,80	EA5620	5/64	
EA1440	5/61	9,14	EA2080	5/132	30,80	EA5811	5/64	28,57
EA1460	5/61	16,36	EA2081	5/66	3,96	EA5822	5/64	25,00
EA1480	5/61	21,51	EA2100	5/61	1,06	EA5861	5/64	17,36
EA1512	5/65	31,34	EA2101	5/66	0,28	EA5883	5/64	23,19
EA1540	5/65	18,84	EA2102	5/61	0,09	EA6002	5/65	1,67
EA1560	5/65	23,99	EA2110	5/65	48,17	EA6003	5/63	1,39

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Oder code	Page	Weight Kg	Oder code	Page	Weight Kg	Oder code	Page	Weight Kg
EA6061	5/66	8,91	EB6104	5/84	3,66	EC2060K	5/132	26,60
EA6081	5/66	11,88	EB6106	5/84	3,02	EC2061K	5/54	15,32
EA8002	5/65	2,27	EB8000	5/84	0,81	EC2080FC5K	5/133	17,79
EA8003	5/63	1,96	EB8001	5/84	1,20	EC2080FC5K	5/50	17,79
EA8061	5/66	11,88	EB8001	5/86	1,20	EC2080FC6K	5/50	21,33
EA8081	5/66	15,84	EB8100	5/51	3,67	EC2080FC8K	5/50	28,31
EBO400	5/67	0,97	EB8100	5/68	3,67	EC2080FV6K	5/50	18,13
EBO440	5/67	1,57	EB8100	5/75	3,67	EC2080FV6K	5/133	18,13
EB0500	5/67	1,20	EB8101	5/66	5,16	EC2080FV8K	5/50	24,06
EB0550	5/67	2,07	EB8102	5/68	5,28	EC2080K	5/48	28,31
EB0600	5/67	1,41	EB8104	5/84	4,38	EC2080K	5/132	28,31
EB0660	5/67	2,04	EB8106	5/84	3,56	EC2080VC2K	5/50	8,04
EB0800	5/67	1,91	EC1440K	5/48	9,87	EC2080VC4K	5/50	14,34
EB0880	5/67	2,74	EC1460K	5/48	14,95	EC2081K	5/54	20,43
EB1000	5/67	2,55	EC1480FC6K	5/50	14,92	EC2082	5/49	21,28
EB1004	5/84	5,08	EC1480K	5/48	19,93	EC2082	5/86	21,28
EB1006	5/84	4,10	EC1610K	5/48	28,40	EC2084	5/49	21,28
EB1010	5/67	4,25	EC1640K	5/48	11,36	EC2084	5/86	21,28
EB1011	5/67	5,12	EC1660K	5/48	17,08	EC2210K	5/48	38,78
EB1020	5/67	2,58	EC1680FC6K	5/50	17,08	EC2211K	5/54	28,09
EB1041	5/107	0,54	EC1680K	5/48	22,78	EC2232K	5/48	11,85
EB1042	5/107	0,86	EC1810K	5/48	31,79	EC2240K	5/48	15,76
EB1043	5/107	1,21	EC1811K	5/54	22,98	EC2241K	5/54	11,24
EB1060	5/67	3,07	EC1831K	5/48	9,69	EC2251K	5/54	14,05
EB1080	5/67	4,15	EC1840K	5/48	12,93	EC2260K	5/48	23,43
EB1100	5/51	4,84	EC1841K	5/54	9,19	EC2261K	5/54	16,86
EB1100	5/68	4,84	EC1851K	5/54	11,49	EC2280FC5K	5/50	19,57
EB1100	5/75	4,84	EC1860K	5/48	19,22	EC2280FC6K	5/50	23,43
EB1101	5/66	6,45	EC1861K	5/54	13,79	EC2280FC8K	5/50	31,11
EB1102	5/68	6,67	EC1880FC5K	5/50	16,01	EC2280FV6K	5/50	19,92
EB1200	5/67	3,86	EC1880FC6K	5/50	19,22	EC2280FV8K	5/50	26,44
EB4100	5/51	1,72	EC1880FC8K	5/50	25,51	EC2280K	5/48	31,11
EB4100	5/68	1,72	EC1880FV6K	5/50	16,33	EC2280VC2K	5/50	8,84
EB4100	5/75	1,72	EC1880FV8K	5/50	21,68	EC2280VC4K	5/50	15,76
EB4101	5/66	1,94	EC1880K	5/48	25,51	EC2281K	5/54	22,47
EB4101	5/130	1,94	EC1880VC2K	5/50	7,23	EC2282	5/49	23,18
EB4810	5/67	3,65	EC1880VC4K	5/50	12,93	EC2282	5/86	23,18
EB4860	5/67	2,26	EC1881K	5/54	18,39	EC2284	5/49	23,18
EB4880	5/67	2,90	EC1882	5/49	19,37	EC2284	5/86	23,18
EB5100	5/51	2,16	EC1882	5/86	19,37	ED1412SK	5/51	13,61
EB5100	5/68	2,16	EC1884	5/49	19,37	ED1612SK	5/51	15,54
EB5100	5/75	2,16	EC1884	5/86	19,37	ED1802SK	5/51	7,25
EB5101	5/66	2,58	EC2011K	5/54	25,54	ED1804SK	5/51	12,81
EB6000	5/84	0,83	EC2012K	5/48	35,29	ED1810SK	5/51	16,01
EB6100	5/51	2,80	EC2012K	5/132	35,29	ED1812SK	5/51	19,22
EB6100	5/68	2,80	EC2031K	5/48	10,77	ED1816SK	5/51	25,62
EB6100	5/75	2,80	EC2040K	5/48	14,34	ED2002SK	5/51	8,03
EB6100	5/133	2,80	EC2041K	5/54	10,22	ED2004SK	5/51	14,23
EB6101	5/66	3,87	EC2051K	5/54	12,77	ED2010SK	5/133	17,79
EB6102	5/68	3,89	EC2060K	5/48	26,60	ED2010SK	5/51	17,79

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### IS2 enclosures

Oder code	Page	Weight Kg	Oder code	Page	Weight Kg	Oder code	Page	Weight Kg
ED2012SK	5/51	27,00	EE1881	5/68	16,64	EF1011	5/55	8,93
ED2016SK	5/51	28,47	EE1906K	5/71	17,61	EF1012	5/56	11,28
ED2202SK	5/51	8,83	EE1908K	5/71	22,08	EF1040	5/55	3,10
ED2204SK	5/51	15,66	EE1910K	5/71	26,55	EF1041	5/55	2,47
ED2210SK	5/51	19,57	EE2010K	5/71	29,50	EF1042	5/56	3,38
ED2212SK	5/51	23,49	EE2011	5/68	19,26	EF1051	5/55	3,58
ED2216SK	5/51	31,32	EE2020	5/70	0,87	EF1052	5/56	4,79
EE0024	5/110	1,32	EE2030	5/70	1,37	EF1053	5/55	4,51
EE0240	5/70	2,16	EE2040	5/70	2,05	EF1060	5/55	5,92
EE0250	5/70	2,32	EE2041	5/68	7,03	EF1060	5/127	5,92
EE0260	5/70	2,58	EE2051	5/68	9,07	EF1060	5/132	5,92
EE0280	5/70	3,59	EE2052	5/110	14,75	EF1061	5/55	4,81
EE0340	5/70	2,16	EE2060K	5/71	19,57	EF1061	5/133	4,81
EE0355	5/70	2,86	EE2061	5/68	11,11	EF1062	5/56	6,20
EE0360	5/70	3,56	EE2062	5/110	17,70	EF1080	5/55	8,74
EE0380	5/70	4,95	EE2080K	5/71	24,54	EF1081	5/55	7,15
EE0440	5/70	3,24	EE2081	5/68	15,18	EF1082	5/56	9,02
EE0450	5/70	3,81	EE2100	5/70	5,52	EF2610	5/57	0,85
EE0460	5/70	4,30	EE2106K	5/71	19,57	EF2620	5/57	1,25
EE0480	5/70	7,17	EE2108K	5/71	24,54	EF2810	5/57	1,10
EE0640	5/70	4,32	EE2110K	5/71	29,50	EF2820	5/57	1,68
EE0650	5/70	5,22	EE2210K	5/71	32,45	EF3610	5/57	0,75
EE0660	5/70	6,03	EE2211	5/68	21,22	EF3810	5/57	1,00
EE0680	5/70	8,34	EE2241	5/68	7,76	EF4010	5/55	3,12
EE0840	5/70	5,61	EE2251	5/68	9,99	EF4011	5/55	3,19
EE0850	5/70	6,68	EE2252	5/110	16,31	EF4012	5/56	3,91
EE0860	5/70	7,75	EE2260K	5/71	21,53	EF4040	5/55	0,87
EE0880	5/70	11,04	EE2261	5/68	12,24	EF4041	5/55	0,75
EE1001K	5/69	6,98	EE2262	5/110	19,57	EF4042	5/56	0,95
EE1002K	5/69	9,31	EE2280K	5/71	26,99	EF4050	5/55	1,26
EE1003K	5/69	5,32	EE2280K	5/133	26,99	EF4051	5/55	1,10
EE1004K	5/69	6,52	EE2281	5/68	16,73	EF4052	5/56	1,34
EE1011	5/69	12,28	EE2306K	5/71	21,53	EF4060	5/55	1,66
EE1040	5/70	7,53	EE2308K	5/71	26,99	EF4061	5/55	1,33
EE1041	5/69	5,13	EE2310K	5/71	32,45	EF4063	5/56	1,74
EE1050	5/70	9,48	EE2406	5/110	0,62	EF4080	5/55	2,45
EE1051	5/69	6,32	EE2410	5/110	0,62	EF4081	5/55	2,18
EE1060	5/70	11,09	EE2416	5/110	0,62	EF4082	5/56	2,52
EE1061	5/69	7,51	EE2600	5/70	3,20	EF4610	5/57	0,75
EE1080	5/70	16,42	EE2800	5/70	4,39	EF4810	5/57	0,90
EE1081	5/69	9,90	EE4041	5/69	2,21	EF6010	5/55	5,68
EE1810K	5/71	26,55	EE4051	5/69	2,69	EF6010	5/55	5,68
EE1811	5/68	17,30	EE6041	5/69	3,18	EF6011	5/55	4,79
EE1841	5/68	6,31	EE6051	5/69	3,90	EF6011	5/55	4,79
EE1851	5/68	8,14	EE6061	5/69	4,62	EF6012	5/56	5,86
EE1852	5/110	13,20	EE8041	5/69	4,15	EF6012	5/56	5,86
EE1860K	5/71	17,61	EE8051	5/69	5,11	EF6040	5/55	1,61
EE1861	5/68	9,98	EE8061	5/69	6,07	EF6040	5/55	1,61
EE1862	5/110	15,84	EE8081	5/69	7,98	EF6041	5/55	1,33
EE1880K	5/71	22,08	EF1010	5/55	10,93	EF6041	5/55	1,33

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EF6050	5/55	2,35	EF8062	5/56	4,71	EG1917	5/87	3,54
EF6050	5/126	2,35	EF8080	5/55	6,64	EG1918	5/87	3,75
EF6050	5/55	2,35	EF8080	5/55	6,64	EG1920	5/87	4,16
EF6051	5/55	1,93	EF8081	5/55	5,50	EG1991	5/87	0,21
EF6051	5/55	1,93	EF8081	5/55	5,50	EG1999	5/87	3,96
EF6052	5/56	2,49	EF8082	5/56	6,86	EG2000	5/83	3,76
EF6052	5/56	2,49	EF8082	5/56	6,86	EG2000	5/131	3,76
EF6060	5/55	3,08	EF9620	5/57	0,83	EG2001K	5/83	15,10
EF6060	5/55	3,08	EF9820	5/57	0,83	EG2003K	5/83	18,50
EF6060	5/127	3,08	EG0119	5/87	0,48	EG2003K	5/131	18,50
EF6060	5/128	3,08	EG0219	5/87	0,75	EG2004K	5/85	20,50
EF6061	5/55	2,58	EG0319	5/87	0,98	EG2005	5/84	8,12
EF6061	5/55	2,58	EG0419	5/87	1,06	EG2019	5/87	6,05
EF6061	5/133	2,58	EG0500K	5/83	4,00	EG2080	5/83	10,62
EF6062	5/56	3,22	EG0519	5/87	1,55	EG2200	5/83	4,13
EF6062	5/56	3,22	EG0619	5/87	1,75	EG2201K	5/83	16,61
EF6080	5/55	4,54	EG0719	5/87	1,86	EG2203K	5/83	20,35
EF6080	5/55	4,54	EG0900K	5/83	4,80	EG2204K	5/85	22,30
EF6081	5/55	3,83	EG0919	5/87	2,69	EG2205	5/84	9,04
EF6081	5/55	3,83	EG1019	5/87	3,02	EG2280	5/83	11,73
EF6082	5/56	4,69	EG1130K	5/86	2,80	EH0003	5/89	0,98
EF6082	5/56	4,69	EG1219	5/87	3,59	EH0004	5/89	1,24
EF6610	5/57	0,55	EG1300K	5/83	6,93	EH0018	5/78	0,85
EF6810	5/57	0,75	EG1419	5/87	4,20	EH0018	5/129	0,85
EF8010	5/55	8,30	EG1500K	5/86	1,32	EH0018	5/130	0,85
EF8010	5/55	8,30	EG1519	5/87	4,53	EH0024	5/78	0,77
EF8011	5/55	6,88	EG1619	5/87	4,84	EH0029	5/78	1,23
EF8011	5/55	6,88	EG1800	5/83	3,38	EH0036	5/78	0,97
EF8012	5/56	8,57	EG1801K	5/83	13,59	EH0562K	5/80	0,37
EF8012	5/56	8,57	EG1803K	5/83	16,65	EH0582K	5/80	0,54
EF8040	5/55	2,36	EG1804K	5/85	18,65	EH1060	5/76	20,30
EF8040	5/55	2,36	EG1805	5/84	7,38	EH1061K	5/77	14,19
EF8041	5/55	1,92	EG1819	5/87	5,39	EH1062K	5/80	0,63
EF8041	5/55	1,92	EG1880	5/83	9,50	EH1080	5/76	65,51
EF8042	5/56	2,57	EG1900K	5/86	2,44	EH1081K	5/77	18,92
EF8042	5/56	2,57	EG1902	5/87	0,42	EH1082K	5/80	0,87
EF8050	5/55	3,43	EG1903	5/87	0,62	EH1518K	5/80	0,89
EF8050	5/55	3,43	EG1904	5/87	0,83	EH1524K	5/80	0,89
EF8051	5/55	2,76	EG1905	5/87	1,04	EH1529K	5/80	1,23
EF8051	5/55	2,76	EG1906	5/87	1,25	EH1536K	5/80	1,23
EF8052	5/56	3,64	EG1907	5/87	1,46	EH1562K	5/80	0,89
EF8052	5/56	3,64	EG1908	5/87	1,67	EH1582K	5/80	1,23
EF8060	5/55	4,50	EG1909	5/87	1,87	EH1800	5/78	4,00
EF8060	5/55	4,50	EG1910	5/87	2,08	EH1800	5/129	4,00
EF8060	5/128	4,50	EG1911	5/87	2,29	EH1800	5/130	4,00
EF8060	5/128	4,50	EG1912	5/87	2,50	EH1800	5/130	4,00
EF8061	5/55	3,71	EG1913	5/87	2,71	EH1889	5/82	0,21
EF8061	5/55	3,71	EG1914	5/87	2,91	EH1890	5/82	0,13

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EH1992	5/87	0,78	EH3083K	5/81	3,32	EH8010K	5/77	3,92
EH1993	5/87	1,03	EH3085	5/79	6,74	EH8060	5/76	39,31
EH2000	5/78	4,80	EH3272K	5/81	1,63	EH8062K	5/77	11,35
EH2018K	5/80	1,14	EH3272K	5/130	1,63	EH8080	5/76	20,00
EH2024K	5/80	1,14	EH3296K	5/81	1,63	EH8081K	5/77	15,13
EH2029K	5/80	1,59	EH3472K	5/81	1,63	EK1010KN	5/46	68,84
EH2036K	5/80	1,59	EH3496K	5/81	1,63	EK1010RK	5/113	12,30
EH2060	5/76	10,57	EH4061K	5/77	5,68	EK1040KN	5/46	31,39
EH2060	5/129	10,57	EH4061K	5/129	5,68	EK1050KN	5/46	35,08
EH2060	5/130	10,57	EH4061K	5/130	5,68	EK1050RK	5/113	6,28
EH2061K	5/77	2,84	EH4062K	5/80	2,18	EK1060KN	5/46	38,77
EH2061K	5/129	2,84	EH4063	5/76	19,65	EK1060KN	5/132	38,77
EH2061K	5/130	2,84	EH4063	5/129	19,65	EK1060KN	5/133	38,77
EH2062K	5/80	1,14	EH4063	5/130	19,65	EK1080KN	5/46	46,12
EH2063K	5/81	1,66	EH4064K	5/81	3,32	EK1240KN	5/46	37,35
EH2065	5/79	2,00	EH4065	5/79	6,74	EK1240RK	5/113	6,07
EH2066	5/76	6,56	EH4080	5/76	26,20	EK1250KN	5/46	41,52
EH2067K	5/77	2,84	EH4081K	5/77	7,57	EK1250RK	5/113	7,51
EH2081K	5/77	3,78	EH4082K	5/80	3,04	EK1260KN	5/46	45,73
EH2082K	5/80	1,59	EH4083K	5/81	4,42	EK1260KN	5/133	45,73
EH2083K	5/81	2,21	EH4085	5/79	8,99	EK1260RK	5/113	8,54
EH2085	5/79	4,50	EH5060	5/76	24,57	EK1280KN	5/46	54,08
EH2086	5/76	8,75	EH5061K	5/77	7,09	EK1280RK	5/113	11,83
EH2087K	5/77	3,78	EH5062K	5/80	2,70	EK3040KN	5/46	15,31
EH2118	5/82	0,07	EH5063K	5/81	4,15	EK3050KN	5/46	16,94
EH2129	5/82	0,08	EH5080	5/76	32,75	EK3060KN	5/46	18,57
EH2180	5/76	14,10	EH5081K	5/77	9,46	EK3080KN	5/46	21,81
EH2200	5/78	8,19	EH5082K	5/80	3,76	EK4010KN	5/46	36,35
EH2272K	5/81	1,17	EH5084K	5/81	5,53	EK4010RK	5/113	5,08
EH2272K	5/129	1,17	EH6010K	5/77	2,94	EK4040KN	5/46	20,41
EH2272K	5/130	1,17	EH6018K	5/80	3,22	EK4040RK	5/113	2,10
EH2297K	5/81	1,17	EH6018K	5/129	3,22	EK4050KN	5/46	22,59
EH2472K	5/81	1,17	EH6018K	5/130	3,22	EK4050RK	5/113	2,59
EH3018K	5/80	1,66	EH6025K	5/80	3,22	EK4060KN	5/46	24,76
EH3029K	5/80	2,22	EH6029K	5/80	4,48	EK4060RK	5/113	3,09
EH3060	5/76	8,00	EH6029K	5/130	4,48	EK4080KN	5/46	29,08
EH3060	5/129	8,00	EH6036K	5/80	4,48	EK4080RK	5/113	4,08
EH3060	5/130	8,00	EH6060	5/76	29,48	EK6010KN	5/46	51,52
EH3061K	5/77	4,26	EH6061K	5/77	8,51	EK6010RK	5/113	7,49
EH3061K	5/129	4,26	EH6062K	5/80	3,22	EK6040KN	5/46	18,40
EH3061K	5/130	4,26	EH6063K	5/81	4,97	EK6050KN	5/46	26,75
EH3063K	5/80	1,66	EH6080	5/76	39,31	EK6050KN	5/132	26,75
EH3063K	5/129	1,66	EH6082K	5/80	4,48	EK6050RK	5/113	3,62
EH3063K	5/130	1,66	EH6083K	5/77	11,35	EK6060KN	5/46	29,43
EH3064K	5/81	2,49	EH6084K	5/81	6,63	EK6060RK	5/113	4,56
EH3065	5/79	5,06	EH7262K	5/77	2,84	EK6080KN	5/46	34,76
EH3080	5/76	19,65	EH7262K	5/129	2,84	EK6080RK	5/113	6,02
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EK8050KN	5/46	30,92	EL2060K	5/129	31,27	EM2200	5/133	18,97
EK8050RK	5/113	5,05	EL2060K	5/132	31,27	EM2201	5/51	9,54
EK8060KN	5/46	27,40	EL2060K	5/133	31,27	EM2202	5/75	28,78
EK8060KN	5/132	27,40	EL2060K	5/133	31,27	EM2203	5/75	38,42
EK8060KN	5/133	27,40	EL2061K	5/53	15,63	EM2204	5/75	7,39
EK8080KN	5/46	40,44	EL2061K	5/114	15,63	EM2204	5/83	7,39
EK8080RK	5/113	7,96	EL2080K	5/53	41,85	EM2205	5/47	19,15
EL1440K	5/53	16,41	EL2081K	5/53	20,92	EM2211	5/51	3,74
EL1460K	5/53	25,16	EL2081K	5/114	20,92	EN0105K	5/102	0,09
EL1480K	5/53	29,29	EL2210K	5/53	57,67	EN0150K	5/102	0,18
EL1610K	5/53	36,85	EL2211K	5/53	28,84	EN0204K	5/102	0,30
EL1650K	5/53	23,51	EL2211K	5/114	28,84	EN0250K	5/102	0,52
EL1660K	5/53	28,46	EL2240K	5/53	22,76	EN0325K	5/102	1,00
EL1680K	5/53	33,48	EL2241K	5/53	11,38	EN0480K	5/104	5,41
EL1810K	5/53	47,19	EL2241K	5/114	11,38	EN0481K	5/102	3,64
EL1811K	5/53	23,59	EL2250K	5/53	28,57	EN0482K	5/104	5,41
EL1811K	5/114	23,59	EL2251K	5/53	14,29	EN0483K	5/102	1,10
EL1840K	5/53	18,62	EL2251K	5/114	14,29	EN0484K	5/104	2,30
EL1840K	5/130	18,62	EL2260K	5/53	34,39	EN0485K	5/104	2,30
EL1841K	5/53	9,31	EL2260K	5/133	34,39	EN1105K	5/103	0,43
EL1841K	5/114	9,31	EL2261K	5/53	17,20	EN1150K	5/103	0,88
EL1850K	5/53	23,38	EL2261K	5/114	17,20	EN1204K	5/103	1,02
EL1850K	5/126	23,38	EL2280K	5/53	46,03	EN1250K	5/103	1,65
EL1851K	5/53	11,69	EL2281K	5/53	23,02	EN2105K	5/103	0,43
EL1851K	5/114	11,69	EL2281K	5/114	23,02	EN2150K	5/103	0,88
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EL1861K	5/114	14,07	EM1800	5/47	14,40	EN2325K	5/103	3,70
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EL1881K	5/53	18,83	EM1802	5/75	23,54	EN3150	5/115	0,08
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EL2011K	5/114	26,21	EM1804	5/83	5,98	EN3325K	5/103	3,70
EL2012K	5/53	52,43	EM1805	5/47	15,85	EN3326	5/115	0,44
EL2040K	5/53	20,69	EM1811	5/51	3,06	EP0400H	5/48	1,24
EL2041K	5/53	10,34	EM2000	5/47	15,80	EP0600H	5/48	1,95
EL2041K	5/114	10,34	EM2000	5/132	15,80	EP0800H	5/48	2,66
EL2050K	5/53	25,98	EM2000	5/132	15,80	EP1000H	5/48	3,37
EL2050K	5/126	25,98	EM2000	5/132	15,80	EP1800V	5/48	5,75
EL2050K	5/131	25,98	EM2000	5/133	15,80	EP1811K	5/52	24,06
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EL2050K	5/132	25,98	EM2001	5/51	8,74	EP1830K	5/52	7,33
EL2051K	5/53	12,99	EM2001	5/133	8,74	EP1830K	5/52	7,33
EL2051K	5/114	12,99	EM2002	5/75	26,16	EP1840K	5/52	9,77
EL2060K	5/53	31,27	EM2003	5/75	34,93	EP1860K	5/52	14,53
EL2060K	5/127	31,27	EM2004	5/75	6,68	EP1880K	5/52	19,29
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EP2012K	5/52	32,02	ER8040K	5/72	19,82	ES1818K	5/35	117,30
EP2012K	5/133	32,02	ER8050K	5/72	23,73	ES1824BK	5/34	130,66
EP2030K	5/52	8,14	ER8061K	5/72	27,64	ES1824FV4K	5/38	128,28
EP2030K	5/52	8,14	ER8080K	5/72	35,46	ES1824K	5/35	130,66
EP2041K	5/52	10,85	ES1800K	5/33	128,80	ES1824MF4K	5/42	110,59
EP2060K	5/52	16,14	ES1800MF2K	5/42	116,86	ES1824VC4K	5/40	124,46
EP2060K	5/132	16,14	ES1800MF4K	5/42	122,55	ES1824VC4K	5/130	124,46
EP2080K	5/52	21,44	ES1800VK	5/37	125,43	ES1824VK	5/38	124,89
EP2080K	5/132	21,44	ES1804FV2K	5/38	111,87	ES1825FV4K	5/38	132,45
EP2200V	5/48	7,02	ES1804FV4K	5/38	112,74	ES1825MF4K	5/42	114,76
EP2210K	5/52	29,40	ES1804K	5/32	102,98	ES1825VC4K	5/40	128,63
EP2212K	5/52	35,23	ES1804MF2K	5/42	94,18	ES1825VK	5/38	129,06
EP2231K	5/52	8,95	ES1804MF4K	5/42	99,87	ES1826BK	5/34	139,04
EP2231K	5/52	8,95	ES1804MF4K	5/130	99,87	ES1826FV4K	5/38	136,67
EP2240K	5/52	11,94	ES1804VC2K	5/40	108,04	ES1826K	5/35	139,04
EP2260K	5/52	17,76	ES1804VC4K	5/40	108,39	ES1826MF4K	5/42	118,97
EP2280K	5/52	23,58	ES1804VK	5/37	98,21	ES1826VC4K	5/40	132,84
EP2280K	5/133	23,58	ES1805FV2K	5/38	115,56	ES1826VK	5/38	133,28
ER1000	5/72	0,31	ES1805FV4K	5/38	116,20	ES1827BK	5/34	134,83
ER1010K	5/72	53,16	ES1805K	5/32	106,67	ES1827K	5/35	134,83
ER1041K	5/72	24,28	ES1805MF2K	5/42	97,86	ES1828BK	5/34	147,39
ER1050K	5/72	29,09	ES1805MF4K	5/42	103,56	ES1828FV4K	5/38	131,37
ER1060K	5/72	33,90	ES1805VC2K	5/40	111,73	ES1828K	5/35	147,39
ER1080K	5/72	43,53	ES1805VC4K	5/40	112,08	ES1828MF4K	5/42	127,31
ER3010K	5/73	40,00	ES1805VK	5/37	101,90	ES1828VC4K	5/40	141,18
ER3011K	5/73	41,43	ES1806FV2K	5/38	119,25	ES1828VK	5/38	141,62
ER3012K	5/73	42,85	ES1806FV4K	5/38	121,20	ES1840K	5/33	69,82
ER3040K	5/73	29,81	ES1806K	5/33	110,36	ES1844K	5/32	58,84
ER3041K	5/73	31,24	ES1806MF2K	5/42	101,55	ES1845K	5/32	61,01
ER3042K	5/73	32,66	ES1806MF4K	5/42	107,22	ES1846K	5/32	63,18
ER3050K	5/73	31,51	ES1806VC2K	5/40	115,42	ES1848K	5/33	67,50
ER3051K	5/73	32,93	ES1806VC4K	5/40	115,77	ES1860K	5/33	88,25
ER3052K	5/73	34,36	ES1806VK	5/37	105,59	ES1860MFK	5/42	92,15
ER3060K	5/73	33,21	ES1808FV2K	5/38	126,60	ES1860VK	5/37	85,37
ER3061K	5/73	34,63	ES1808FV4K	5/38	128,40	ES1864CK	5/44	80,82
ER3062K	5/73	36,06	ES1808K	5/33	117,71	ES1864K	5/32	68,00
ER3080K	5/73	36,61	ES1808MF2K	5/42	117,71	ES1864K	5/126	68,00
ER3081K	5/73	38,03	ES1808MF4K	5/42	114,60	ES1864LK	5/44	79,62
ER3082K	5/73	39,45	ES1808VC2K	5/40	122,77	ES1864MFK	5/42	62,15
ER4011K	5/72	23,53	ES1808VC4K	5/40	123,12	ES1864SPK	5/36	58,55
ER4040K	5/72	10,90	ES1808VK	5/37	102,83	ES1864VK	5/37	70,67
ER4050K	5/72	13,00	ES1810BK	5/34	125,66	ES1864VK	5/129	70,67
ER4060K	5/72	15,11	ES1810K	5/35	125,66	ES1864VK	5/130	70,67
ER4080K	5/72	19,32	ES1814BK	5/34	112,27	ES1865CK	5/44	90,43
ER6010K	5/72	33,40	ES1814K	5/35	112,27	ES1865K	5/32	73,00
ER6040K	5/72	15,36	ES1815BK	5/34	114,75	ES1865K	5/126	73,00
ER6050K	5/72	18,36	ES1815K	5/35	114,75	ES1865LK	5/44	89,23
ER6060K	5/72	21,37	ES1816BK	5/34	115,20	ES1865MFK	5/42	64,83

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ES1865VK	5/37	68,00	ES1886VK	5/37	83,00	ES2015BK	5/34	115,28
ES1866CK	5/44	93,11	ES1888CK	5/44	115,18	ES2015K	5/35	115,28
ES1866K	5/32	71,00	ES1888FV2K	5/38	109,86	ES2016BK	5/34	120,07
ES1866LK	5/44	91,91	ES1888K	5/33	100,98	ES2016K	5/35	120,07
ES1866MFK	5/42	67,50	ES1888LK	5/44	113,98	ES2018BK	5/34	126,30
ES1866PCK	5/45	92,00	ES1888MF2K	5/42	98,46	ES2018K	5/35	126,30
ES1866SPK	5/36	63,91	ES1888MFK	5/42	83,28	ES2024BK	5/34	140,49
ES1866VK	5/37	70,00	ES1888VC2K	5/40	106,98	ES2024FV4K	5/39	141,11
ES1868CK	5/44	98,44	ES1888VK	5/37	87,04	ES2024K	5/35	140,49
ES1868K	5/33	84,24	ES2000K	5/33	132,74	ES2024MF4K	5/42	121,65
ES1868LK	5/44	97,24	ES2000MF2K	5/43	128,54	ES2024VC4K	5/40	136,90
ES1868MFK	5/42	72,83	ES2000MF4K	5/43	134,81	ES2024VK	5/38	137,38
ES1868PCK	5/45	98,00	ES2000VK	5/37	129,71	ES2025BK	5/34	144,66
ES1868VK	5/37	81,36	ES2004FV2K	5/39	123,06	ES2025FV4K	5/39	145,70
ES1875BK	5/34	161,78	ES2004FV4K	5/39	124,07	ES2025K	5/35	144,66
ES1875K	5/35	161,78	ES2004K	5/33	110,76	ES2025MF4K	5/43	126,23
ES1876BK	5/34	169,73	ES2004MF2K	5/42	103,59	ES2025VC4K	5/40	141,49
ES1876K	5/35	169,73	ES2004MF4K	5/42	109,85	ES2025VK	5/38	141,97
ES1878BK	5/34	175,65	ES2004VC2K	5/40	118,85	ES2026BK	5/34	148,88
ES1878K	5/35	175,65	ES2004VC4K	5/40	119,23	ES2026FV4K	5/39	150,33
ES1880K	5/33	106,66	ES2004VK	5/37	108,03	ES2026K	5/35	148,88
ES1880MF2K	5/42	104,14	ES2005FV2K	5/39	127,11	ES2026K	5/128	148,88
ES1880MFK	5/42	96,92	ES2005FV4K	5/39	128,08	ES2026MF4K	5/43	130,87
ES1880VK	5/37	102,83	ES2005MF2K	5/42	107,65	ES2026VC4K	5/40	146,12
ES1884CK	5/44	102,47	ES2005MF4K	5/42	113,91	ES2026VK	5/38	146,60
ES1884FV2K	5/38	97,16	ES2005VC2K	5/40	122,91	ES2028BK	5/34	157,22
ES1884K	5/32	82,00	ES2005VC4K	5/40	123,29	ES2028FV4K	5/39	144,51
ES1884LK	5/44	101,27	ES2005VK	5/37	112,09	ES2028K	5/35	157,22
ES1884MF2K	5/42	85,75	ES2006FV2K	5/39	131,17	ES2028MF4K	5/43	140,05
ES1884MF2K	5/129	85,75	ES2006FV4K	5/39	122,78	ES2028VC4K	5/40	155,30
ES1884MFK	5/42	70,57	ES2006K	5/33	118,14	ES2028VK	5/38	155,78
ES1884SPK	5/36	73,27	ES2006K	5/127	118,14	ES2040K	5/33	73,94
ES1884VC2K	5/40	94,27	ES2006MF2K	5/43	111,71	ES2044K	5/33	62,96
ES1884VK	5/37	84,44	ES2006MF4K	5/43	117,97	ES2045K	5/33	65,13
ES1885CK	5/44	105,65	ES2006VC2K	5/40	126,96	ES2046K	5/33	67,30
ES1885FV2K	5/38	100,34	ES2006VC4K	5/40	127,34	ES2048K	5/33	71,62
ES1885K	5/32	91,45	ES2006VK	5/37	116,15	ES2060K	5/33	93,59
ES1885LK	5/44	104,45	ES2007K	5/33	114,45	ES2060MFK	5/43	91,20
ES1885MF2K	5/42	88,93	ES2008FV2K	5/39	123,82	ES2060VK	5/37	96,70
ES1885MFK	5/42	73,76	ES2008FV4K	5/39	124,72	ES2064CK	5/45	88,90
ES1885VC2K	5/40	97,46	ES2008K	5/33	125,49	ES2064K	5/33	78,89
ES1885VK	5/37	80,00	ES2008MF2K	5/43	119,80	ES2064MFK	5/42	68,36
ES1886CK	5/44	108,83	ES2008MF4K	5/43	126,06	ES2064SPK	5/36	73,89
ES1886FV2K	5/38	103,52	ES2008VC2K	5/40	135,05	ES2064VK	5/37	77,74
ES1886K	5/33	84,00	ES2008VC4K	5/40	135,43	ES2065CK	5/45	99,47
ES1886LK	5/44	107,63	ES2008VK	5/37	113,11	ES2065K	5/33	81,57
ES1886MF2K	5/42	76,94	ES2010BK	5/34	135,37	ES2065K	5/126	81,57
ES1886MFK	5/42	76,94	ES2010K	5/35	135,37	ES2065MFK	5/42	71,31
ES1886SPK	5/36	79,63	ES2014BK	5/34	112,87	ES2065SPK	5/36	66,57

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ES2065VK	5/131	80,68	ES2086VC2K	5/40	110,70	ES2215BK	5/34	126,70
ES2066CK	5/45	102,42	ES2086VK	5/37	99,89	ES2215K	5/35	126,70
ES2066K	5/33	84,25	ES2088CK	5/45	126,69	ES2216BK	5/34	131,12
ES2066K	5/127	84,25	ES2088FV2K	5/39	120,85	ES2216K	5/35	131,12
ES2066MFK	5/43	74,25	ES2088MF2K	5/43	108,30	ES2218BK	5/34	139,20
ES2066PCK	5/45	101,20	ES2088MFK	5/43	91,61	ES2218K	5/35	139,20
ES2066PCK	5/129	101,20	ES2088VC2K	5/40	117,68	ES2224BK	5/34	154,54
ES2066SPK	5/36	79,25	ES2088VK	5/37	95,74	ES2224FV4K	5/39	155,22
ES2066VK	5/37	83,63	ES2089K	5/33	107,54	ES2224K	5/35	154,54
ES2068CK	5/45	108,28	ES2089SPK	5/36	92,54	ES2224MF4K	5/43	133,81
ES2068K	5/33	89,58	ES2200K	5/33	145,80	ES2224VC4K	5/41	150,59
ES2068MFK	5/43	93,20	ES2200MF2K	5/43	141,40	ES2224VK	5/38	151,12
ES2068PCK	5/45	107,80	ES2200MF4K	5/43	148,29	ES2225BK	5/34	159,13
ES2068VK	5/37	89,49	ES2200VK	5/37	142,20	ES2225FV4K	5/39	160,27
ES2075BK	5/34	161,38	ES2204FV2K	5/39	135,36	ES2225K	5/35	159,13
ES2075K	5/35	161,38	ES2204FV4K	5/39	135,10	ES2225MF4K	5/43	138,85
ES2076BK	5/34	169,33	ES2204K	5/33	121,84	ES2225VC4K	5/41	155,64
ES2076K	5/35	169,33	ES2204MF2K	5/43	113,95	ES2225VK	5/38	156,17
ES2076K	5/128	169,33	ES2204MF4K	5/43	120,84	ES2226BK	5/34	163,76
ES2078BK	5/34	175,26	ES2204VC2K	5/41	130,73	ES2226FV4K	5/39	165,36
ES2078K	5/35	175,26	ES2204VC4K	5/41	131,15	ES2226K	5/35	163,76
ES2080K	5/33	113,22	ES2204VK	5/37	118,84	ES2226MF4K	5/43	143,95
ES2080MF2K	5/43	114,56	ES2205FV2K	5/39	139,83	ES2226VC4K	5/41	160,74
ES2080MFK	5/43	106,61	ES2205FV4K	5/39	126,61	ES2226VK	5/38	161,27
ES2080VK	5/37	113,11	ES2205K	5/33	125,90	ES2228BK	5/34	172,94
ES2084CK	5/45	112,71	ES2205MF2K	5/43	118,41	ES2228FV4K	5/39	158,96
ES2084FV2K	5/39	106,87	ES2205MF4K	5/43	125,30	ES2228K	5/35	172,94
ES2084K	5/33	94,83	ES2205VC2K	5/41	135,20	ES2228MF4K	5/43	154,05
ES2084MF2K	5/42	94,33	ES2205VC4K	5/41	135,61	ES2228VC4K	5/41	170,83
ES2084MFK	5/42	77,63	ES2205VK	5/37	123,30	ES2228VK	5/38	171,36
ES2084SPK	5/36	89,83	ES2206FV2K	5/39	144,29	ES2240K	5/33	81,33
ES2084VC2K	5/40	103,70	ES2206FV4K	5/39	145,00	ES2244K	5/33	69,25
ES2084VK	5/37	92,88	ES2206K	5/33	129,95	ES2245K	5/33	71,64
ES2085CK	5/45	116,22	ES2206MF2K	5/43	122,88	ES2246K	5/33	74,03
ES2085FV2K	5/39	110,37	ES2206MF4K	5/43	129,77	ES2248K	5/33	78,79
ES2085K	5/33	98,01	ES2206VC2K	5/41	139,66	ES2260K	5/33	102,95
ES2085MF2K	5/42	97,83	ES2206VC4K	5/41	140,08	ES2260MFK	5/43	88,15
ES2085MFK	5/42	81,13	ES2206VK	5/37	127,76	ES2260VK	5/37	103,30
ES2085SPK	5/36	83,01	ES2208FV2K	5/39	139,80	ES2264K	5/33	86,78
ES2085VC2K	5/40	107,20	ES2208FV4K	5/39	140,76	ES2264MFK	5/43	75,20
ES2085VK	5/37	96,39	ES2208K	5/33	138,04	ES2264VK	5/37	85,51
ES2085VK	5/131	96,39	ES2208MF2K	5/43	131,78	ES2265K	5/33	89,73
ES2086CK	5/45	119,72	ES2208MF4K	5/43	138,66	ES2265MFK	5/43	78,44
ES2086FV2K	5/39	113,87	ES2208VC2K	5/41	148,56	ES2265VK	5/37	88,75
ES2086K	5/33	101,19	ES2208VC4K	5/41	148,98	ES2266K	5/33	92,67
ES2086K	5/127	101,19	ES2208VK	5/37	124,43	ES2266MFK	5/43	81,68
ES2086K	5/128	101,19	ES2210BK	5/34	148,90	ES2266VK	5/37	91,99
ES2086MF2K	5/43	101,33	ES2210K	5/35	148,90	ES2268K	5/33	98,54
ES2086MFK	5/43	84,63	ES2214BK	5/34	122,40	ES2268MFK	5/43	93,19

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ES2275BK	5/34	177,52	EV0005	5/108	0,23	EV0132	5/57	1,33
ES2275K	5/35	177,52	EV0006	5/74	1,22	EV0133	5/57	1,50
ES2276BK	5/34	186,27	EV0007	5/85	2,25	EV0134	5/57	1,66
ES2276K	5/35	186,27	EV0008	5/74	0,16	EV0135	5/57	1,58
ES2279BK	5/34	192,78	EV0020	5/88	0,62	EV0136	5/57	1,75
ES2279K	5/35	192,78	EV0021	5/88	0,72	EV0137	5/57	1,91
ES2280K	5/33	124,54	EV0022	5/88	0,90	EV0400	5/88	2,75
ES2280MFK	5/43	91,73	EV0024	5/89	0,50	EV0600	5/88	3,90
ES2280VK	5/37	124,43	EV0026	5/89	0,35	EV0800	5/88	5,10
ES2281MF2K	5/43	135,80	EV0035	5/89	0,75	EV1000	5/107	0,48
ES2284FV2K	5/39	117,56	EV0036	5/89	0,20	EV1001	5/98	0,70
ES2284K	5/33	104,31	EV0037	5/89	0,35	EV1002	5/98	1,10
ES2284MF2K	5/43	103,76	EV0041	5/88	6,85	EV1004	5/111	0,29
ES2284MFK	5/43	85,39	EV0042	5/89	0,25	EV1005	5/111	0,53
ES2284VC2K	5/41	114,07	EV0050	5/57	0,35	EV1006	5/111	0,63
ES2284VK	5/37	102,17	EV0058	5/105	5,20	EV1007	5/111	2,75
ES2285FV2K	5/39	121,41	EV0061	5/105	1,20	EV1008	5/106	0,04
ES2285K	5/33	107,81	EV0063	5/109	1,10	EV1008	5/113	0,04
ES2285MF2K	5/43	107,61	EV0064	5/109	1,50	EV1030	5/106	0,30
ES2285MFK	5/43	89,24	EV0068	5/93	0,92	EV1030	5/113	0,30
ES2285VC2K	5/41	117,92	EV0069	5/93	0,92	EV1036	5/106	0,04
ES2285VK	5/37	106,03	EV0070	5/96	0,68	EV1037	5/106	0,04
ES2286FV2K	5/39	125,26	EV0071	5/96	0,83	EV1039	5/106	0,04
ES2286MF2K	5/43	111,46	EV0081	5/89	0,35	EV1039	5/113	0,04
ES2286MFK	5/43	93,09	EV0101	5/106	0,03	EV1040	5/98	0,37
ES2286VC2K	5/41	121,77	EV0102	5/85	0,30	EV1041	5/98	1,10
ES2286VK	5/37	109,88	EV0102	5/115	0,30	EV1042	5/98	0,24
ES2287K	5/33	111,31	EV0103	5/85	0,50	EV1043	5/98	0,75
ES2288FV2K	5/39	132,94	EV0103	5/115	0,50	EV1045	5/98	0,24
ES2288K	5/33	118,29	EV0104	5/85	0,50	EV1047	5/98	0,48
ES2288MF2K	5/43	119,14	EV0104	5/115	0,50	EV1048	5/98	0,53
ES2288MFK	5/43	100,77	EV0108	5/93	0,55	EV1050	5/110	6,88
ES2288VC2K	5/41	129,45	EV0109	5/93	0,75	EV1051	5/110	1,00
ES2288VK	5/37	105,32	EV0110	5/93	0,40	EV1056	5/110	0,33
ET1810K	5/49	27,03	EV0111	5/93	0,35	EV1057	5/115	1,25
ET1860K	5/49	16,33	EV0112	5/93	0,95	EV1058	5/110	0,58
ET1880K	5/49	21,68	EV0114	5/58	0,95	EV1060K	5/108	1,62
ET2010K	5/49	29,99	EV0116	5/58	0,95	EV1061K	5/108	2,39
ET2060K	5/49	18,13	EV0117	5/58	0,75	EV1071K	5/108	1,57
ET2080K	5/49	24,06	EV0118	5/47	16,12	EV1072K	5/108	2,10
ET2211K	5/49	32,96	EV0119	5/58	0,20	EV1073K	5/108	2,62
ET2260K	5/49	19,92	EV0120	5/47	17,87	EV1075K	5/108	0,20
ET2280K	5/49	26,44	EV0121	5/58	0,20	EV1081	5/107	2,34
ET2280K	5/133	26,44	EV0122	5/47	19,35	EV1082	5/107	1,96
EV0001	5/115	1,89	EV0123	5/58	0,20	EV1083	5/107	2,26
EV0002	5/74	1,78	EV0124	5/58	0,20	EV1085	5/107	4,51
EV0003	5/74	0,24	EV0125	5/58	0,13	EV1087	5/107	8,68
EV0003	5/127	0,24	EV0126	5/58	0,13	EV1090	5/96	0,46
EV0003	5/128	0,24	EV0127	5/58	0,13	EV1091	5/96	0,88

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EV1093	5/96	0,55	EV2202	5/113	2,12	VS6285K	5/105	28,00
EV1100	5/92	1,15	EV2385	5/89	4,20	VZ1400K	5/104	36,00
EV1100	5/115	1,15	EV3500	5/88	3,33	VZ1401K	5/105	34,00
EV1101	5/92	1,28	EV5000	5/88	4,52	VZ1550K	5/104	35,00
EV1101	5/115	1,28	EV8880	5/107	2,24	VZ1850K	5/104	35,00
EV1102	5/115	3,10	EV8881	5/107	5,78	VZ2000K	5/104	50,20
EV1103	5/115	1,20	EV8882	5/107	6,74	VZ8501K	5/105	33,00
EV1110	5/96	2,74	EX1860	5/79	21,56	ZN0006	5/59	2,08
EV1111	5/96	0,68	EX1880	5/79	30,18	ZN0006	5/59	2,08
EV1112	5/96	2,74	EX1880	5/130	30,18	ZN0008	5/59	2,78
EV1113	5/96	0,13	EX2060	5/79	23,96	ZN0008	5/59	2,78
EV1115	5/92	0,65	EX2080	5/79	33,54	ZN0010	5/59	3,48
EV1116	5/92	0,75	EX2260	5/79	26,35	ZN1000	5/59	3,48
EV1117	5/92	0,67	EX2280	5/79	36,89	ZN1000	5/127	3,48
EV1118	5/92	0,96	EZ1001	5/60	21,65	ZN1000	5/130	3,48
EV1119	5/92	3,60	EZ1201	5/60	26,00	ZN1000	5/132	3,48
EV1120	5/92	4,50	EZ1601	5/60	34,65	ZN1000	5/133	3,48
EV1121	5/92	8,85	EZ4001	5/60	8,67	ZN1001	5/59	2,45
EV1122	5/92	2,44	EZ6001	5/60	13,00	ZN1002	5/60	6,06
EV1123	5/92	2,49	EZ8001	5/60	17,35	ZN1010	5/59	3,83
EV1124	5/92	2,77	GD1520	5/79	0,80	ZN1020	5/59	2,38
EV1125	5/92	2,77	GD1530	5/79	1,79	ZN1040	5/60	1,04
EV1130	5/92	1,04	GD1530	5/130	1,79	ZN1041	5/60	1,50
EV1131	5/92	5,89	PB0803	5/90	0,40	ZN1200	5/59	4,18
EV1135	5/82	0,24	PBFC1001	5/91	15,50	ZN3000	5/59	1,04
EV1136	5/82	0,16	PBFC1005	5/91	7,26	ZN4000	5/59	1,39
EV1137	5/82	0,24	PBFC3205	5/91	2,38	ZN4000	5/129	1,39
EV1140	5/99	0,19	PBFC5005	5/91	3,50	ZN4000	5/129	1,39
EV1143	5/99	0,08	PBFC6305	5/91	4,46	ZN4000	5/130	1,39
EV1144	5/99	0,08	PIRH0405	5/106	1,00	ZN4000	5/130	1,39
EV1144	5/99	0,08	PIRH0455	5/106	1,00	ZN4000	5/130	1,39
EV1145	5/99	0,08	PIRH1242	5/106	1,00	ZN4001	5/59	0,66
EV1145	5/99	0,08	PIRH2432	5/106	1,02	ZN4002	5/60	2,41
EV1146	5/99	0,02	TS4000	5/96	1,47	ZN5000	5/59	1,74
EV1147	5/99	0,36	TS4001	5/96	2,50	ZN5000	5/126	1,74
EV1148	5/99	0,36	TS4002	5/96	2,00	ZN5000	5/126	1,74
EV1150	5/112	0,10	TS4003	5/96	2,00	ZN5000	5/131	1,74
EV1151	5/112	0,10	TS4004	5/96	5,38	ZN5000	5/131	1,74
EV1152	5/112	0,10	TS4011	5/96	2,00	ZN5000	5/132	1,74
EV1153	5/112	0,10	TS4012	5/96	2,00	ZN5001	5/59	0,96
EV1154	5/112	0,10	TS4013	5/96	2,00	ZN5002	5/60	3,02
EV1155	5/112	0,01	TU1000	5/111	15,17	ZN6000	5/59	2,08
EV1156	5/112	0,07	TU1001	5/111	15,17	ZN6000	5/59	2,08
EV1157	5/112	0,24	VA7910	5/100	0,40	ZN6000	5/126	2,08
EV1160	5/108	0,85	VA7915	5/100	0,55	ZN6000	5/126	2,08
EV1385	5/89	2,65	VA7930	5/100	0,30	ZN6000	5/127	2,08
EV1802	5/113	1,74	VA7950	5/100	0,35	ZN6000	5/127	2,08
EV2002	5/113	1,93	VA7975	5/100	0,45	ZN6000	5/128	2,08
EV2110	5/96	0,56	VA8300	5/100	0,80	ZN6000	5/128	2,08



## List of codes

### Wiring ducts

Oder code	Page	Weight Kg	Oder code	Page	Weight Kg	Oder code	Page	Weight Kg
05 019	3-6	0,11	05 194	3-6	0,61	1SL5321A00	3-5	0,28
05 033	3-6	0,29	05 195	3-6	0,66	1SL5322A00	3-5	0,42
05 035	3-6	0,33	05 196	3-6	0,90	1SL9019A00	3-5	0,08
05 037	3-6	0,45	05 197	3-6	1,04	1SL9033A00	3-5	0,24
05 043	3-6	0,33	05 198	3-6	1,10	1SL9035A00	3-5	0,29
05 045	3-6	0,40	05 199	3-6	1,81	1SL9037A00	3-5	0,37
05 047	3-6	0,47	05 214	3-9	0,01	1SL9043A00	3-5	0,25
05 049	3-6	0,64	05 216	3-9	0,01	1SL9045A00	3-5	0,33
05 051	3-6	0,88	05 224	3-9	0,01	1SL9047A00	3-5	0,43
05 053	3-6	0,97	05 226	3-9	0,01	1SL9049A00	3-5	0,49
05 063	3-6	0,42	05 228	3-9	0,01	1SL9051A00	3-5	0,63
05 065	3-6	0,49	05 230	3-9	0,01	1SL9053A00	3-5	0,74
05 067	3-6	0,63	05 240	3-9	0,00	1SL9063A00	3-5	0,33
05 069	3-6	0,83	05 250	3-8	0,02	1SL9065A00	3-5	0,39
05 071	3-6	0,94	05 252	3-8	0,01	1SL9067A00	3-5	0,54
05 073	3-6	1,21	05 254	3-8	0,01	1SL9069A00	3-5	0,68
05 083	3-6	0,51	05 256	3-8	0,02	1SL9071A00	3-5	0,75
05 085	3-6	0,57	05 258	3-8	0,02	1SL9073A00	3-5	0,94
05 087	3-6	0,69	05 260	3-8	0,02	1SL9083A00	3-5	0,41
05 089	3-6	0,84	05 262	3-8	0,02	1SL9085A00	3-5	0,44
05 091	3-6	1,04	05 265	3-9	0,45	1SL9087A00	3-5	0,58
05 093	3-6	1,25	05 266	3-9	0,45	1SL9089A00	3-5	0,71
05 094	3-6	0,61	05 268	3-9	0,45	1SL9091A00	3-5	0,83
05 095	3-6	0,66	05 270	3-8	0,30	1SL9093A00	3-5	1,08
05 096	3-6	0,90	05 272	3-8	0,20	1SL9119A00	3-5	0,08
05 097	3-6	1,04	05 274	3-8	0,20	1SL9133A00	3-5	0,24
05 098	3-6	1,10	05 276	3-8	0,36	1SL9135A00	3-5	0,27
05 099	3-6	1,81	05 278	3-8	0,36	1SL9137A00	3-5	0,36
05 119	3-6	0,11	05 280	3-8	0,42	1SL9143A00	3-5	0,27
05 133	3-6	0,29	05 282	3-8	0,40	1SL9145A00	3-5	0,30
05 135	3-6	0,33	05 300	3-6	0,03	1SL9147A00	3-5	0,39
05 137	3-6	0,45	05 302	3-6	0,11	1SL9149A00	3-5	0,51
05 143	3-6	0,33	05 304	3-6	0,13	1SL9151A00	3-5	0,65
05 145	3-6	0,40	05 306	3-6	0,24	1SL9153A00	3-5	0,75
05 147	3-6	0,47	05 308	3-6	0,33	1SL9163A00	3-5	0,34
05 149	3-6	0,64	05 310	3-6	0,35	1SL9165A00	3-5	0,41
05 151	3-6	0,88	05 312	3-6	0,42	1SL9167A00	3-5	0,53
05 153	3-6	0,97	05 314	3-6	0,58	1SL9169A00	3-5	0,61
05 163	3-6	0,42	05 400	3-7	0,01	1SL9171A00	3-5	0,76
05 165	3-6	0,49	05 402	3-7	0,01	1SL9173A00	3-5	0,96
05 167	3-6	0,63	05 405	3-7	0,02	1SL9183A00	3-5	0,40
05 169	3-6	0,83	05 410	3-7	0,03	1SL9185A00	3-5	0,47
05 171	3-6	0,94	05 415	3-7	0,04	1SL9187A00	3-5	0,62
05 173	3-6	1,21	05 420	3-7	0,07	1SL9189A00	3-5	0,71
05 183	3-6	0,51	05 425	3-7	0,10	1SL9191A00	3-5	0,83
05 185	3-6	0,57	1SL5316A00	3-5	0,03	1SL9193A00	3-5	1,10
05 187	3-6	0,69	1SL5317A00	3-5	0,09	AD1009	3-9	0,08
05 189	3-6	0,84	1SL5318A00	3-5	0,13	AD1098	3-9	0,94
05 191	3-6	1,04	1SL5319A00	3-5	0,24	EV1130	3-9	1,04
05 193	3-6	1,25	1SL5320A00	3-5	0,33	EV1131	3-9	5,77













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Due to possible developments of standards as well as of materials, the characteristics and dimensions specified in this document may only be considered binding after confirmation by ABB SACE.

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