

1STC802001D0202



ArTu distribution switchboards General Catalogue



To take into account the evolution of Standards and materials, the characteristics and overall dimensions indicated in this catalogue can only be considered binding after confirmation from ABB SACE.

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# ArTu distribution switchboards

## General Catalogue

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# ABB SACE and its commitment to protecting the environment



The ABB Group's involvement in research projects and pilot ventures which are capable of combining the objectives of economic growth with the main social and environmental needs is behind its commitment to ensure that all the manufacturing and services sites worldwide obtain ISO 14001 environmental management system certification.

ABB SACE is one of the forerunners among the companies in the Group in dedicating considerable resources towards reaching its objectives of sustainable development and environmental protection. This is confirmed by the fact that all the company manufacturing sites have been awarded ISO 9001 quality certification and most of them have also been awarded ISO 14001 environmental management system certification. The plants in Frosinone, Patrica, Bergamo, Vittuone, Pomezia and Garbagnate Monastero have also been awarded the Quality, Environment and Safety Integrated System certification in compliance with the ISO 9001-2000, ISO 14001-96 and OHSAS 18001-99 Standards.

ABB SACE is actively involved in continuing the policy of improving environmental management by rationalizing the consumption of raw materials and energy, preventing pollution, respecting water and air, reducing noise levels to a minimum, reducing waste from production processes and carrying out periodic environmental checks at the main suppliers' premises.

By using analysis tools such as LCA (Life Cycle Analysis), from the initial design stages ABB SACE assesses and improves the environmental performance of its products throughout their entire life cycle in order to guarantee maximum efficiency in technical and energy performance during operation, control and reduce environmental impact in the manufacturing stage and define end-of-life procedures.

All these goals and activities are the result of a far-sightedness in adopting ecological policies and methods of reducing environmental impact and, here too, ABB SACE is, as already seen in the quality of its products, a leader on the Italian company scene.



Factory in Garbagnate Monastero LC





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# Presentation of the range

## General

The range of ABB SACE ArTu distribution switchboards provides a complete and integrated offer of switchboards and kit systems for constructing primary and secondary low voltage distribution switchboards able to satisfy all market requirements in terms of type of installation, degree of protection, as well as electrical and mechanical characteristics.

1 The ArTu switchboards designed and constructed by ABB SACE make it possible to construct a wide range of configurations with a single range of accessories, and starting off from simple assembly kits, such as terminal wall-mounted distribution switchboards with modular circuit-breakers only, floor-mounted secondary distribution switchboards, switchboards equipped with moulded-case circuit-breakers, Power Center type primary distribution switchboards with a prevalence of moulded-case circuit-breakers and any internal segregations up to Form 4.

The user of ABB SACE air, moulded-case and modular circuit-breakers can therefore have a complete and integrated system of metalwork structure kits available, in accordance with the reference standards, which guarantees absolute compatibility between the various elements (metalwork structures, circuit-breakers and distribution systems), together with maximum assembly and cabling facility.

ABB SACE proposes a series of standardised kits, consisting of pre-drilled plates and panels, for installation of the whole range of System Pro M, Isomax and Tmax circuit-breakers in all their possible versions as well as Emax E1, E2 and E3 circuit-breakers, without the need for any additional drilling operations or adaptations.

Special consideration has been given to cabling requirements, providing special seats for fixing the plastic cabling duct horizontally and vertically.

Standardisation of the components has been extended to internal segregation of the switchboard – a feature increasingly prescribed by designers to allow access to the cabled switchboard for maintenance operations without interrupting service continuity on the various output circuits. Internal segregation of ArTu switchboards is therefore a simple operation to carry out, which does not require either construction of made-to-measure switchboards or any additional sheet cutting, bending or drilling work.

The DMBWin technical software, developed for ArTu secondary distribution switchboards, facilitates configuration, making out estimates and preparation of the documents to be enclosed with the switchboards once these have been cabled and tested.



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# Presentation of the range

## Technical-functional characteristics

The ArTu switchboards are noted for the following features:

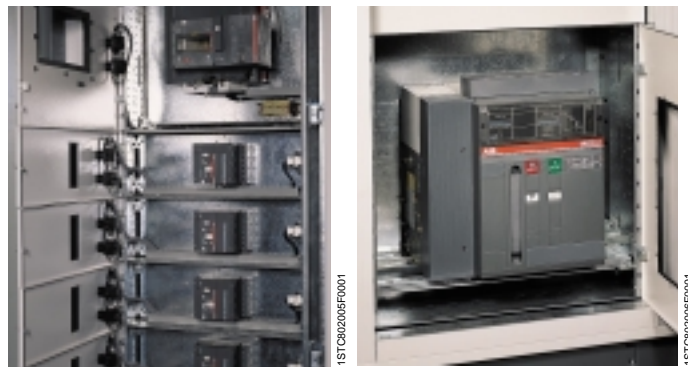
- integrated range of modular metalwork structures up to 3200 A with common accessories;
- possibility of fulfilling all application requirements in terms of installation (wall-mounting, floor-mounting, monoblock and cabinet kits) and degree of protection (IP31, IP41, IP65);
- structure made of hot galvanised sheet;
- maximum integration with modular apparatus and ABB SACE moulded-case and air circuit-breakers;
- minimum switchboard assembly times, thanks to the simplicity of the kits, standardisation of the small assembly items, self-supporting elements and the presence of clear reference points for assembly of the plates and panels;
- segregations in kits up to Form 4.

Furthermore, the range of installation accessories allows:

- assembly of the complete range of ABB SACE System Pro *M* circuit-breakers and modular apparatus with standardised installation solutions for the cabling duct and Unifix cabling system;
- installation without drilling or adaptation of the whole range of Isomax and Tmax moulded-case circuit-breakers with front or

rear terminals in all their possible configurations (fixed, removable, withdrawable, with differential module) thanks to the special kits with a single code consisting of pre-drilled back plate and front panel, accessories and small assembly items;

- installation without additional drilling or adaptation of Emax E1, E2 and E3 fixed or withdrawable air circuit-breakers (up to 3200 A) by means of specific kits - again with a single code - consisting of a base shelf and pre-drilled front door, accessories and small assembly items;



The use and installation of the kits according to the instructions provided means that assembly and cabling times can be reduced to a minimum, for example thanks to the reference points for positioning the panels and plates, and they guarantee respect of the insulation distances and rated characteristics of the circuit-breakers.





# Presentation of the range

## Composition of the series

The range of ArTu switchboards includes three versions, which are completed with the same accessories:

- The **ArTu L** series consists of a range of modular switchboard kits, with a capacity of 24 modules per row and IP31 degree of protection (without door) or IP43 (basic version with door).

Installation can be either wall or floor-mounted:

- Wall-mounted ArTu L, with 600, 800, 1000, and 1200mm heights, 200mm depth, 700mm width. It allows installation of the modular System Pro *M* apparatus, moulded-case SACE Tmax T1-T2-T3 and Isomax S3, S4 and S5 (fixed version with front terminals) circuit-breakers;
- Floor-mounted ArTu L, with 1400, 1600, 1800, 2000mm heights, 240 mm depth, 700mm width. It allows installation of the modular System Pro *M* apparatus and moulded-case SACE Tmax T1-T2-T3 (fixed version with front terminals).

- The **ArTu M** series consists of a modular range of monoblock switchboards for wall-mounted installation (with depths of 150 and 200mm and with IP65 degree of protection) or floor-mounted (with depth of 250 mm and IP31 or IP65 degree of protection), where it is possible to mount System Pro *M* modular apparatus and Isomax S1, S2 and Tmax T1, T2 and T3 circuit-breakers on a DIN rail. The possibility of installing S3 circuit-breakers (200 mm depth) is only foreseen in the M wall-mounted versions, whereas the ArTu M series of floor-mounted switchboards can be equipped with S1...S6 circuit-breakers, together with the Tmax series.

- The **ArTu K** series consists of a range of modular switchboard kits for floor-mounted installation with four different depths (250, 350, 600 and 800 mm) and with IP31 degree of protection (without front door), IP41 (with front door and side ventilation panels) or IP65 (with front door and blind side panels), where it is possible to mount System Pro *M* modular apparatus, the range of Isomax and Tmax circuit-breakers in all their possible configurations, and Emax E1, E2 and E3 circuit-breakers.

ArTu L									
Wall structures			Floor structures			Additional internal cable container	Front coverings		Remove side panels
Functional dimensions <sup>(1)</sup> (mm)			Functional dimensions <sup>(1)</sup> (mm)				Width 300mm	IP31	
H	W	D	H	W	D				
600	600	165				•	•	•	
800	600	165				•	•	•	
1000	600	165				•	•	•	
1200	600	165				•	•	•	
			1400	600	195	•	•	•	•
			1600	600	195	•	•	•	•
			1800	600	195	•	•	•	•
			2000	600	195	•	•	•	•

ArTu M									
Wall structures			Floor structures			Internal cable container	Front coverings		Side coverings
Functional dimensions <sup>(1)</sup> (mm)			Functional dimensions <sup>(1)</sup> (mm)					IP31	
H	W	D	H	W	D				
600	600	150						•	
800	600	150						•	
	600	200						•	
1000	600	200						•	
1200	600	200						•	
			1400	600	250			•	•
			1600	600	250			•	•
				800	250	•		•	•
			1800	600	250			•	•
				800	250	•		•	•
			2000	600	250			•	•
				800	250	•		•	•

ArTu K										
Functional dimensions <sup>(1)</sup> (mm)			Functional frames		Internal cable container		Front coverings		Side coverings	
H	W	D	open	closed	for open frames	for closed frames	IP31	IP65	IP41	IP65
1600	600	250	•				•	•		•
	800	250	•		•		•	•		•
	400	350	•	•			•	•		•
	400	600	•	•			•	•		•
1800	400	800	•	•			•	•		•
	600	250	•				•	•		•
2000	600	350	•	•			•	•		•
	600	600	•	•			•	•		•
	600	800	•	•			•	•		•
	800	250	•	•	•		•	•		•
	800	350	•	•	•	•	•	•		•
	800	600	•	•	•	•	•	•		•
	800	800	•	•	•	•	•		•	•

<sup>(1)</sup> External dimensions are available on page 9/1.

# Presentation of the range

## Composition of the series

1

Cable connection box	Busbar distribution system			Unifix distribution system		System Pro M modular apparatus	Isomax and Tmax moulded-case circuit-breakers				
	Vert. back	Vert. cable container	horiz. back	L Series	H Series		S1/T1 160A	S2/T2 160A	S3/T3 250A	S4 250A	S5 630A
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Busbar distribution system Vertical back structure and cable container	Unifix distribution system		Additional cable container Width 300mm	System Pro M modular apparatus	Isomax and Tmax moulded-case circuit-breakers						
	L Series	H Series			S1/T1 125/160A	S2/T2 160A	S3/T3 250A	S4 250A	S5 630A	S6 630A	
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Segregations Form 2/3/4	Busbar distribution system			Unifix distribution system		Additional cable container		System Pro M modular apparatus	Isomax and Tmax moulded-case circuit-breakers							Emax air circuit-breakers E1/E2/E3 1250/3200A
	Vert. back	Vert. side	Horiz.	L Series	H Series	Width 200mm	Width 300mm		S1/T1 160A	S2/T2 160A	S3/T3 250A	S4 400A	S5 630A	S6 630A	S7 800/1250A	
	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.
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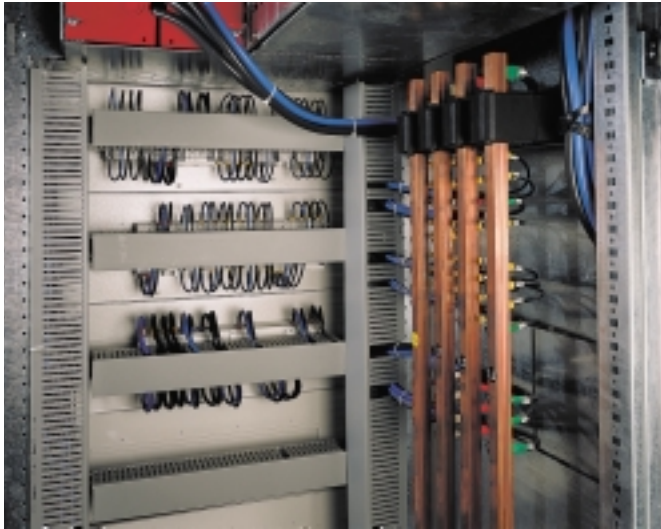
# Presentation of the range

## Composition of the series

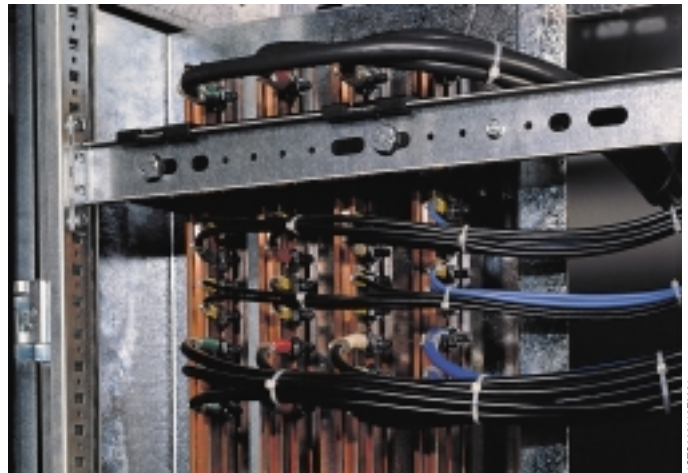
The ArTu switchboards have three functional widths:

- 400 mm, for installation of moulded-case circuit-breakers up to 400 A (S5);
- 600 mm, which is the basic dimension for installation of all the apparatus;
- 800 mm, for making the lateral cable container inside the structure of floor-mounted switchboards or to use panels of the same width.

1



Assembly of the busbars is greatly simplified and is more rapid than the standard distribution systems, thanks also to the limited number of product codes, which completely and univocally identify the specific function of the components, without the need for further kits or accessories (for example, the fixing screws are already included in the busbar holder codes).



The panels for Isomax, Tmax and Emax circuit-breakers have 100 mm modularity. The useful inside height space varies from 600 mm (L wall-mounted series) to 2000 mm (M and L floor-mounted series and K series), offering solutions for the most varied application requirements.

With the shaped section busbar system, ArTu switchboards for low voltage power distribution further enhance perfect integration with ABB SACE apparatus and, in full conformity with the CEI EN 60439 Standard, can be certified by carrying out only the individual tests. Using metalwork structures and relative accessories together with modular apparatus and moulded-case and air circuit-breakers, it is therefore possible to build AS or ANS type switchboards without carrying out further type tests, simply respecting the selection criteria and the assembly instructions for the various components.

The copper distribution busbars have capacities from 400 A to 3200 A. They are completed with the insulating busbar holders, flexible busbars for connection of moulded-case Isomax or Tmax circuit-breakers and with the hammer-headed screws for connection of the branches.

With just four types of busbars, applications up to 3200 A can be satisfied, whereas up to 800 A a single busbar section can be used with 400 A and 800 A capacity respectively, applicable both in ArTu K switchboard series and in ArTu M floor-mounted switchboard series.

The busbar holders, available in the scaled and linear types, allow the busbars to be positioned both in the cable container (internal or external), and on the back of the cabinet, even in the case of the M and L series floor-mounted switchboards, which are characterised by limited dimensions.

In particular, the practicality of the scaled type of busbar holders means that the busbars can be mounted in the depth of the switchboard, at the same time ensuring the access indispensable for fixing them individually.







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# ArTu L modular structures

## General

The ArTu L range, for applications up to 630 A, is available in the two wall-mounted and floor-mounted versions. Both consist of modular kits which allow different combinations to be built, limiting the overall dimensions thanks to the depth of just 200 mm for the wall-mounted version and 240 mm for the floor-mounted version. Made of pickled sheet with 15/10 (bottom and door section) and 12/10 (structure) thickness, in the wall-mounted version the switchboards can be placed side by side and on top of each other,



The box, to be placed above the switchboard roof, increases the space available for the incoming cables and, together with the distribution frame, makes distribution simpler.

The 400 and 800A busbar system with shaped section, with prefabricated connections between circuit-breakers and busbars is also available for the L series. The new busbars with shaped section extend the electrical capacity up to 630A, however it is still possible to use the traditional flat busbars.



up to a maximum of 1800 mm.

Modular apparatus of the pro M System series, and moulded-case Tmax T1-T2-T3 and Isomax S4 and S5 (fixed version with front terminals) circuit-breakers are housed inside the ArTu L switchboards, with a capacity of 24 modules per row.

Apart from in the traditional versions (plain and pre-drilled) with 200 mm height, modular panels are also available in the 150 mm height, which allows optimisation of the space available for circuit-breakers and cables.

Cabling becomes simpler, thanks to the structure which is completely open on all sides: with the switchboard dismantled, it is possible to carry out cabling easily in the workshop or on site, placing the switchboard horizontally on trestles.

It is possible to use the rapid Unifix (H and L) cabling system. Furthermore, the kit for fixing the circuit-breakers further simplifies the job, thanks to the practical rapid snap-on hooking up system and the standardised small items.

Lateral access is guaranteed, as is the possibility of mounting the vertical wiring duct both on the right and on the left. The wiring duct can also be positioned horizontally.

The cable riser container is available in two sizes (200 and 300 mm).

The degree of protection goes from IP31, for the versions without door, up to IP43 for the versions with door. The maximum form of segregation which can be obtained is type 2.

The accessories, which are common to the other two M and K ranger, ensure maximum versatility of use.

### Technical characteristics

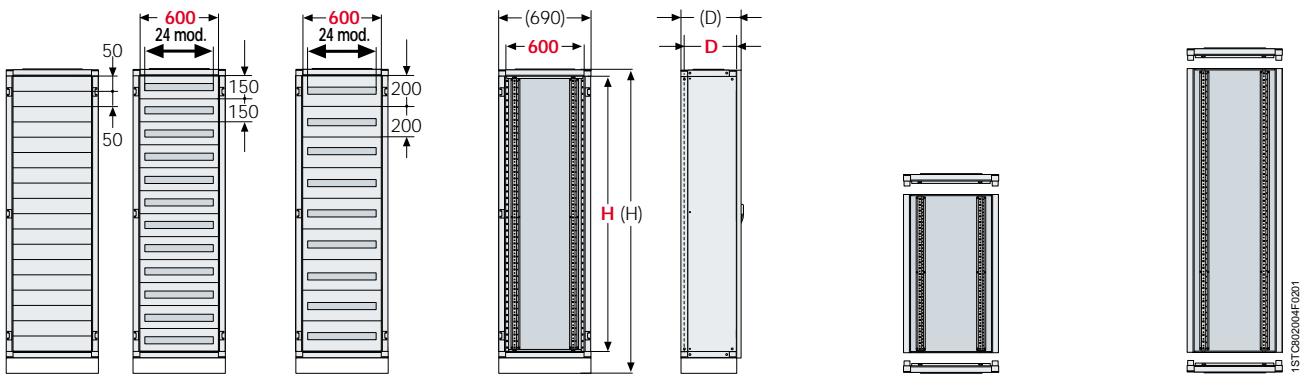
	Wall-mounted D=200mm	Floor-mounted D=240mm
Compliance with Standards	CEI EN 60439-1	
Rated service voltage -Ue	up to 690 V	
Rated insulation voltage -Ui	up to 1000 V	
Rated frequency	50-60 Hz	
Rated impulse withstand voltage -Uimp	6 kV	8 kV
Rated current -In	up to 250 A	up to 630 A
Rated short-circuit withstand current -Icw	up to 25 kA	up to 35 kA
Rated short-circuit peak current -Ipk	up to 52.5 kA	up to 74 kA
IP degree of protection	31 without door 43 with door	31 without door 43 with door



# ArTu L modular structures

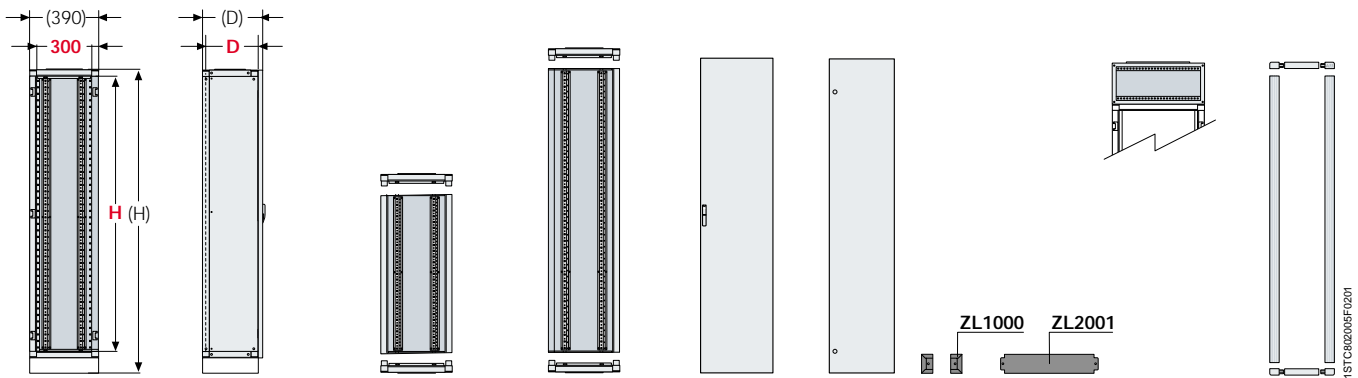
## Rapid selection tables

### Structures



N° vert. mod. H=100mm	N° DIN modules installable DIN panel 24 modules H=150mm	N° DIN modules installable DIN panel 24 modules H=200mm	External overall dimensions <sup>(1)</sup>			Functional dimension <sup>(2)</sup>			Wall-mounted structure back <sup>(3)</sup>	Floor-mounted structure back
			(H) mm	(W) mm	(D) mm	H mm	W mm	D <sup>(3)</sup> mm	Including roof and base	Including roof and base
6	96 (24x4)	72 (24x3)	650	690	204	600	600	165	SL0600	
8	120 (24x5)	96 (24x4)	850			SL0800				
10	144 (24x6)	120 (24x5)	1050			SL1000				
12	192 (24x8)	144 (24x6)	1250			SL1200				
14	216 (24x9)	168 (24x7)	1550			1400			SL1400	
16	240 (24x10)	192 (24x8)	1750	690	240	1600	600	195		SL1600
18	288 (24x12)	216 (24x9)	1950			SL1800				
20	312 (24x13)	240 (24x10)	2150			SL2000				

### Additional cable container

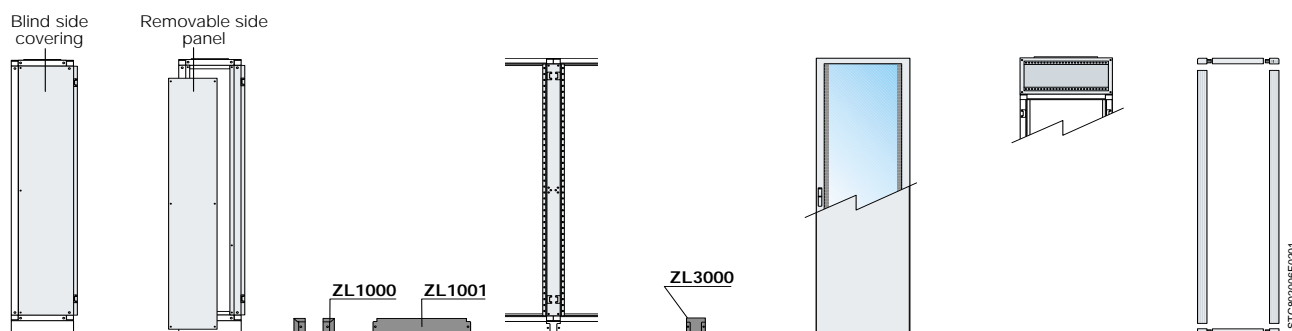


External overall dimensions <sup>(1)</sup>			Functional dimensions <sup>(2)</sup>			Wall-mounting cable container <sup>(3)</sup>	Floor-mounting cable container	Front door IP43	Internal doors	Base strip		Connection box	Finishing section IP31
(H) mm	(W) mm	(D) mm	H mm	W mm	D <sup>(4)</sup> mm	Including roof and base	Including roof and base	Plain door	Plain door	Angles	Flanges	Roof	
650	390	204	600	300	165	VC0600		PC0602					See page 10/4
850			800			VC0800		PC0802					
1050			1000			VC1000		PC1002					
1250			1200			VC1200		PC1202					
1550			1400			VC1400		PO1431	ZL1000	ZL2001	RC2000		
1750	1600		VC1600		PC1602		PO1631						
1950	1800		VC1800		PC1802		PO1831						
2150	2000		VC2000		PC2002		PO2031						

- (1) The external overall dimensions of floor-mounted ArTu L switchboards include the palletisable base strip h=100mm (angle and flanged to be ordered separately).
- (2) The functional dimensions represent the useful space for installing the apparatus.
- (3) The wall-mounted structures cannot be superimposed.
- (4) In this catalogue, reference is always made to the 204/240mm depth respectively corresponding to the overall dimensions with front door. The useful dimensions between panel and back of the structure are 165/195 mm..

# ArTu L modular structures

## Rapid selection tables



Side covering		Base strip		Intermediate uprights	Base strip	Front doors IP43		Connection box	Finishing section IP31
Blind	With removable panel	Angles	Flanges	For side-by-side structures	Angle for side-by-side structures	Glazed door	Blind door	Roof	
MC0600				MI0600		PV0600	PC0601		See page 10/4
MC0800				MI0800		PV0800	PC0801		
MC1000				MI1000		PV1000	PC1001		
MC1200				MI1200		PV1200	PC1201		
MC1400	LF1400			MI1400	ZL3000	PV1400	PC1401	RC1000	
MC1600	LF1600	ZL1000	ZL1001	MI1600		PV1600	PC1601		
MC1800	LF1800			MI1800		PV1800	PC1801		
MC2000	LF2000			MI2000		PV2000	PC2001		

### Recommended solutions for installation of the apparatus

Apparatus	Type of structure/installation						
	Wall-mounted structures			Floor-mounted structures			Connection box
	Vertical on DIN rail	Vertical	Horizontal	Vertical on DIN rail	Vertical	Horizontal	
<b>Pro M System modular apparatus</b>	•			•			
<b>OESA</b>					•		
<b>OETL</b>					•		
<b>Tmax T1</b>	(••)	•	•	(••)	•	•	
<b>Tmax T2</b>	(••)	•	•	(••)	•	•	
<b>Tmax T3</b>	•	(•)	•	•	(•)	•	
<b>Tmax T3</b>					•	•	
<b>Side-by-side Tmax kit</b>					•		
<b>Isomax S4</b>					(•)	(■ ■)	
<b>Isomax S5</b>					(•)	•	
<b>Busbar with shaped section</b>		(•)			(•)		•
					(■)		•
<b>Flat busbar</b>		(•)			(•)		•
					(■)		•
<b>Unifix H-L</b>			•			•	

- (••) Also for Isomax S1-S2
- (•) Can also be installed in the additional cable container
- (■) Can only be installed in the additional cable container
- (■ ■) Also for Isomax S3





# ArTu M monoblock structures

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# ArTu M monoblock structures

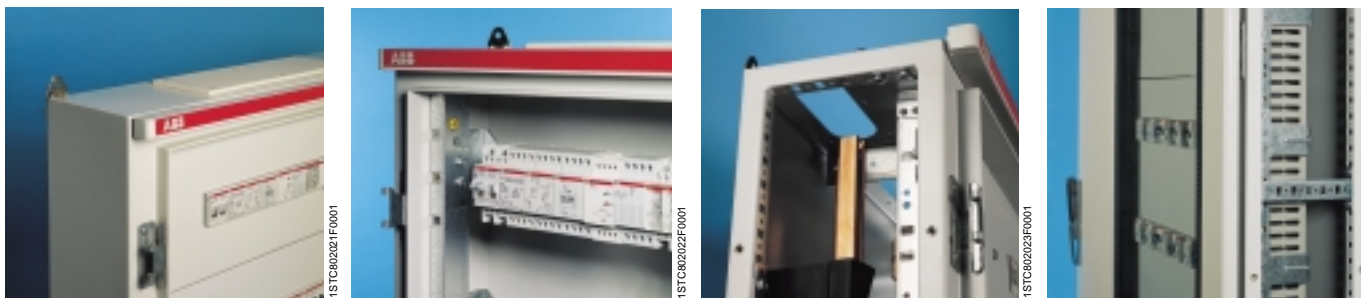
## General

The ArTu M switchboards offer a simple and functional solution for constructing secondary distribution switchboards.

They can be wall- or floor-mounted, only requiring assembly of the front door and side panels thanks to their characteristic monoblock structure. Within the series, the wall-mounted switchboards are preset for installation of System Pro *M* modular apparatus and Isomax S1, S2, S3, Tmax T1, T2 and T3 moulded-case circuit-breakers and the Unifix system. The wall-mounted models include two depths (150 and 200mm), a functional width of 24 DIN modules (600 mm) and four different heights (600, 800, 1000 and 1200 mm),

applied from the inside, or in steel sheet, can be replaced according to the different application requirements by finishing frames with IP 31 degree of protection.

Once again, for this type of M series switchboards, it is in any case possible to carry out fixing to the wall using dedicated brackets (to be ordered separately - code AA 1206). They are also prepared in the bottom and top area with removable flanges for conductor inlet. The base strip 100 mm high complete with removable flanges is already mounted on the structure, and allows easy handling with transpallets.



corresponding to 3, 4, 5 and 6 rows of modular apparatus respectively. The degree of protection is IP 65. The floor-mounted switchboards have a depth of 250 mm and are available in two functional widths (600 mm 24 DIN modules and 800 mm 36 DIN modules or 24 DIN modules plus cable riser) in four heights (1400, 1600, 1800 and 2000 mm), corresponding to 7, 8, 9 and 10 rows of modular apparatus respectively. The maximum rated current is 630 A and the degree of protection varies from IP31 (without front door) to IP 65 (with front door).

All the models allow installation of System Pro *M* modular apparatus and Isomax S1...S6 and Tmax moulded-case fixed version circuit-breakers with front terminals, of busbar systems up to 800 A and of the Unifix system. The sides of the M series floor-mounted switchboards consist of two removable side panels which allow lateral coupling of the structures or cable containers.

The front door, available either made of transparent tempered glass

### Technical characteristics

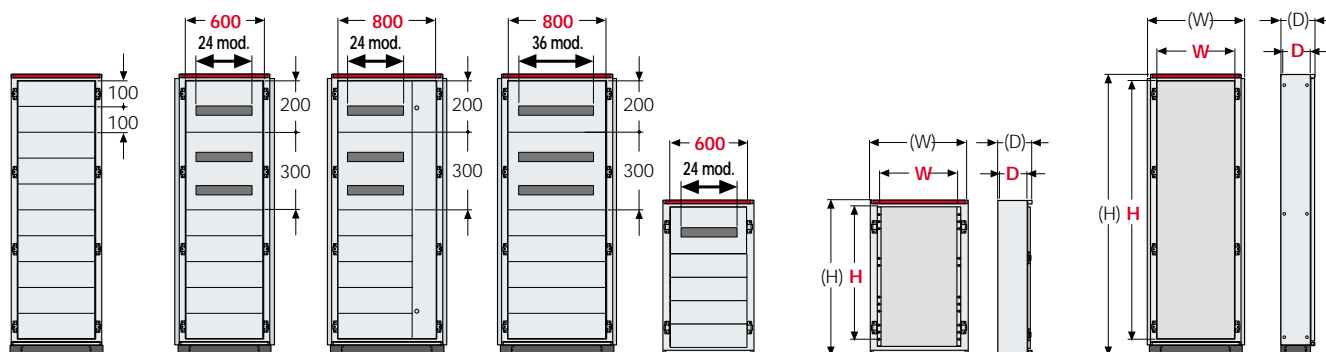
	Wall-mounted D=150/200	Floor-mounted D=250
Compliance with Standards	CEI EN 60439-1	
Rated service voltage – Ue	up to 690 V	
Rated insulation voltage – Ui	up to 1000 V	
Rated frequency	50-60 Hz	
Rated impulse withstand voltage – Uimp	6 kV	8 kV
Rated current - In	up to 250 A	up to 630 A
Rated short-time short-circuit withstand current – Icw	up to 25 kA	up to 35 kA
Rated peak short-circuit current – Ipk	up to 52,5 kA	up to 74 kA
Degree of protection IP	65 with door	31 without door 65 with door



# ArTu M Monoblock structures

## Rapid selection tables

### Structures



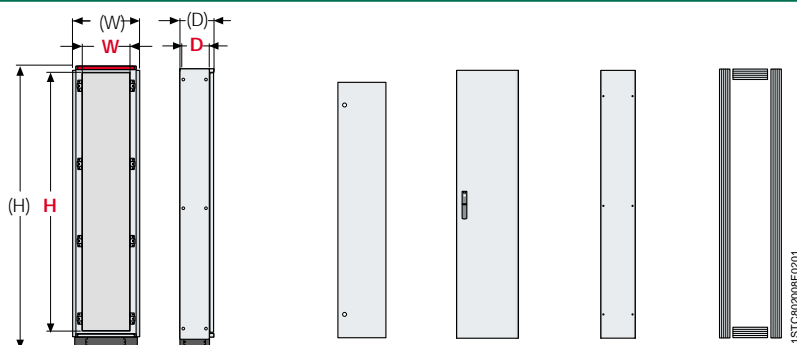
N°vert. mod. H=100mm	N° of DIN mod. which can be installed		Overall external dimensions <sup>(1)</sup>			Functional dimensions <sup>(2)</sup>			Wall structures		Floor structures
	DIN panel 150mm centre distr.	DIN panel 200mm centre distr.	(H) mm	(W) mm	(D) mm <sup>(3)</sup>	H mm	W mm	D mm <sup>(3)</sup>	Basic	With accessories <sup>(4)</sup>	
6		72 (24x3)	700	700	150	600	600	115	SM6061	SM6015	-
8		96 (24x4)	900	700	150	800	600	115	SM8061	SM8015	-
				700	200		600	165	SM8062	SM8020	-
10		120 (24x5)	1100	700	200	1000	600	165	SM1062	SM1020	-
12		144 (24x6)	1300	700	200	1200	600	165	SM1262	SM1220	-
14	216 (24x9)	168 (24x7)	1596	724	250	1400	600	195	-	-	SM1462
16	240 (24x10)	192 (24x8)	1796	724	250	1600	600	195	-	-	SM1662
	360 (36x10)	288 (36x8)		924	250		800	195	-	-	SM1682
18	288 (24x12)	216 (24x9)	1996	724	250	1800	600	195	-	-	SM1862
	432 (36x12)	324 (36x9)		924	250		800	195	-	-	SM1882
20	313 (24x13)	240 (24x10)	2196	724	250	2000	600	195	-	-	SM2062
	468 (36x13)	360 (36x10)		924	250		800	195	-	-	SM2082

The cable container, placed at the side of the structure with the special kit (AD1012), keeps the IP65 degree of protection when installed with an external door.

The external doors are used on the additional cable container to be placed side by side with an ArTu structure with door (IP65). The internal doors are used on the additional cable container placed side by side with an ArTu structure in the IP31 version (i.e. without door and with finishing profiles). This ensures uniformity of appearance between the structure and additional cable container.

Furthermore, the internal doors can be used as internal segregations of the cable container: should a segregation with door of the additional cable container open be requested, it is possible to mount both the internal and external door at the same time.

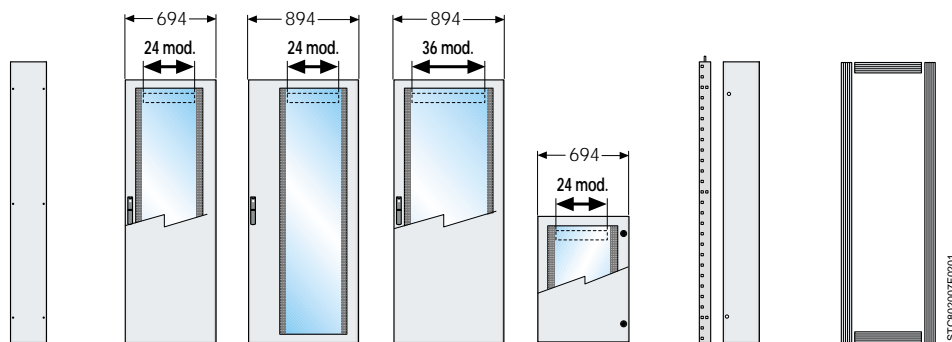
### Additional cable container W = 300mm



Overall external dimensions <sup>(1)</sup>			Functional dimensions <sup>(2)</sup>			Structure	Internal door front IP31	External door front IP65	Side panel	Finishing section IP31
(H) mm	(W) mm	(D) mm <sup>(3)</sup>	H mm	W mm	D mm <sup>(3)</sup>					
1796	424	250	1600	300	195	VC1632	PO1631	PO1630	LF1625	See selection table on page 10/10
1996	424	250	1800	300	195	VC1832	PO1831	PO1830	LF1825	
2196	424	250	2000	300	195	VC2032	PO2031	PO2030	LF2025	

# ArTu M Monoblock structures

## Rapid selection tables



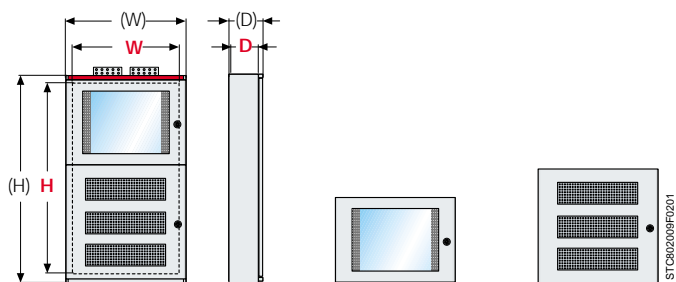
- (1) The overall dimensions of the ArTu M switchboards starting from 1400mm (1596mm) height include the base skirting h=100mm and the side panels.
- (2) The functional dimensions represent the useful space for installing the apparatus.
- (3) In this catalogue, reference is always made to the 150/200/250mm depth corresponding to the overall dimensions with front door. The useful dimensions between panel and bottom of the structure are 115/165/195 mm.
- (4) The ArTu M wall-mounted switchboards are also available in the version fully fitted with accessories which include the DIN rail kits, both the vertical and horizontal 60x60 cabling duct already cut to size with the relative fixing supports, brackets for wall fixing and the glazed door. Only the modular panels have to be ordered separately.

3

Side coverings IP65	Front doors IP65			Internal cable container	Finishing section IP31
Side panel	Glazed door 24 mod.	Glazed door 36 mod.	Blind door 24/36 mod.		
-	PV6060	-	PO6060	-	See page 10/10
-	PV8060	-	PO8060	-	
-	PV8060	-	PO8060	-	
-	PV1060	-	PO1060	-	
-	PV1260	-	PO1260	-	
LF1425	PV1460	-	PO1460	-	
LF1625	PV1660	-	PO1660	-	
LF1625	PV1680	PV1688	PO1680	VC1622	
LF1825	PV1860	-	PO1860	-	
LF1825	PV1880	PV1888	PO1880	VC1822	
LF2025	PV2060	-	PO2060	-	
LF2025	PV2080	PV2088	PO2080	VC2022	



### Structure for constructing switchboards for operating theatres



- (5) The QSO switchboards for operating theatres are complete with brackets (AD1009 n° 4 pieces) for installation of the duct, two DIN rail kits (GD6001 and PM2624 n° 2 pieces) and relative brackets for wall fixing (4 pieces). The switchboard can be fitted with the Yale type key box with single unique cipher (AA8002).

Overall external dimensions <sup>(1)</sup>			Functional dimensions <sup>(2)</sup>			Complete structure <sup>(5)</sup>	Spare parts	
(H) mm	(W) mm	(D) <sup>(3)</sup> mm	H mm	W mm	D <sup>(3)</sup> mm		Glazed door	Blind door
1100	700	200	1000	600	165	SM1069	PV4060	PO6069

# ArTu M Monoblock structures

## Rapid selection tables

### Solutions recommended for installation of the apparatus

Apparatus			Type of structure/Installation			
			D=150mm Vertical on DIN rail	D=200mm Vertical on DIN rail	D=250mm Horizontal	D=250mm Vertical
<b>System Pro M modular apparatus</b>			•	•	•	•
<b>Tmax T1</b>	front terminals	fixed	•	•	•	•
		fixed+diff.mod.		•	•	•
<b>Tmax T2</b>	front terminals	fixed	•	•	•	•
		fixed+diff.mod.		•	•	•
<b>Tmax T3</b>	front terminals	fixed		• <sup>(1)</sup>	•	•
		fixed+diff.mod.		•	•	•
<b>Isomax S1</b>	front terminals	fixed	•	•	•	•
		fixed+diff.mod.	•	•	•	•
<b>Isomax S2</b>	front terminals	fixed	•	•	•	•
		fixed+diff.mod.	•	•	•	•
<b>Isomax S3</b>	front terminals	fixed		• <sup>(2)</sup>	•	•
		fixed+diff.mod.			•	•
<b>Isomax S4</b>	front terminals	fixed			•	•
<b>Isomax S5</b>	front terminals	fixed			•	•
<b>Isomax S6</b>	front terminals	fixed			•	•

<sup>(1)</sup> Can only be installed horizontally with kit KT3112

<sup>(2)</sup> Can only be installed horizontally with kit KS3118



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# ArTu K Modular Structures

## General

The K series of ArTu switchboards consists of a series of components for configuration of floor-mounted kit switchboards, with the following dimensions:

• **three heights**

1600 mm (16 modules of 100 mm), 1800 mm (18 modules of 100 mm) and 2000 mm (20 modules of 100 mm);

• **three widths**

4400 mm (12 DIN modules), 600 mm (18 DIN modules) and 800 mm (36 or 24 DIN modules + cable riser);

• **four depths**

250 mm (for Isomax up to fixed S6 630A), 350 mm (for Isomax up to fixed S6 800A), 600 mm (for Isomax up to fixed S7) and 800 mm (for Emax up to withdrawable E3).

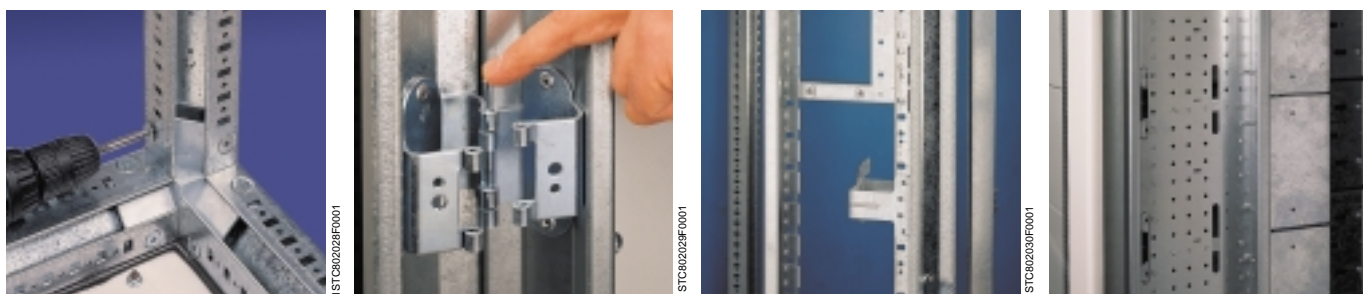
The structure is made entirely of hot galvanised steel sheet, which, thanks to its construction characteristics, guarantees the equipotentiality of the switchboard.

The switchboard structure is completed with two types of functional frames, fitted with reference nicks (at 100 mm pitch) to avoid annoying measurements during assembly of the kits for the apparatus:

- open functional frame (can be used in switchboards where no form of segregation is required);
- closed functional frame (can be used in switchboards where forms 2-3 and 4 segregation are required).

The switchboard is completed with:

- blind (IP 65) and ventilated (IP 41) type side panels;
- blind and transparent doors, fitted with safety glass which can be mounted on all sides (IP 65).



Base and top are supplied pre-mounted by means of a three-way joint which is able to provide considerable structural rigidity.

The base is fitted with removable flanges which allow entry into the areas reserved for the cables, of different size and number.

The base strip (H=100 mm), with removable flanges over the whole perimeter, is integrated directly with the base. Moreover, it is possible to make the base reversible with the roof by removing the base strip so that there is cable entry into the top part.

The four uprights are fitted with a multi-purpose hinge used to assemble the door and to couple the structures, both laterally and at the rear.

Technical characteristics

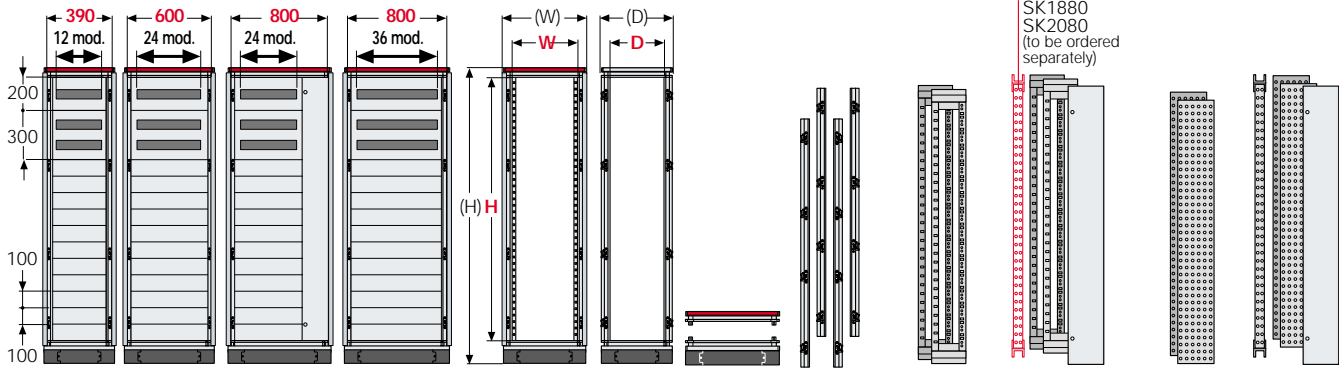
Compliance with Standards	CEI EN 60439-1
Rated service voltage – Ue	up to 690 V
Rated insulation voltage – Ui	up to 1000 V
Rated frequency	50-60 Hz
Rated impulse withstand voltage – Uimp	8 kV
Rated frequency-In	up to 3200 A
Rated short-time short-circuit withstand current – Icw	up to 105 kA
Rated peak short-circuit current – Ipk	up to 254 kA
Degree of protection IP	31 without door
	41 with door and lateral ventilated panel
	65 with door and blind panel



# ArTu K Modular Structures

## Rapid selection tables

### Structure



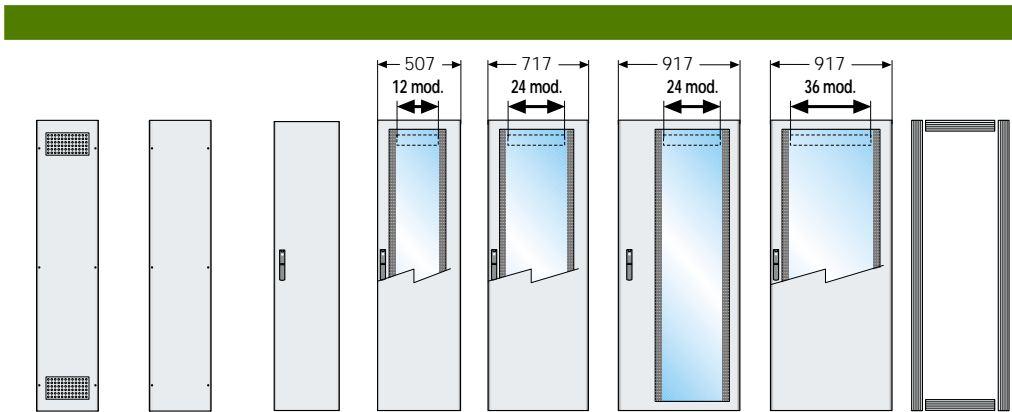
N°vert. mod. H=100mm	N°DIN modules installable		External overall dimensions <sup>(1)</sup>			Functional dimensions <sup>(2)</sup>			Base/Top/ Base strip	Uprights	Functional frames for switchboards without segregation		Functional frames for segregated switchboards	
	DIN panel 150mm centre dist.	DIN panel 200mm centre dist.	(H) mm	(W) mm	(D) <sup>(3)</sup> mm	H mm	W mm	D <sup>(3)</sup> mm			Open frame	Internal cable container <sup>(4)</sup>	Closed frame	Internal cable container <sup>(4)</sup>
16	240 (24x10)	192 (24x8)	1831	748	287	1600	600	150	SK6025	SK1600	SK1604	-	-	-
	360 (36x10)	236 (36x8)		948	287		800	225	SK8025		SK1604	VC1624	-	-
18	144 (12x12)	108 (12x9)	2031	538	362	1800	390	225	SK4040	SK1800	SK1803	-	-	-
				538	637		390	500	SK4060		SK1803	-	SK1802	-
	538	837		390	700		SK4080	SK1803	-		SK1802	-		
	748	287		600	150		SK6025	SK1804	-		-	-		
	748	362		600	225		SK6040	SK1803	-		-	-		
	748	637		600	500		SK6060	SK1803	-		SK1802	-		
	748	837		600	700		SK6080	SK1803	-		SK1802	-		
	948	287		800	150		SK8025	SK1804	VC1824		-	-		
	948	362		800	225		SK8040	SK1803	VC1823		-	-		
	948	637		800	500		SK8060	SK1803	VC1823		SK1802	VC1820		
20	156 (12x13)	120 (12x10)	2231	538	362	2000	390	225	SK4040	SK2000	SK2003	-	-	-
				538	637		390	500	SK4060		SK2003	-	SK2002	-
	538	837		390	700		SK4080	SK2003	-		SK2002	-		
	748	287		600	150		SK6025	SK2004	-		-	-		
	748	362		600	225		SK6040	SK2003	-		-	-		
	748	637		600	500		SK6060	SK2003	-		SK2002	-		
	748	837		600	700		SK6080	SK2003	-		SK2002	-		
	948	287		800	150		SK8025	SK2004	VC2024		-	-		
	948	362		800	225		SK8040	SK2003	VC2023		-	-		
	948	637		800	500		SK8060	SK2003	VC2023		SK2002	VC2020		
948	837	800	700	SK8080	SK2003	VC2023	SK2002	VC2020						

When selecting the components, the characteristics of the apparatus to be mounted inside the switchboard must be taken into consideration, opting for the open frame and cable container when no form of segregation is required and, on the contrary, for the closed frame and cable container when forms of segregation from 2 to 4 are required.

According to the type of covering selected, the degree of protection varies from IP 31 (switchboard without front door) to IP 41 (switchboard with front door and side ventilated panels) up to IP 65 (switchboard with front door and blind side panels).

# ArTu K Modular Structures

## Rapid selection tables

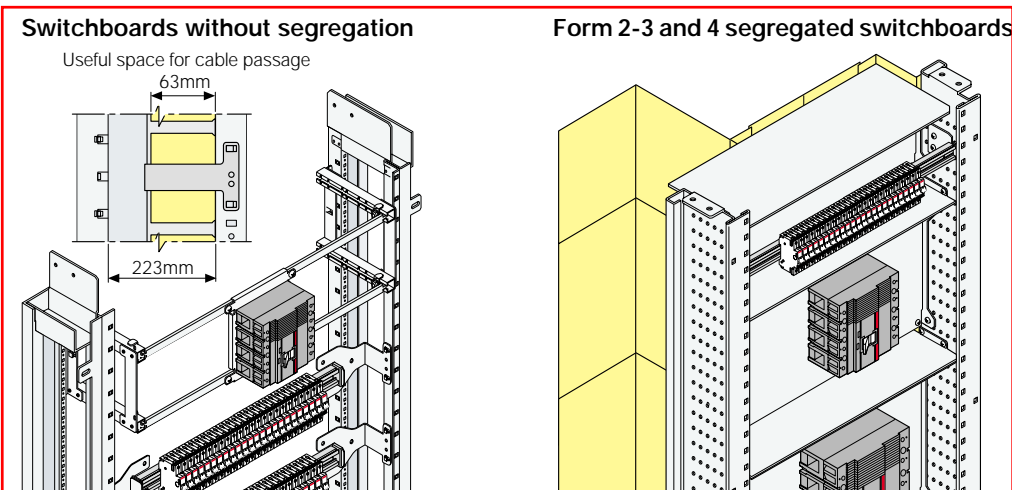


- (1) The overall external dimensions of the ArTu K switchboards include the base strip h=100mm and the side panels, each 14mm wide.
- (2) The functional dimensions represent the useful space for installing the apparatus.
- (3) In this catalogue, reference is always made to the following depths:  
**nominal**  
 250/350/600/800 mm  
**functional**  
 150/225/500/700 mm  
**external**  
 287/362/637/837 mm.

Side coverings			Front and rear coverings IP 65				Finishing section IP31
Ventilated side panel IP41	Side panel IP41	Side door IP41	Glazed door 12/24/36 mod.	Glazed door 24 mod. + int. cable container	Blind door 12/24/36 mod.	Rear panel	
-	LF1626	-	PV1661	-	PO1661	RF1660	
-	LF1626	-	PV1682	PV1681	PO1681	RF1680	
-	LF1840	LI1840	PV1841	-	PO1841	RF1840	
LA1860	LF1860	LI1860	PV1841	-	PO1841	RF1840	
LA1880	LF1880	LI1880	PV1841	-	PO1841	RF1840	
-	LF1826	-	PV1861	-	PO1861	RF1860	
-	LF1840	LI1840	PV1861	-	PO1861	RF1860	
LA1860	LF1860	LI1860	PV1861	-	PO1861	RF1860	
LA1880	LF1880	LI1880	PV1861	-	PO1861	RF1860	
-	LF1826	-	PV1882	PV1881	PO1881	RF1880	
-	LF1840	LI1840	PV1882	PV1881	PO1881	RF1880	
LA1860	LF1860	LI1860	PV1882	PV1881	PO1881	RF1880	
LA1880	LF1880	LI1880	PV1882	PV1881	PO1881	RF1880	
-	LF2040	LI2040	PV2041	-	PO2041	RF2040	
LA2060	LF2060	LI2060	PV2041	-	PO2041	RF2040	
LA2080	LF2080	LI2080	PV2041	-	PO2041	RF2040	
-	LF2026	-	PV2061	-	PO2061	RF2060	
-	LF2040	LI2040	PV2061	-	PO2061	RF2060	
LA2060	LF2060	LI2060	PV2061	-	PO2061	RF2060	
LA2080	LF2080	LI2080	PV2061	-	PO2061	RF2060	
-	LF2026	-	PV2082	PV2081	PO2081	RF2080	
-	LF2040	LI2040	PV2082	PV2081	PO2081	RF2080	
LA2060	LF2060	LI2060	PV2082	PV2081	PO2081	RF2080	
LA2080	LF2080	LI2080	PV2082	PV2081	PO2081	RF2080	

See page 10/16

- (4) Only to be ordered for the structures W=800mm, already inclusive of functional frame. The rear intermediate upright SK 1880 (H=1800mm) or SK 2080 (H=2000mm) in switchboards without segregation must be ordered separately if necessary for fixing onto the back of crosspieces, accessories, busbars, etc.

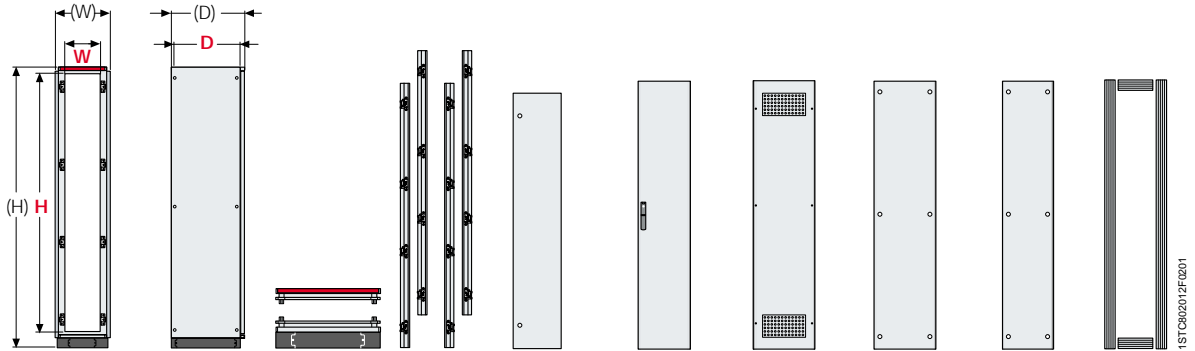


- The functional frames of ArTu K switchboards are available in two versions:
- **switchboards without segregation** (open frame) in cases where no form of segregation is required;
  - **segregated switchboards** (closed frame) in cases where forms 2-3 and 4 segregation are required.

# ArTu K Modular Structures

## Rapid selection tables

### Additional cable container



External overall dimensions <sup>(1)</sup>			Functional dimensions <sup>(2)</sup>			Base/Top/ Base strip	Uprights	Internal front door IP31	External front door IP65	Ventilated side panel IP41	Blind side panel IP65	Rear panel IP65	Finishing section IP31
(H) mm	(W) mm	(D) <sup>(3)</sup> mm	H mm	W mm	D <sup>(3)</sup> mm								
2031	320	362	1800	200	225	VC2040	SK1800	PO1824	PO1823		LF1840	RF1820	See page 10/16
		637			500	VC2060				LA1860	LF1860		
		837			700	VC2080				LA1880	LF1880		
2231	320	362	2000	200	225	VC2040	SK2000	PO2024	PO2023		LF2040	RF2020	
		637			500	VC2060				LA2060	LF2060		
		837			700	VC2080				LA2080	LF2080		
1831	420	287	1600	300	150	VC3025	SK1600	PO1631	PO1633		LF1626	RF1630	
		287			150	VC3025					LF1826		
		362			225	VC3040					LF1840		
2031	420	637	1800	300	500	VC3060	SK1800	PO1831	PO1833	LA1860	LF1860	RF1830	
		837			700	VC3080				LA1880	LF1880		
		287			150	VC3025					LF2026		
2231	420	362	2000	300	225	VC3040	SK2000	PO2031	PO2033		LF2040	RF2030	
		637			500	VC3060				LA2060	LF2060		
		837			700	VC3080				LA2080	LF2080		

(1) The overall external dimensions of the ArTu K switchboards include the base strip h=100mm and the side panels, each 14mm wide.

(2) The functional dimensions represent the useful space for installing the apparatus.

(3) In this catalogue, reference is always made to depths 250/350/600/800mm corresponding to overall external dimensions 287/362/637/837 mm and to useful dimensions 150/225/500/700 mm.

Additional structures 200 and 300mm wide are available, which can be used as cable containers placed side by side laterally with all the ArTu K switchboards. In the same way as the structures, the additional cable container is made up of a base, top, base strip and uprights and is fixed to the structures using the side-by-side kits (AD1014). It is completed with the side panels and the doors (to be ordered separately). The external doors are used on the additional cable container to be placed side by side with an ArTu structure with door (IP 65); the internal doors are used on the additional cable container placed side by side with an ArTu IP31 version structure (i.e. without door and with finishing sections). This ensures uniformity of appearance between the structure and additional cable container. Furthermore, the internal doors can be used as internal segregations of the cable container: should a segregation with door open of the additional cable container be requested, it is possible to mount both the internal and external door at the same time.

# ArTu K Modular Structures

## Rapid selection tables

Solutions recommended for installation of the apparatus

Apparatus			Type of structure/installation											
			Switchboard without segregation								Segregated switchboard			
			D=250mm		D=350mm		D=600mm		D=800mm		D=600mm		D=800mm	
			Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.
<b>System Pro M modular apparatus</b>														
<b>Tmax T1</b>	front terminal	fixed	•	•	•	•	•	•	•	•				
<b>Isomax S1</b>		plug-in			• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>					
		fixed+diff.mod.	•	•	•	•	•	•	•	•				
	rear terminal	fixed			• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>		• <sup>(1)</sup>	
		plug-in			• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>	
		fixed+diff.mod.			• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>	
	<sup>(1)</sup> only for Isomax													
<b>Tmax T2</b>	front terminal	fixed	•	•	•	•	•	•	•	•				
<b>Isomax S2</b>		plug-in			•		•		•					
		fixed+diff.mod.	•	•	•	•	•	•	•	•				
	rear terminal	fixed			•	•	•	•	•	•	•		•	
		plug-in			•		•		•		•		•	
		fixed+diff.mod.			• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>	
	<sup>(1)</sup> only for Isomax													
<b>Tmax T3</b>	front terminal	fixed	•	•	•	•	•	•	•	•				
<b>Isomax S3</b>		plug-in			•		•		•					
		withdrawable			•		•		•					
		fixed+diff.mod.	•	•	•	•	•	•	•	•				
	rear terminal	fixed					•	•	•	•	•		•	
		plug-in						•	•	•	•		•	
		withdrawable						•	•	•	•		•	
		fixed+diff.mod.						•	•	•	•		•	
<b>Isomax S4</b>	front terminal	fixed	•	•	•	•	•	•	•	•				
		plug-in			•		•		•					
		withdrawable					•		•					
	rear terminal	fixed					•	•	•	•	•		•	
		plug-in						•	•	•	•		•	
		withdrawable						•	•	•	•		•	
<b>Isomax S5</b>	front terminal	fixed	•	•	•	•	•	•	•	•				
		plug-in			•		•		•					
		withdrawable					•		•					
	rear terminal	fixed					•	•	•	•	•		•	
		plug-in						(*)	(*)	•	•		•	
		withdrawable						•	•	•	•		•	
<b>Isomax S6</b>	front terminal	fixed	•	•	•	•	•	•	•	•				
		withdrawable						•	•	•				
	rear terminal	fixed						(*)		•			•	
		withdrawable								•			•	
<b>Isomax S7</b>	front terminal	fixed					(*)	•	•	•			•	
		withdrawable						(*)		•			•	
	rear terminal	fixed						•	•	•			•	
		withdrawable								•			•	
<b>Emax E1-E2-E3</b>		fixed								•			•	
	rear terminal	withdrawable								•			•	

For installation of SACE Isomax S7 circuit-breakers in ArTu switchboards with standard external door, replace the apparatus lever with the one in the kit.  
 For Emax E1-E2-E3 air circuit-breakers (fixed and withdrawable), use ArTu K switchboards D=800mm.

(\*) advisable in D=800mm switchboards (greater space for cabling).

# ArTu K Modular Structures

## Rapid selection tables

Solutions recommended for installation of the apparatus fitted with accessories

### Apparatus fitted with accessories

### Type of structure/installation

			Switchboard without segregation						Segregated switchboard				
			D=350mm		D=600mm		D=800mm		D=600mm		D=800mm		
			Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horizz.	Vert.	
<b>Direct rotary handle - Motor operator</b>													
<b>Tmax T1</b>	front terminal	fixed	•		•		•						
<b>Isomax S1</b>	rear terminal	fixed	• <sup>(1)</sup>		• <sup>(1)</sup>		• <sup>(1)</sup>						
<b>Tmax T2</b>	front terminal	fixed	•		•		•						
<b>Isomax S2</b>	rear terminal	fixed	•		•		•						
<b>Tmax T3</b>	front terminal	fixed	•		•		•						
<b>Isomax S3</b>	plug-in	fixed	(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>						
	withdrawable	fixed	(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>						
	rear terminal	fixed			•		•		•		•		•
		plug-in			(•)		(•)		(•)		(•)		(•)
		withdrawable			(•)		(•)		(•)		(•)		(•)
<b>Isomax S4</b>	front terminal	fixed	•		•		•						
	plug-in	fixed	(•)		(•)		(•)						
	withdrawable	fixed			•		•						
	rear terminal	fixed			•		•		(•)		(•)		(•)
		plug-in			(•)		(•)		(•)		(•)		(•)
		withdrawable			(•)		(•)		(•)		(•)		(•)
<b>Isomax S5</b>	front terminal	fixed	•	•	•	•	•	•					
	plug-in	fixed	(•)	(•)	(•)	(•)	(•)	(•)					
	withdrawable	fixed			•		•						
	rear terminal	fixed			•		•		•	•	•	•	•
		plug-in			•		•		(•)	(•)	(•)	(•)	(•)
		withdrawable			(•)		(•)		(•)	(•)	(•)	(•)	(•)
<b>Isomax S6</b>	front terminal	fixed			•		•						
	withdrawable	fixed			•		•						
	rear terminal	fixed			•		•						
		withdrawable			(•)		(•)						
<b>Isomax S7</b>	front terminal	fixed			•		•						
	withdrawable	fixed			•		•						
	rear terminal	fixed			•		•						
		withdrawable							(•)		(•)		(•)
<b>Interlocked-Interlocked motor operated</b>													
<b>Tmax T3</b>	front terminal	fixed		(•) <sup>(2)</sup>	•		•						
<b>Isomax S3</b>	plug-in	fixed		(•) <sup>(2)</sup>	(•) <sup>(2)</sup>		(•) <sup>(2)</sup>						
	withdrawable	fixed		(•) <sup>(2)</sup>	(•) <sup>(2)</sup>		(•) <sup>(2)</sup>						
	rear terminal	fixed			•		•		•		•		•
		plug-in			(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>
		withdrawable			(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>		(•) <sup>(2)</sup>
		fixed+diff.mod											
<b>Isomax S4</b>	front terminal	fixed		(•)	(•)		(•)						
	plug-in	fixed		(•)	(•)		(•)						
	rear terminal	fixed			•		•		•		•		•
		plug-in			(•)		(•)		•		•		•
		withdrawable			(•)		(•)						
<b>Isomax S5</b>	front terminal	fixed		•	•		•						
	plug-in	fixed		(•)	(•)		(•)						
	withdrawable	fixed			•		•						
	rear terminal	fixed		•	•		•		•	•	•	•	•
		plug-in		(•)	(•)		(•)		•	•	•	•	•
		withdrawable			(•)		(•)		•	•	•	•	•
<b>Isomax S6</b>	front terminal	fixed			•		•						
	withdrawable	fixed			•		•						
	rear terminal	fixed			•		•						
		withdrawable			•		•						
<b>Isomax S7</b>	front terminal	fixed			•		•						
	withdrawable	fixed			•		•						
	rear terminal	fixed			•		•						
		withdrawable											

<sup>(1)</sup> Only for Isomax

<sup>(2)</sup> For Tmax, use standard door

(•) Use with the glazed extending door dedicated to assembly of Isomax circuit-breakers with direct rotary handle, motor operator and interlocked.

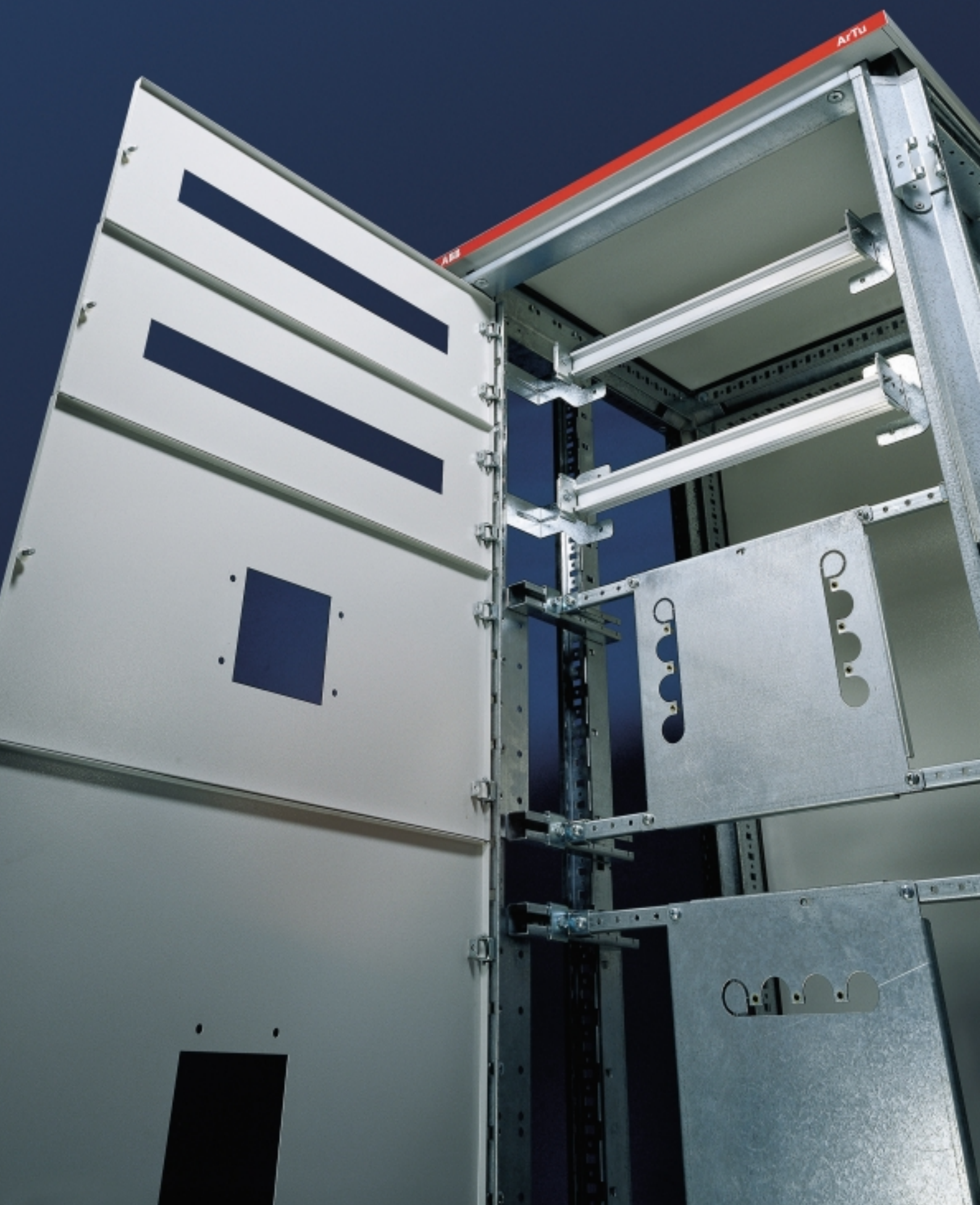
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# Kits for switchboards without segregation

## General

The kits for installation of the apparatus inside ArTu switchboards are designed according to an integrated concept of metalwork structures and circuit-breaker. The assembly positions are pre-defined, thereby always guaranteeing the insulation distances and providing perfect alignment of the apparatus on the front panel. All the kits can be mounted from the front, which is also thanks to the self-supporting structures which only have to be bolted together at a later time.

The **kits for moulded-case circuit-breakers** are fitted with two supporting crosspieces, the self-centring base plate with threaded bushings for fixing the circuit-breakers from the front, together with the fixing brackets specially shaped for conductor passage, the front panel and all the bolts and screws required.

The **kits for air circuit-breakers** consist of supporting crosspieces, the front panel and all the bolts and screws needed.



The **DIN rail kits** consist of:

- a drawn aluminium piece able to resist the load of the circuit-breakers
- the fixing brackets (patented), prepared for housing the vertical cabling duct,
- the bolts and screws needed for assembly.

The standard kit can be completed with a set of accessories destined for installation of the cabling duct horizontally and of the panel with modular cut-outs.

The DIN rail, made of aluminium, has three pre-defined assembly positions, corresponding to the depths of the Pro *M* System, Isomax and Tmax circuit-breakers respectively, and has a DIN 35 rail on both sides.

The rear part can be used to support the wiring duct, up to 60x80mm, which can be fixed both vertically (at the side of the circuit-breakers thanks to the special supports of the DIN rail); and horizontally (between two rows of modular circuit-breakers, using the special brackets AD1037); or for fixing any accessories.

There are also **"universal" kits**, which allow assembly of generic apparatus, consisting of base plates and blind front panels.

All the modular apparatus in the pro *M* System range can easily be installed using the special modular panels and the kit consisting of a DIN rail and fixing supports.

The panels have 100mm vertical modularity and are fitted with a hinge which is invisible from the outside, and can be mounted either on the right or left, which ensures earthing of the panel, thereby making the equipotential connection superfluous. The panels are also available in the versions for one, two or three rows of modular circuit-breakers, corresponding to heights of 200, 300 and 600 mm respectively.

If modular and moulded-case circuit-breakers are placed side by side in the same row, the special section (AP6000 for modular pro *M* System and Isomax circuit-breakers or AP6001 for modular pro *M* System and Tmax circuit-breakers) must be used, which allows the assembly position of the circuit-breakers to be adapted correctly so as to use the same modular panel. If the circuit-breakers do not occupy the whole panel cut-out, it is possible to close the spaces with hole covering (12863).

# ArTu L - without segregation

## Installation on DIN rail

Kit for Pro M System, Isomax S1-S2, Tmax T1-T2-T3 modular apparatus, OT and supports for Unifix H

H (mm)	W=600mm DIN rail kit 24 DIN mod.	Panel 1DIN row 24 DIN mod.	Panel 2 DIN row 48 DIN mod.	Panel 3 DIN row 72 DIN mod.
150 <sup>(1)</sup>	GD1520	PM1500		
200	GD1520	PM2624		
300 <sup>(2)</sup>	GD1520	PM2312		
300	2x GD1520		PM3648 <sup>(1)</sup>	
600	3x GD1520			PM6672

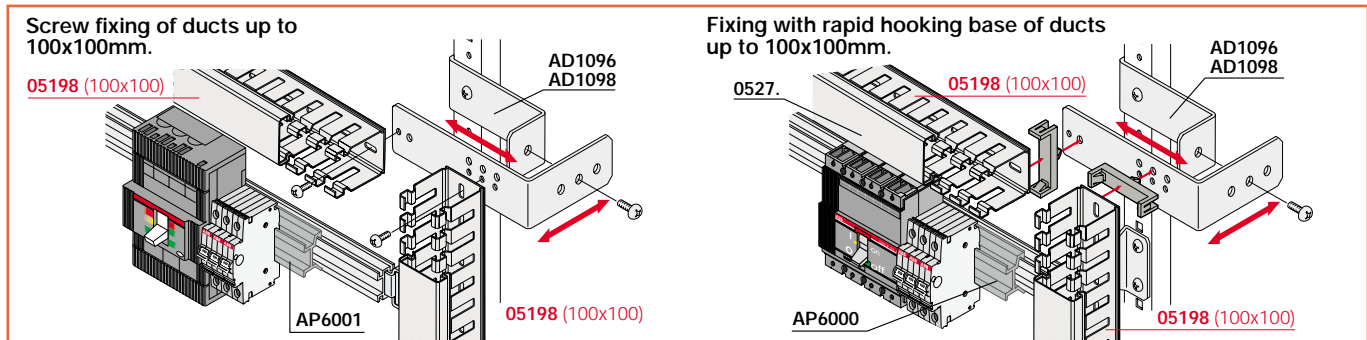
  

Unifix H fixing brackets				
300	AD1097	PM3624		

<sup>(1)</sup> Only for modular System Pro M  
<sup>(2)</sup> Version for Tmax with differential module

5

### Completion items for installation on DIN rail



### Supports for horizontal wiring duct

Code	Description
AD1096	Support for horizontal/vertical wall-mounted wiring duct
AD1098	Support for horizontal/vertical floor-mounted wiring duct

Allows assembly of the cabling wiring duct horizontally and vertically up to 100x100mm (in the case of installation in floor-mounted structure with removable side panel LF.... the vertical wiring duct has maximum dimensions of 100x80mm h x w). The support AD1098 has compensation drillings as the height and width of the wiring duct varies. The accessory is also prepared with  $\varnothing 7$ mm holes for assembly of the ABB wiring duct by means of the Fix-O-rapid hook.

### Depth adapter

Code	Description
AP6000	Depth adapter W=600mm for side-by-side Pro M - Isomax S1-S2
AP6001	Depth adapter W=600mm for side-by-side Pro M - Tmax T1-T2-T3

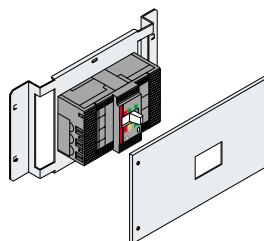
### Hole cover

Code	Description
12863	Hole cover 4 DIN mod. RAL 7035

# ArTu L - without segregation

## Kits for Isomax and Tmax circuit-breakers

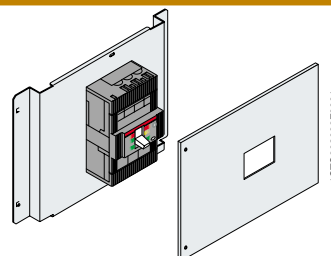
### Horizontal installation



#### Fixed

Circuit-breaker front terminals	N° poles	Dimensions H (mm)	Wall-mounted structures		Floor-mounted structures	
			Structure 24 DIN mod. W=600mm	Cable container side by side W=300mm	Structure 24 DIN mod. W=600mm	Cable container side by side W=300mm
<b>Tmax T1</b>	3-4	200	<b>LK1000</b>		<b>LK1000</b>	
<b>Tmax T1</b> CB + diff. mod.	4	200	<b>LK1004</b>		<b>LK1004</b>	
<b>Tmax T2</b>	3-4	200	<b>LK2000</b>		<b>LK2000</b>	
<b>Tmax T2</b> CB + diff. mod.	4	200	<b>LK2004</b>		<b>LK2004</b>	
<b>Tmax T3</b>	3-4	200	<b>LK3000</b>		<b>LK3000</b>	
<b>Tmax T3</b> CB + diff. mod.	4	300	<b>LK3004</b>		<b>LK3004</b>	
<b>Tmax T3</b> CB + distrib. frame	3-4	200			<b>LK3301</b>	
<b>Isomax S3-S4</b>	3-4	200			<b>LK4000</b>	
<b>Isomax S5</b>	3-4	300			<b>LK5000</b>	

### Vertical installation



#### Fixed

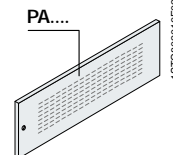
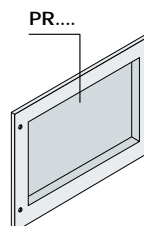
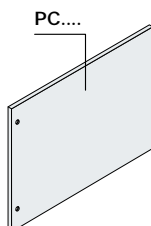
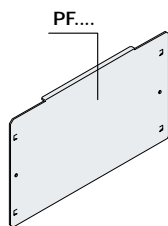
Circuit-breaker front terminals	N° poles	Dimensions H (mm)	Wall-mounted structures		Floor-mounted structures	
			Structure 24 DIN mod. W=600mm	Cable container side by side W=300mm	Structure 24 DIN mod. W=600mm	Cable container side by side W=300mm
<b>Isomax S1-S2 / Tmax T1-T2-T3</b> on DIN rail 35		200	(see page 5/4)		(see page 5/4)	
<b>Tmax T1</b>	3-4	200	<b>LK1001</b>		<b>LK1001</b>	
<b>Tmax T1</b> N° 4 side-by-side CBs	3-4	200			<b>LK4100</b>	
<b>Tmax T2</b>	3-4	200	<b>LK2001</b>		<b>LK2001</b>	
<b>Tmax T2</b> N° 3 side-by-side CBs	3-4	200			<b>LK3200</b>	
<b>Tmax T3</b>	3-4	300	<b>LK3001</b>	<b>LK3003</b>	<b>LK3001</b>	<b>LK3002</b>
<b>Tmax T3</b> CB + diff.mod	4	300	<b>LK3005</b>		<b>LK3005</b>	
<b>Tmax T3</b> N° 3 side-by-side CBs	3-4	300			<b>LK3300</b>	
<b>Isomax S3-S4</b>	3-4	400			<b>LK4001</b> (S3 only)	<b>LK4002</b>
<b>Isomax S5</b>	3-4	500			<b>LK5001</b>	<b>LK5002</b>

The kit for installation of Isomax and Tmax moulded-case circuit-breakers in the versions of switchboards indicated includes the pre-drilled front panel, which can be hinged either on the right or left, the pre-drilled back plate, supports and screws and nuts.

# ArTu L - without segregation

## Switch-disconnectors and generic apparatus

### Blind flat, blind and ventilated panels



#### Back plates

#### Panels

H (mm)	Plain flat		Plain flat		Plain recessed		Ventilated
	Structure 24 DIN mod. W=600mm	Cable container and drawer W=300mm	Structure 24 DIN mod. W=600mm	Cable container and drawer W=300mm	Structure 24 DIN mod. W=600mm	Structure 24 DIN mod. W=600mm	Structure 24 DIN mod. W=600mm
50			PC1050				
100			PC1600	PC1403			PA1600
150			PC1150				
200 <sup>(1)</sup>	PF1002	PC0300	PC2600	PC2401	PR2600		PA2600
300	PF1003		PC3600	PC3401			
400 <sup>(2)</sup>	PF1004		PC4600	PC4401	PR4600		
600	PF1006	PC0600	PC6600	PC6401	PR6600		
800	PF1008		PC8600	PC8401			
1600			PC1660				
1800			PC1860				
2600			PC2060				

Can be used to mount all the non-modular apparatus and for installation of OESA and OETL switch-disconnectors.

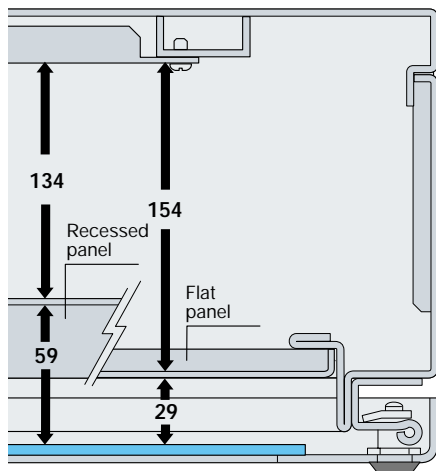
<sup>(1)</sup> For OETL 200 K3-K4 ÷ 315 K3-K4.

<sup>(2)</sup> For OETL 400 D1-D2 ÷ 630 K3-K4.

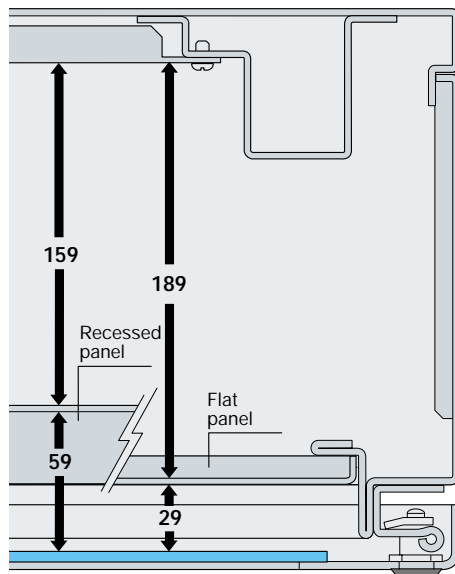
Overall dimensions page 9/15

### Useful internal space

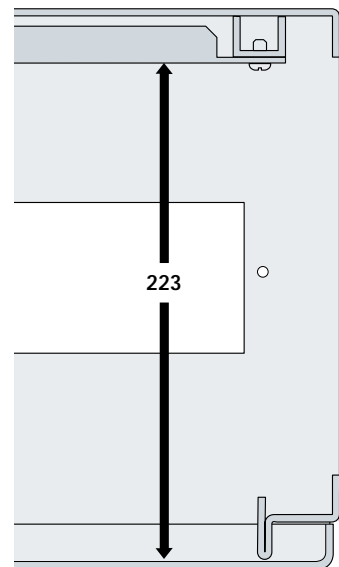
#### Wall-mounted structure



#### Floor-mounted structure



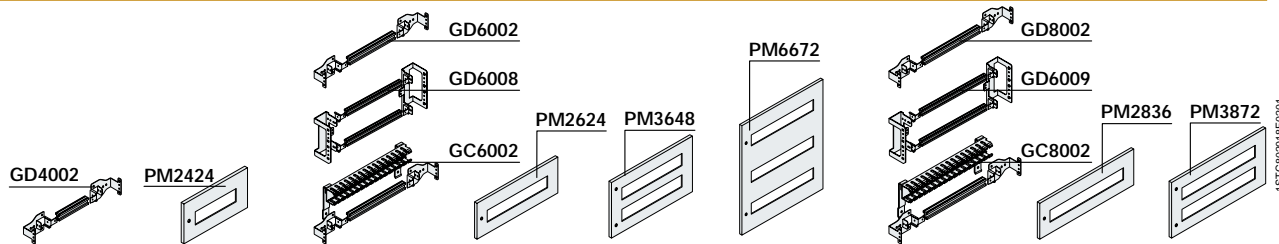
#### Cable connection box



# ArTu M - K - without segregation

## Installation on DIN rail

Kit for System Pro M, Isomax S1-S2, Tmax T1-T2-T3, OT 160 (\*) modular apparatus and supports for Unifix H



W=400mm			W=600mm				W=800mm		
H (mm)	DIN rail kit 12 DIN mod.	Panel 1 DIN row 12 DIN mod.	DIN rail kit 24 DIN mod.	Panel 1 DIN row 24 DIN mod.	Panel 2 DIN rows 48 DIN mod.	Panel 3 DIN rows 72 DIN mod.	DIN rail kit 36 DIN mod.	Panel 1 DIN row 36 DIN mod.	Panel 2 DIN rows 72 DIN mod.

### Standard aluminium version

200	GD4002	PM2424
300 <sup>(2)</sup>		
300 <sup>(1)</sup>		
600		

GD6002	PM2624		
GD6002	PM2312		
GD6008		PM3648	
3x GD6002			PM6672

GD8002	PM2836	
GD8002	PM2315	
GD6009		PM3872

### Standard sheet version

200		
-----	--	--

GD6005	PM2624		
--------	--------	--	--

GD8005	PM2836	
--------	--------	--

### Version fitted with accessories (complete with 60x80 wiring duct and AD 1037 supports)

200		
-----	--	--

GC6002	PM2624		
--------	--------	--	--

GC8002	PM2836	
--------	--------	--

### Reinforced version for Isomax

200		
-----	--	--

GD6004	PM2624		
--------	--------	--	--

GD8004	PM2836	
--------	--------	--

### Reinforced version for Tmax

300 <sup>(2)</sup>		
--------------------	--	--

GD6010	PM2312		
--------	--------	--	--

GD8010	PM2315	
--------	--------	--

### Unifix H fixing brackets

300		
-----	--	--

AD1061	PM3624		
--------	--------	--	--

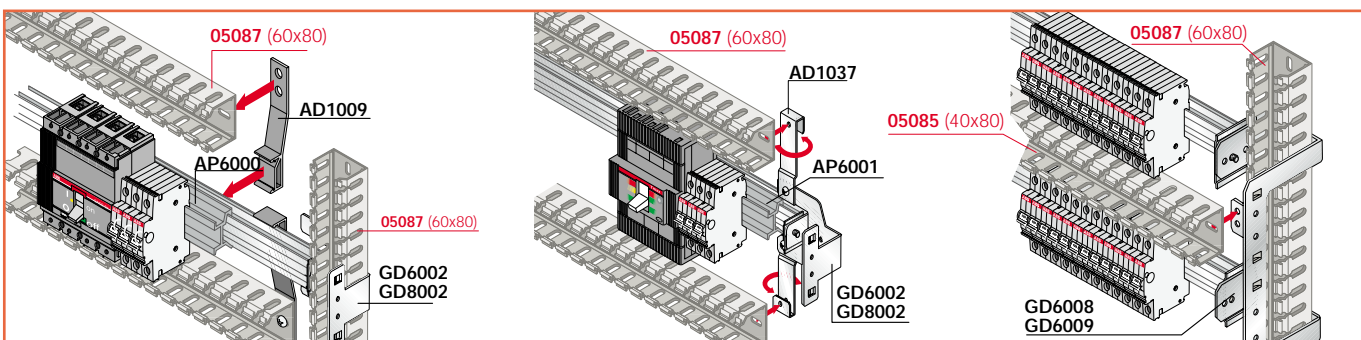
AD1061	PM3836	
--------	--------	--

(1) Only for System Pro M modular apparatus (excluding floor-mounted ArTu M).

(2) For OT≥100 replace the PM code ... with PC2600.

(2) Version for Tmax with differential module.

### Completion items for installation on DIN rail



### Support for horizontal wiring duct

Code	Description
AD1009	Horizontal wiring duct (plastic) supports
AD1037	Horizontal wiring duct (metal) supports

Allows assembly of the cabling wiring duct horizontally up to 60x80mm. The AD1009 plastic model can be positioned on the rear of the DIN rail, whereas the AD1037 metal version is fixed onto the brackets of DIN rail GD 6002/ GD8002, and allows adjustment of the wiring duct depth.

### Depth adapter

Code	Description
AP6000	Depth adapter W=600mm for side-by-side Pro M - Isomax S1-S2
AP6001	Depth adapter W=600mm for side-by-side Pro M - Tmax T1-T2-T

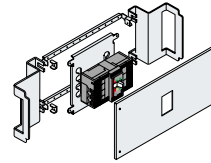
### Hole cover

Code	Description
12863	4 DIN mod. RAL 7035 hole cover

# ArTu M - K d=250mm - without segregation

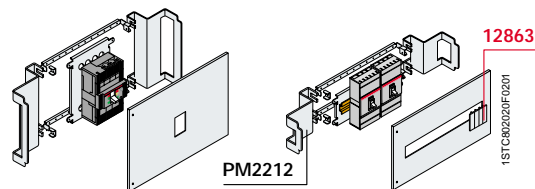
## Kit for Isomax and Tmax circuit-breakers

### Horizontal installation



Circuit-breaker front terminal	N° poles	Dimensions H (mm)	Fixed		Fixed + diff mod. underneath	
			24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm
<b>Isomax S1</b>	4	200	<b>KS1117</b>		<b>KS1102</b>	
<b>Isomax S1</b>	3	200	<b>KS1112</b>			
<b>Isomax S2</b>	4	200	<b>KS2117</b>		<b>KS2102</b>	<b>KL2102</b>
<b>Isomax S2</b>	3	200	<b>KS2112</b>			
<b>Isomax S3</b>	3-4	200	<b>KS3112</b>	<b>KL3112</b>		
<b>Isomax S3</b>	3-4	200 <sup>(1)</sup>	<b>KS3118</b>			
<b>Isomax S3</b>	3-4	300			<b>KS3102</b>	<b>KL3102</b>
<b>Isomax S4</b>	3-4	200	<b>KS4112</b>	<b>KL4112</b>		
<b>Isomax S5</b>	3-4	300	<b>KS5112</b>	<b>KL5112</b>		
<b>Isomax S6</b>	3-4	500	<b>KS6112</b>	<b>KL6112</b>		
<b>Tmax T1</b>	3-4	200	<b>KT1117</b>			
<b>Tmax T1</b>	4	200			<b>KT1102</b>	
<b>Tmax T2</b>	3-4	200	<b>KT2117</b>			
<b>Tmax T2</b>	4	200			<b>KT2102</b>	<b>KL2103</b>
<b>Tmax T3</b>	3-4	200	<b>KT3112</b>	<b>KL3113</b>		
<b>Tmax T3</b>	4	300			<b>KT3102</b>	<b>KL3103</b>

### Vertical installation



Circuit-breaker front terminal	N° poles	Dimensions H (mm)	Fixed		Fixed + diff mod. underneath	
			24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm
<b>Isomax S1-S2 / Tmax T1-T2-T3</b> on DIN 35 rail		200	(see page 5/7)			
<b>Isomax S3-S4-S5</b> on plate with DIN rail	3-4	400 <sup>(2)</sup>	<b>PM2212</b>	<b>PM2214</b>		
<b>Isomax S3</b>	3-4	400	<b>KS3212</b>			
<b>Isomax S4</b>	3-4	400	<b>KS4212</b>			
<b>Isomax S5</b>	3-4	500	<b>KS5212</b>			
<b>Isomax S6</b>	3-4	500	<b>KS6212</b>	<b>KL6212</b>		
<b>Tmax T3</b>	3-4	300	<b>KT3212</b>			

4 DIN module hole cover, colour: RAL 7035, Article **12863**.

<sup>(1)</sup> Kit for wall-mounted ArTu M D=200mm

<sup>(2)</sup> Allows vertical installation of several fixed Isomax S3, S4, S5 circuit-breakers with the possibility for the Isomax S3 circuit-breaker of mounting the differential module side by side. All the circuit-breakers must be fitted with accessories for installation on DIN rail, including the modular front as well.

The kit for installation Isomax and Tmax moulded-case circuit-breakers in the versions of switchboards indicated includes the pre-drilled front panel, which can be hinged either on the right or left, the pre-drilled bottom plate, supports and screws and nuts.

# ArTu M - K d=250mm - without segregation

## Switch-disconnectors and generic apparatus

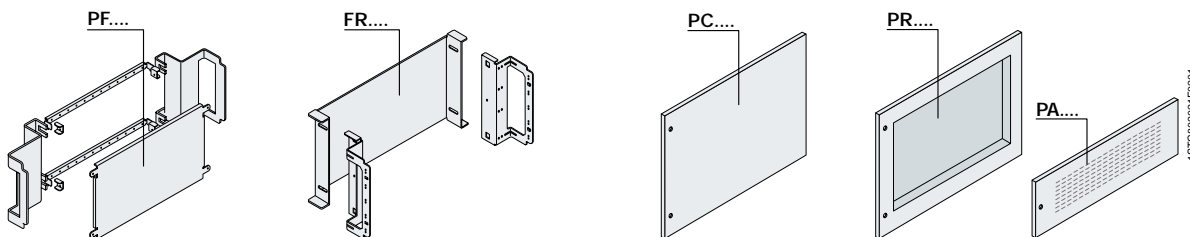
Apparatus of the OETL series up to 400A and OESA up to 160 A (in both cases not motor operated) can be installed inside the floor-mounted ArTu M switchboards.

According to the dimensions of the apparatus, a plain back plate must be used (PF or FR...) and a panel (PC or PR...) of appropriate

height and depth.

The useful space between panel and door is 40mm. For larger-sized handles, use plain recessed panels RR... (see dimensions in table).

### Plain back plates, plain and ventilated panels



H (mm)	Back plates			
	Plain flat		Plain recessed	
	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm
100				
200	PF2610 <sup>(1)</sup>	PF2810	FR2601	FR2801
300				
400	PF4610	PF4810	FR4601	FR4801
600				
800				
1600				
1800				
2000				

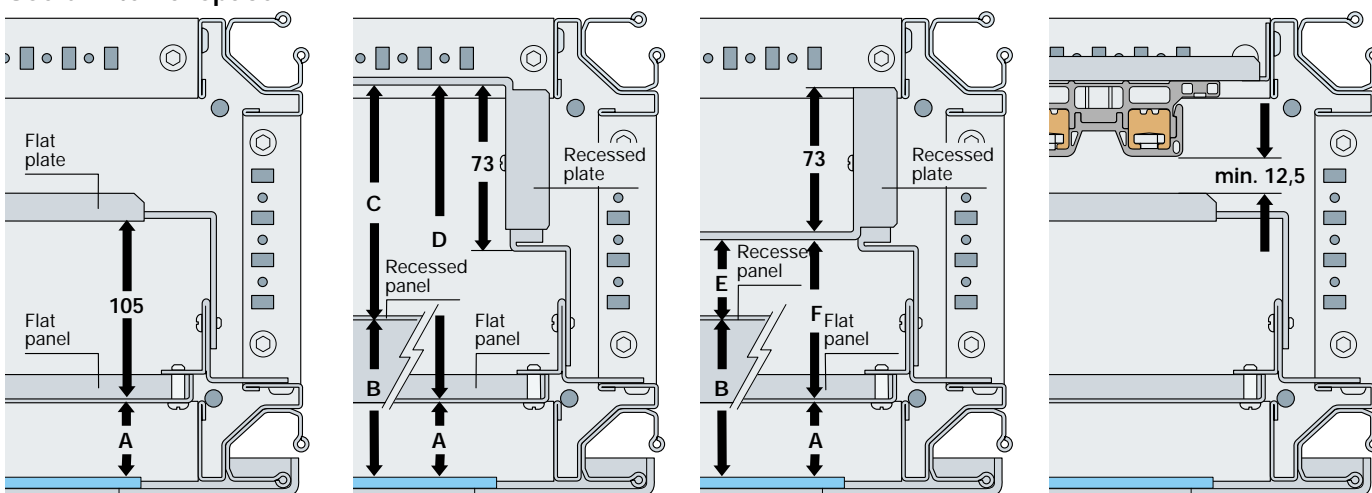
H (mm)	Panel				
	Plain flat		Plain recessed		Ventilated
	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm
	PC1600	PC1800			PA1600
	PC2600	PC2800			PA2600
	PC3600	PC3800			
	PC4600	PC4800			
	PC6600	PC6800			
	PC8600				
	PC1660	PC1680			
	PC1860	PC1880			
	PC2060	PC2080			

<sup>(1)</sup> Can also be mounted on wall-mounted ArTu M.

Can be used to assemble all the non-modular apparatus and to install OESA and OETL switch-disconnectors.

Overall dimensions page 9/15

### Useful internal space



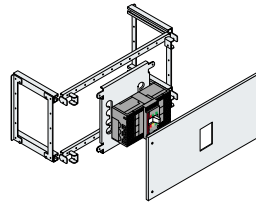
Structure	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
ArTu M	40	70	110+160	140+190	40+90	70+120
ArTu K d=250mm	50	80	150+200	180+230	72+122	102+152

Minimum distance between back plate and busbar holder

# ArTu K - without segregation

## Kit for Isomax and Tmax circuit-breakers

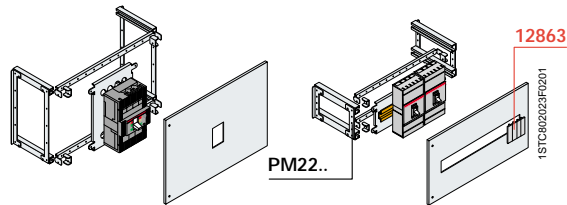
### Horizontal installation



Front or rear circuit-breaker terminals	N°poles	Dimensions H (mm)
Isomax S1	4	200
Isomax S1	3	200
Isomax S2	4	200
Isomax S2	3	200
Isomax S3	3-4	200 <sup>(1)</sup>
Isomax S3	3-4	300
Isomax S4	3-4	200 <sup>(1)</sup>
Isomax S4	3-4	300
Isomax S5	3-4	300
Isomax S6	3-4	500
Isomax S7	3-4	600 <sup>(2)</sup>
Tmax T1	3-4	200 <sup>(1)</sup>
Tmax T1	4	200 <sup>(1)</sup>
Tmax T2	3-4	200
Tmax T2	4	200 <sup>(1)</sup>
Tmax T3	3-4	200 <sup>(1)</sup>
Tmax T3	3-4	300
Tmax T3	4	300 <sup>(1)</sup>

Fixed			Fixed + diff. mod. underneath			Plug-in		Withdrawable	
12 DIN mod. W=400mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	12 DIN mod. W=400	24 DIN mod. W=600mm	36 DIN mod. W=800mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm
KS1411	KS1111			KS1101	KL1101	KS1421	KS1121		
KS1416	KS1116					KS1426	KS1126		
KS2411	KS2111			KS2101	KL2101	KS2421	KS2121		
KS2416	KS2116					KS2426	KS2126		
KS3419	KS3119								
KS3411	KS3111	KL3111		KS3101	KL3101	KS3421	KS3121	KS3431	KS3131
	KS4119								
	KS4111	KL4111					KS4121		KS4131
	KS5111	KL5111					KS5121		KS5131
	KS6111								KS6131
	KS7111								
KT1411	KT1111								
				KT1401	KT1101	KL1102			
KT2411	KT2111						KT2421	KT2121	
				KT2401	KT2101	KL2104			
KT3419	KT3119								
KT3411	KT3111	KL3114					KT3421	KT3121	
				KT3401	KT3101	KL3104			

### Vertical installation



Front or rear circuit-breaker terminals	N°poles	Dimensions H (mm)
Isomax S1-S2 / Tmax T1-T2-T3 on DIN 35 rail	3-4	200
Isomax S3-S4-S5 on plate with DIN rail	3-4	400 <sup>(3)</sup>
Isomax S3	3-4	400
Isomax S4	3-4	400
Isomax S5	3-4	500
Isomax S6	3-4	500
Isomax S7	3-4	700
Tmax T3	3-4	300
Tmax T3	3-4	400

Fixed			Fixed + diff. mod.			Plug-in		Withdrawable	
12 DIN mod. W=400mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	12 DIN mod. W=400	24 DIN mod. W=600mm	36 DIN mod. W=800mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm
(see page 5/4)									
	PM2211	PM2213							
KS3416	KS3211	KL3211				KS3426	KS3221	KS3436	KS3231
KS4411	KS4211	KL4211				KS4421	KS4221	KS4431	KS4231
KS5411	KS5211	KL5211				KS5421	KS5221	KS5431	KS5231
	KS6211	KL6211							KS6231
	KS7211	KL7211							KS7231
KT3416	KT3211	KL3212							
						KT3426	KT3221		

4 DIN module hole cover, colour: RAL 7035, Article **12863**.

<sup>(1)</sup> Only front terminals

<sup>(2)</sup> Only rear terminals

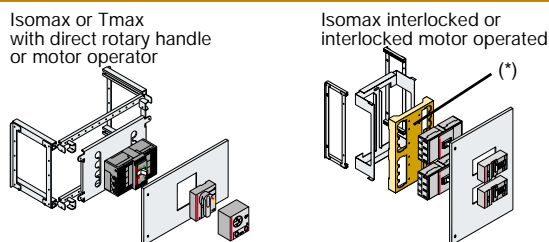
<sup>(3)</sup> Allows vertical installation of several fixed Isomax S3, S4, S5 circuit-breakers with the possibility for the Isomax S3 circuit-breaker of mounting the differential module side by side. All the circuit-breakers must be fitted with accessories for installation on DIN rail, including the modular front as well.

The kit for installation of Isomax S and Tmax moulded-case circuit-breakers in the versions of switchboards indicated includes the pre-drilled front panel, which can be hinged either on the right or left, the pre-drilled bottom plate, supports and screws and nuts. For installation of Isomax S7 circuit-breakers in ArTu switchboards with standard external door, replace the apparatus lever with the one provided in the kit.

# ArTu K - without segregation

## Kit for Isomax and Tmax circuit-breakers fitted with accessories

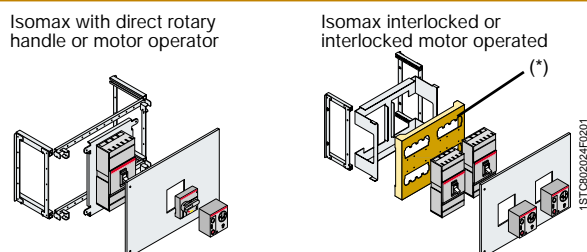
### Horizontal installation



Front or rear circuit-breaker terminals N°poles	Dimensions H (mm)	Fixed 24 DIN mod. W=600mm				Plug-in 24 DIN mod. W=600mm				Withdrawable 24 DIN mod. W=600mm				
		Direct rotary handle	Motor operator	Interlocked	Interbloccati motorizzati	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	
<b>Isomax S1</b>	4 200 <sup>(1)</sup>	KR1111												
<b>Isomax S2</b>	4 200 <sup>(1)</sup>	KR2111												
<b>Isomax S3</b>	3-4 300	KS3111	KS3111		KS3121	KM3121			KS3131	KS3131				
<b>Isomax S4</b>	3-4 300	KS4111	KS4111		KS4121	KM4121			KS4131	KS4131				
<b>Isomax S5</b>	3-4 300	KS5111	KS5111		KS5121	KM5121			KS5131	KS5131				
<b>Isomax S6</b>	3-4 500	KR6111	KM6111						KS6131	KM6131				
<b>Isomax S6</b>	3-4 800			KI6211	KI6213						KI6231	KI6233		
<b>Isomax S7</b>	3-4 600 <sup>(2)</sup>	KR7111	KM7111											
<b>Isomax S7</b>	3-4 800			KI7211	KI7213						KI7231	KI7213		
<b>Tmax T1</b>	3-4 200	KT1112												
<b>Tmax T2</b>	3-4 200	KT2112												
<b>Tmax T3</b>	3-4 300	KT3114			KT3116									

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### Vertical installation



Front or rear circuit-breaker terminals N°poles	Dimensions H (mm)	Fixed 24 DIN mod. W=600mm				Plug-in 24 DIN mod. W=600mm				Withdrawable 24 DIN mod. W=600mm				
		Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	
<b>Isomax S3</b>	4 400			KI3111	KI3111			KI3111	KI3111			KI3131	KI3131	
<b>Isomax S4</b>	4 500			KI4111	KI4111			KI4111	KI4111			KI4131	KI4131	
<b>Isomax S5</b>	4 500			KI5111	KI5111			KI5111	KI5111			KI5131	KI5131	
<b>Isomax S5</b>	3-4 500	KS5211	KS5211			KS5221	KM5221			KS5231	KS5231			
<b>Isomax S6</b>	3-4 500	KR6211	KM6211							KS6231	KM6231			
<b>Isomax S7</b>	3-4 700	KR7211	KM7211							KS7231	KM7231			

<sup>(1)</sup> Transmitted rotary handle

<sup>(2)</sup> Only rear terminals

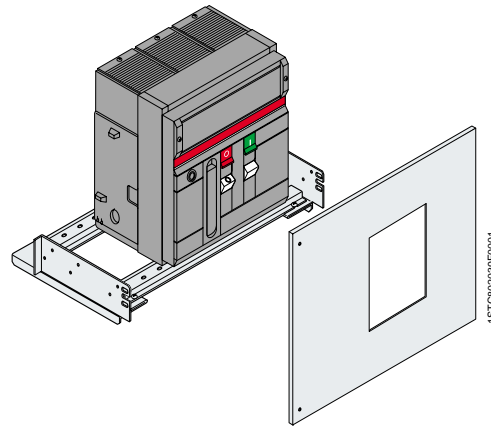
According to the type of set-up provided, the composition of the kit for installing Isomax circuit-breakers in ArTu K switchboards without segregation varies according to what is indicated in the table. To select the glazed door to use (standard or extending) see the table on page 4/8.

(\*) Interlocking plate supplied with the circuit-breakers.

# ArTu K - without segregation

## Kit for Emax circuit-breakers

### Vertical installation

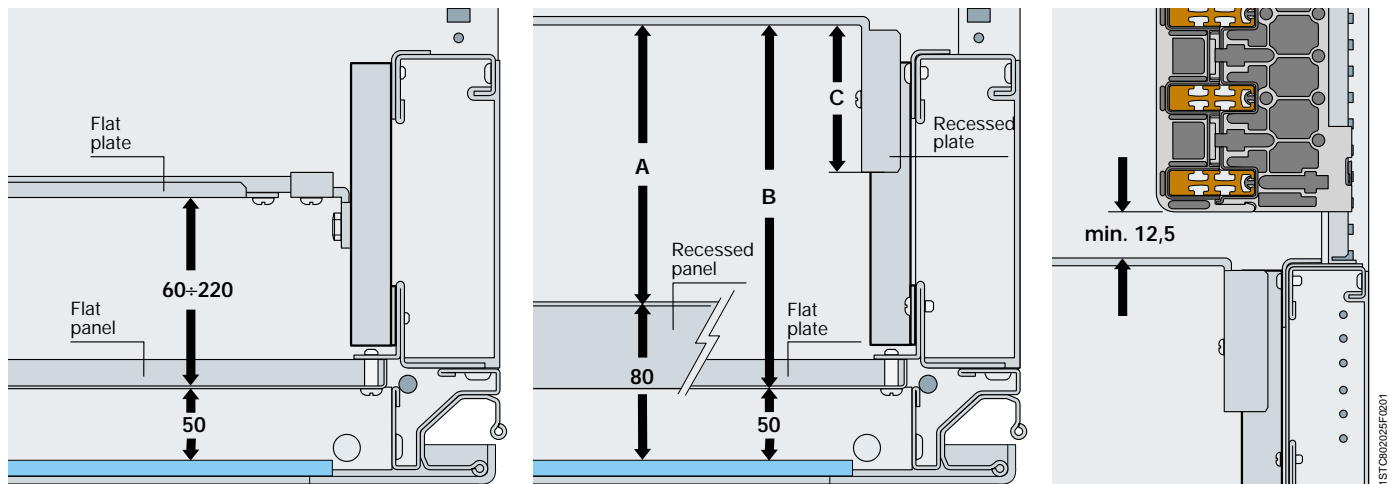


Circuit-breaker	N° poles	Dimensions H (mm)	Fixed		Withdrawable	
			24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm
<b>Emax E1-E2-E3</b>	3-4	600	<b>KE3215</b>	<b>KE4215</b>	<b>KE3235</b>	<b>KE4235</b>
<b>Emax E3 interlocked</b>	3-4	600				

The kit for installing Emax air circuit-breakers in the versions of switchboards indicated includes the pre-drilled front panel and the resting crosspieces. Always use structures with 800mm depth or several structures placed side by side at the rear.

5

### Useful internal space



Structure	Recessed plate H (mm)	A (mm)	B (mm)	C (mm)
ArTu K D=350mm	200	45+220	75+250	28
	400	110+220	140+250	95
ArTu K D≥600mm	200	45+200	75+230	28
	400	110+270	140+300	95
	600	250+380	280+410	240

Minimum distance between back plate and busbar holder

# ArTu K - without segregation

## Switch-disconnectors and general apparatus

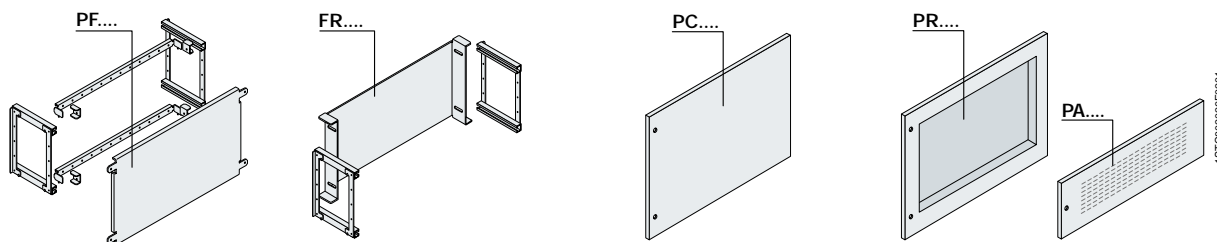
Apparatus of the OETL series up to 400A and OESA up to 160 A (in both cases not motor operated) can be installed inside the floor-mounted ArTu M switchboards.

According to the dimensions of the apparatus, a plain back plate must be used (PF or FR...) and a panel (PC or PR...) of appropriate

height and depth.

The useful space between panel and door is 40mm. For larger-sized handles, use plain recessed panels RR... (see dimensions in table).

### Plain back plates, plain and ventilated panels

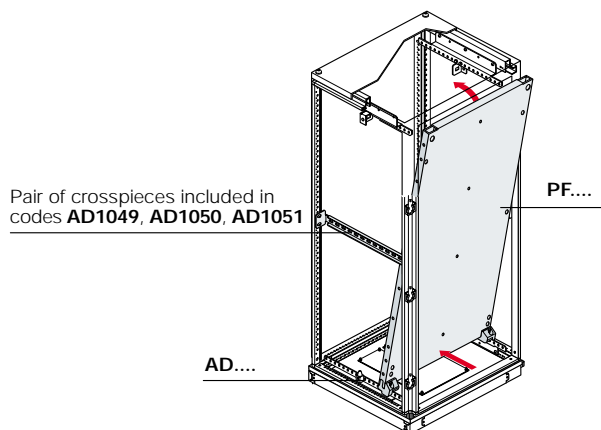


Back plates						Panels					
H (mm)	Plain flat			Plain recessed		Plain flat			Plain recessed		Ventilated
	12 DIN mod. W=400mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm
100						PC1400	PC1600	PC1800			PA1600
200	PF2401	PF2601	PF2801	FR2600	FR2800	PC2400	PC2600	PC2800	PR2600	PR2800	PA2600
300	PF3403	PF3601	PF3801			PC3400	PC3600	PC3800			
400	PF4401	PF4601	PF4801	FR4600	FR4800	PC4400	PC4600	PC4800	PR4600	PR4800	
600	PF6401	PF6601	PF6801	FR6600	FR6800	PC6400	PC6600	PC6800	PR6600	PR6800	
800							PC8600				
1600							PC1660	PC1680			
1800						PC1840	PC1860	PC1880			
2000						PC2040	PC2060	PC2080			

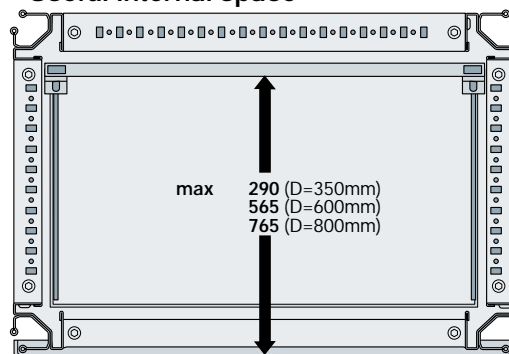
Can be used to assemble all the non-modular apparatus and to install OESA and OETL switch-disconnectors.

Overall dimensions page 9/15

### Back plates



### Useful internal space



Back plates			Tracks		
H (mm)	Galvanised sheet plate		Tracks for front insertion		
	24 DIN mod. W=600mm	36 DIN mod. W=800mm	D=350mm	D=600mm	D=800mm
1800	PF1806	PF1808	AD1049	AD1050	AD1051
2000	PF2006	PF2008			

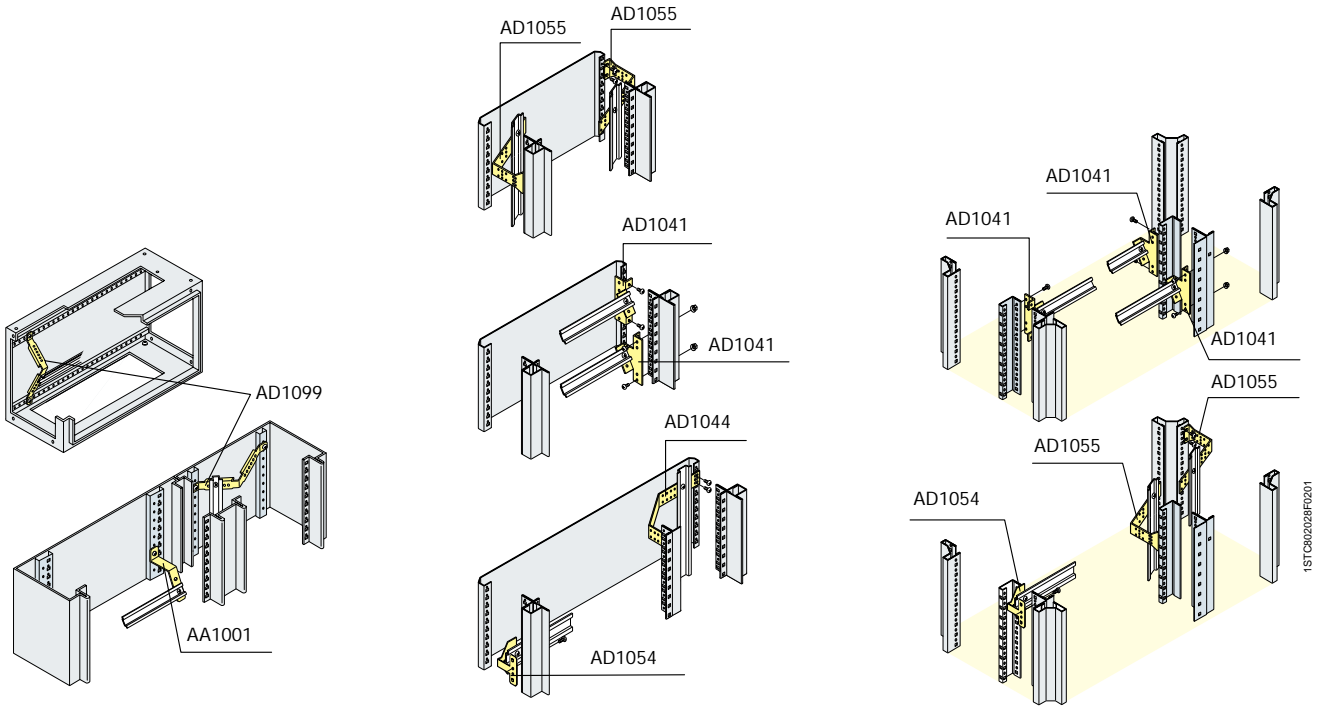
The back plates are available in two 1800mm and 2000mm heights, which correspond to the useful ones of ArTu K switchboards. They allow installation of different apparatus, even with bench cabling, and possibility of adjustment in depth.

The order must also include the pair of tracks for assembly, in the most suitable depth among the three in the catalogue.

# ArTu L - M - K - without segregation

## Terminal box supports

### ArTu L - M - K - Installation of terminal boxes on DIN rail



5

Installation on DIN rail

**Horizontal**

**Horizontal angled 45°**

**Vertical**

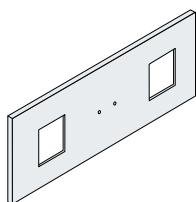
ArTu L			Floor-mounted ArTu M			ArTu K	
Structure	Cable cont. side-by-side	Box	Structure	Internal cable cont.	External cable cont.	Structure	Internal/external cable cont.
		<b>AD1099</b>	<b>AD1054</b>			<b>AD1054</b>	
<b>AA1001</b>			<b>AD1041</b>			<b>AD1041</b>	
	<b>AD1099</b>			<b>AD1044</b>	<b>AD1055</b>		<b>AD1055</b>

The ArTu switchboards are all preset for assembly of terminal boxes with the sole exception of the models in the M wall-mounted series with 150mm depth.

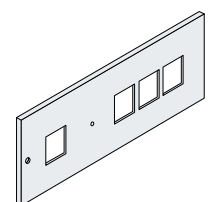
# ArTu L - M - K - without segregation

## Measuring instruments, cabling ducts

### Panels for square measuring instruments



**2-instrument panel**



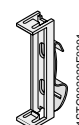
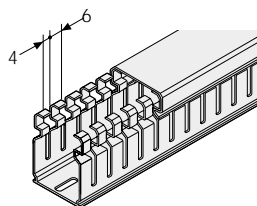
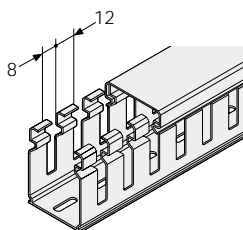
**4-instrument panel**

1STCR0204P0001

H (mm)	72x72mm		96x96mm		72x72mm		96x96mm	
	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm
<b>200</b>	<b>PS2720</b>	<b>PS2728</b>	<b>PS2960</b>	<b>PS2968</b>	<b>PS4720</b>	<b>PS4728</b>	<b>PS4960</b>	<b>PS4968</b>

These allow installation of measuring instruments and relative change-over switches.

### Cabling ducts



1STCR02029F0201

Base (mm)	H (mm)	Cabling ducts		Rapid snap-on bases
		slot 8-12 mm	slot 4-6 mm	
<b>15</b>	<b>17</b>	<b>05 019</b>	<b>05 119</b>	-
	<b>30</b>	<b>05 033</b>	<b>05 133</b>	
	<b>40</b>	<b>05 043</b>	<b>05 143</b>	
	<b>60</b>	<b>05 063</b>	<b>05 163</b>	
<b>25</b>	<b>80</b>	<b>05 083</b>	<b>05 183</b>	<b>05 250</b>
	<b>100</b>	<b>05 094</b>	<b>05 194</b>	
	<b>30</b>	<b>05 035</b>	<b>05 135</b>	
	<b>40</b>	<b>05 045</b>	<b>05 145</b>	
<b>40</b>	<b>60</b>	<b>05 065</b>	<b>05 165</b>	<b>05 252</b>
	<b>80</b>	<b>05 085</b>	<b>05 185</b>	
	<b>100</b>	<b>05 095</b>	<b>05 195</b>	
	<b>30</b>	<b>05 037</b>	<b>05 137</b>	
<b>60</b>	<b>40</b>	<b>05 047</b>	<b>05 147</b>	<b>05 254</b>
	<b>60</b>	<b>05 067</b>	<b>05 167</b>	
	<b>80</b>	<b>05 087</b>	<b>05 187</b>	
	<b>100</b>	<b>05 096</b>	<b>05 196</b>	
<b>80</b>	<b>40</b>	<b>05 049</b>	<b>05 149</b>	<b>05 256</b>
	<b>60</b>	<b>05 069</b>	<b>05 169</b>	
	<b>80</b>	<b>05 089</b>	<b>05 189</b>	
	<b>100</b>	<b>05 097</b>	<b>05 197</b>	
<b>100</b>	<b>40</b>	<b>05 051</b>	<b>05 151</b>	<b>05 258</b>
	<b>60</b>	<b>05 071</b>	<b>05 171</b>	
	<b>80</b>	<b>05 091</b>	<b>05 191</b>	
	<b>100</b>	<b>05 098</b>	<b>05 198</b>	
<b>120</b>	<b>40</b>	<b>05 053</b>	<b>05 153</b>	<b>05 260</b>
	<b>80</b>	<b>05 093</b>	<b>05 193</b>	
<b>150</b>	<b>100</b>	<b>05 099</b>	<b>05 199</b>	<b>05 262</b>

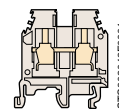
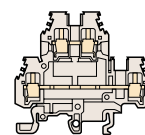
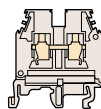
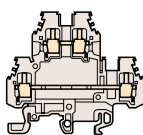
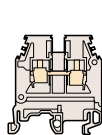
# ArTu L - M - K - without segregation

## Terminals for electro-technical connection

### Terminals with screw

**entrelec**<sup>®</sup>

Member of ABB Group



1STC0202042F0001

**MA 2,5/5**



















**MA 2,5/5.D2**

**M 4/6**

**MS 4/6**

**M 4/6.D2**

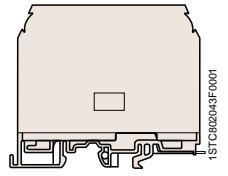
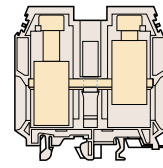
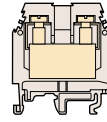
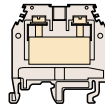
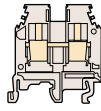
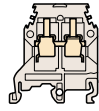
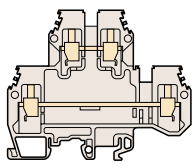
**M 6/8**

	MA 2,5/5	MA 2,5/5.D2	M 4/6	MS 4/6	M 4/6.D2	M 6/8
<b>Pitch</b> (mm)	5	5	6	6	6	8
<b>Max. cross-section</b> (mm <sup>2</sup> )	2,5	2,5	4	4	4	6
<b>Connection</b> 	0115 486.03	0115 490.13	0115 116.07	0115 265.24	0115 271.22	0115 118.11
<b>Neutral</b> 	0125 486.05	0125 490.15	0125 116.01	0125 265.26	0125 126.03	0125 118.13
<b>Protection</b> 	0165 488.27	-	0165 113.16	-	-	0165 114.17
<b>End plate</b> 	0118 368.16	0118 499.23	0118 368.16	0113 885.01	0118 499.23	0118 368.16
<b>Head separator</b> 	0116 728.25	0116 720.21	0113 003.10	-	0113 482.05	0113 003.10
<b>Test pit</b> Ø 2mm 	0163 046.24	0164 950.00	0163 043.21	-	0163 070.00	0163 043.21
<b>Control device</b>	0105 028.21	0173 058.02	0173 059.03	0173 059.03	0163 218.05	0173 060.00
<b>Colour</b>						
<b>Test pin</b> Ø 2mm 	0007 865.26	0007 865.26	0007 865.26	0007 865.26	0007 865.26	0007 865.26
<b>IP20 interc.bar</b> 10 poles 	0176 282.23	0176 740.11	0176 667.04	-	0179 672.21	0176 673.02
<b>IP20 interc.bar without screw</b> 10 poles 	0199 443.24	-	0299 702.14	-	-	0299 720.11
<b>Protection plate</b> 	-	-	0163 427.17 0163 433.15	-	-	0163 428.20 0163 433.15
<b>Comb</b> 10 poles 	0113 544.12	0113 544.12	0113 548.26	0113 548.26	0163 311.22	0163 313.24
<b>Screening bar</b> 	0178 745.14	0173 530.24	0178 745.14	-	-	-

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# ArTu L - M - K - without segregation

## Terminals for electro-technical connection



M 6/8.D2	MS 6/8	M 10/10	M 16/12	M 35/16	M 70/22	M 95/26
8	8	10	12	16	22	26
6	6	10	16	35	70	95
0115 501.12	0115 278.01	0115 120.17	0115 129.14	0115 124.07	0115 216.13	0115 556.10
-	0125 278.03	0125 120.11	0125 129.16	0125 124.01	0125 126.15	0125 556.12
-	-	0165 115.10	0165 130.23	0165 111.14	0165 596.13 without shaped section	0165 556.22 without shaped section
0116 656.25	0114 195.06	0118 368.16	0118 618.01	0118 233.27	0113 065.15	-
0113 482.05	-	0113 003.10	0113 102.10 end plate separator	-	0113 851.16 end plate separator	-
0163 043.21	-	0163 043.21	0163 043.21	0168 237.05 Ø 4mm	-	-
-	0173 060.00	-	-	-	-	-
0007 865.26	0007 865.26	0007 865.26	0007 865.26	0167 860.01 Ø 4mm	-	-
0176 673.02	-	0176 679.10	0179 631.03	0179 617.05 no IP20	-	-
0299 720.11	-	-	-	-	-	-
-	-	0163 429.21 0163 433.15	0163 430.26 0163 432.14	0163 431.13 0173 147.20	0173 328.05 0173 323.20	-
-	0163 313.24	0163 315.26	-	-	-	-
-	-	-	-	-	-	-



# Kits for segregated switchboards

## General

Construction of segregations inside the ArTu distribution switchboards means maintenance or emergency interventions can be carried out without the need to interrupt service, at the same time keeping the maximum level of safety.

Inside the ArTu K series of switchboards with 600 and 800mm depth it is possible to construct segregation compartments of Form 2, 3 and 4 conforming with the EN 60439-1 Standard for the whole

For the higher capacity circuit-breakers (Isomax S5, S6 and S7), the segregation kit is also available in the version suitable for installation of the circuit-breakers vertically.

Form 4 segregation is obtained simply by adding the corresponding cable passage plate to the Form 3 segregation kit. This allows closure of the compartment in correspondence with the rear output terminals of the circuit-breaker.



range of Isomax S circuit-breakers with rear terminals, simply by using the closed functional frame and the installation kits in the version with segregations. According to the type of installation (horizontal or vertical) and the type of segregation required, there are, in fact special kits available for every Isomax S circuit-breaker with rear terminals, consisting of hot galvanised sheet panels and fixing accessories.



For maintenance, it is possible to easily intervene on the single circuit-breaker: this is thanks to the modularity of the segregation kits and the presence of hinges between the segregation panels, which facilitate access to each compartment (carried out by unscrewing just two screws).



Moreover, transport and storage of the segregation kits is facilitated by their limited overall dimensions: thanks to the hinges, the compartments can be assembled by the user, and the segregation panels can be placed on top of each other in the packing.

The drillings provided on the surface of the panels facilitate free circulation of air inside the switchboard, keeping the IP20 degree of protection.

The kit for construction of Form 3 consists of a series of internal segregations made of 15/10mm thick galvanised sheet, made up of:

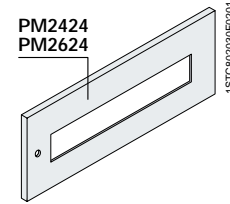
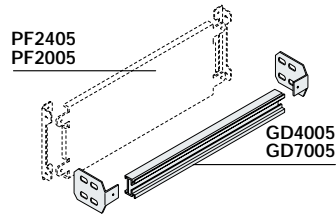
- hinged panels for construction of the internal segregation compartment of the main distribution busbars;
- internal bent panels to make the segregation in correspondence with the rear terminals of each Isomax S circuit-breaker;
- horizontal shelf.



# ArTu K - segregated

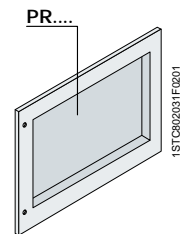
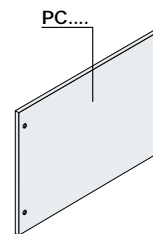
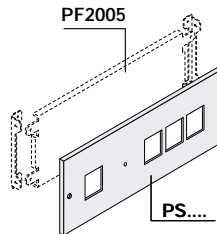
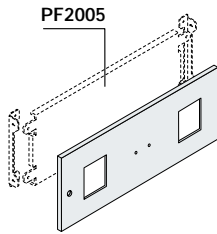
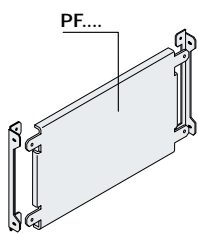
## Installation on Din rail and general apparatus

### Installation on DIN rail



H (mm)	W=400mm		W=600mm	
	DIN rail kit 12 DIN mod.	Panel 1DIN row 12 DIN mod.	DIN rail kit 24 DIN mod.	Panel 1DIN row 24 DIN mod.
200	GD4005	PM2424	GD7005	PM2624

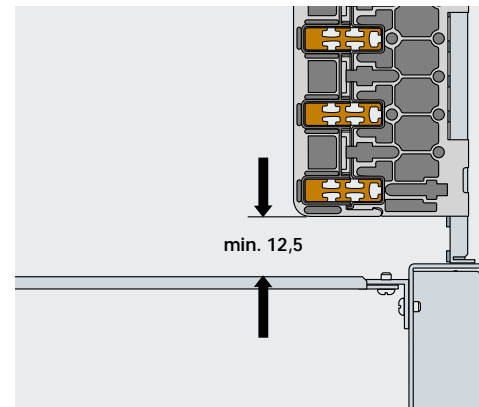
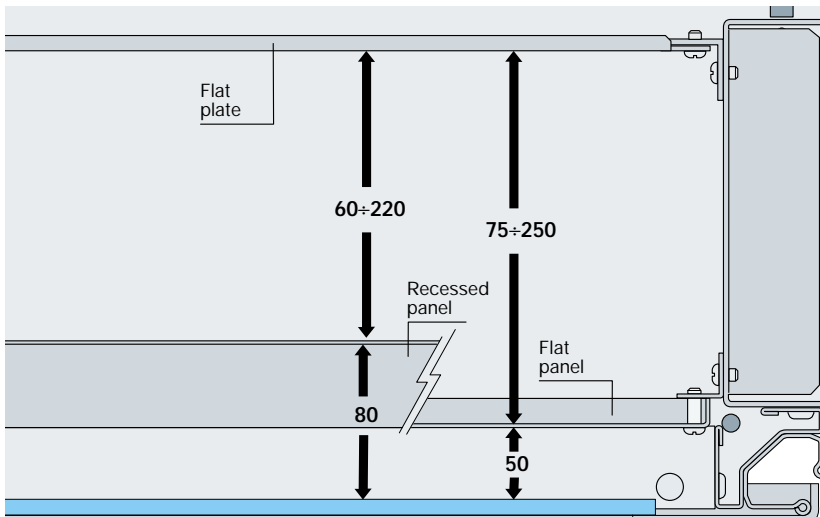
### Back plates, square measuring instrument panels and blind panels



H (mm)	Blind flat		Instrument support panels				Blind panels		
	12 DIN mod. W=400mm	24 DIN mod. W=600mm	2 instruments		4 instruments		Flat		Recessed
			72x72mm 24 DIN mod. W=600mm	96x96mm 24 DIN mod. W=600mm	72x72mm 24 DIN mod. W=600mm	96x96mm 24 DIN mod. W=600mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm	24 DIN mod. W=600mm
100							PC1400	PC1600	
200	PF2405	PF2005	PS2720	PS2960	PS4720	PS4960	PC2400	PC2600	PR2600
300	PF3405	PF3005					PC3400	PC3600	
400	PF4405	PF4005					PC4400	PC4600	PR4600
600	PF6405	PF6005					PC6400	PC6600	PR6600
800		PF8005						PC8600	

These allow installation of measuring instruments with 72x72mm and 96x96mm. They are available in the versions for two or four instruments and relative change-over switches.

### Useful internal space

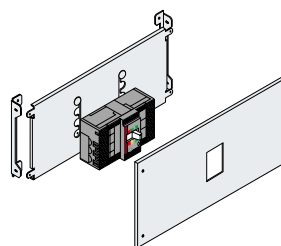


Minimum distance between back plate and busbar holder.

# ArTu K - segregated

## Kit for Isomax and Tmax circuit-breakers

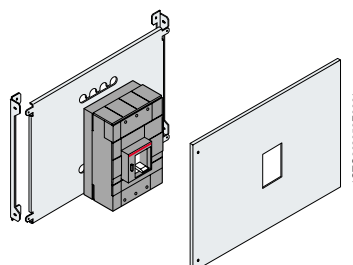
### Horizontal installation



Rear circuit-breaker terminals	N° poles	H (mm)	Fixed		Fixed+diff.mod.under. 24 DIN mod. W=600mm	Plug-in		Withdrawable	
			12 DIN mod. W=400mm	24 DIN mod. W=600mm		12 DIN mod. W=400mm	24 DIN mod. W=600mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm
<b>Isomax S1</b>	4	200	<b>KS1410</b>	<b>KS1110</b>	<b>KS1100</b>	<b>KS1420</b>	<b>KS1120</b>		
<b>Isomax S1</b>	3	200	<b>KS1415</b>	<b>KS1115</b>		<b>KS1425</b>	<b>KS1125</b>		
<b>Isomax S2</b>	4	200	<b>KS2410</b>	<b>KS2110</b>	<b>KS2100</b>	<b>KS2420</b>	<b>KS2120</b>		
<b>Isomax S2</b>	3	200	<b>KS2415</b>	<b>KS2115</b>		<b>KS2425</b>	<b>KS2125</b>		
<b>Isomax S3</b>	3-4	300	<b>KS3410</b>	<b>KS3110</b>	<b>KS3100</b>	<b>KS3420</b>	<b>KS3120</b>	<b>KS3430</b>	<b>KS3130</b>
<b>Isomax S4</b>	3-4	300	<b>KS4410</b>	<b>KS4110</b>		<b>KS4420</b>	<b>KS4120</b>	<b>KS4430</b>	<b>KS4130</b>
<b>Isomax S5 (400A)</b>	3-4	400	<b>KS5410</b>	<b>KS5110</b>		<b>KS5420</b>	<b>KS5120</b>	<b>KS5430</b>	<b>KS5130</b>
<b>Isomax S6</b>	3-4	500		<b>KS6110</b>					<b>KS6130</b>
<b>Isomax S7</b>	3-4	600		<b>KS7110</b>					
<b>Tmax T2</b> 3-4	200		<b>KT2410</b>	<b>KT2110</b>		<b>KT2420</b>	<b>KT2120</b>		
<b>Tmax T3</b> 3-4	300		<b>KT3410</b>	<b>KT3110</b>		<b>KT3420</b>	<b>KT3120</b>		

5

### Vertical installation



Rear circuit-breaker terminals	N° poles	H (mm)	Fixed		Fixed+diff.mod.under. 24 DIN mod. W=600mm	Plug-in		Withdrawable	
			12 DIN mod. W=400mm	24 DIN mod. W=600mm		12 DIN mod. W=400mm	24 DIN mod. W=600mm	12 DIN mod. W=400mm	24 DIN mod. W=600mm
<b>Isomax S5 (400A)</b>	3-4	500		<b>KS5210</b>			<b>KS5220</b>		<b>KS5230</b>
<b>Isomax S6</b>	3-4	600		<b>KS6210</b>					<b>KS6230</b>
<b>Isomax S7</b>	3-4	800		<b>KS7210</b>					<b>KS7230</b>

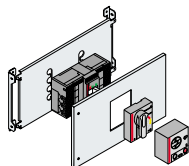
The kit for installation of Isomax S and Tmax moulded-case circuit-breakers in the ArTu K versions of switchboards includes the pre-drilled front panel, which can be hinged either on the right or left, the pre-drilled back plate, supports and screws and nuts.  
For installation of Isomax S7 circuit-breakers in ArTu switchboards with standard external door, replace the apparatus lever with the one in the kit.

# ArTu K - segregated

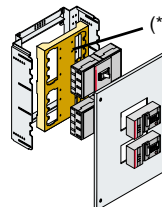
## Kit for Isomax and Tmax circuit-breakers fitted with accessories

### Horizontal installation

Isomax or Tmax T3  
with direct rotary handle  
or motor operator



Isomax interlocked or  
interlocked motor operated

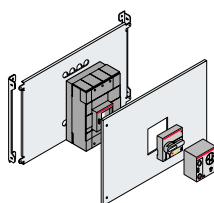


Rear circuit-breaker terminals	N° poles	Dimensions H (mm)	Fixed 24 DIN mod. W=600mm				Plug-in 24 DIN mod. W=600mm				Withdrawable 24 DIN mod. W=600mm			
			Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated
<b>Isomax S3</b>	3-4	300	<b>KS3110</b>	<b>KM3110</b>			<b>KS3120</b>	<b>KM3120</b>			<b>KS3130</b>	<b>KS3130</b>		
<b>Isomax S4</b>	3-4	300	<b>KS4110</b>	<b>KM4110</b>			<b>KS4120</b>	<b>KM4120</b>			<b>KS4130</b>	<b>KS4130</b>		
<b>Isomax S5 (400A)</b>	3-4	400	<b>KS5110</b>	<b>KM5110</b>			<b>KS5120</b>	<b>KM5120</b>			<b>KS5130</b>	<b>KS5130</b>		
<b>Isomax S6</b>	3-4	500	<b>KR6110</b>	<b>KM6110</b>							<b>KS6130</b>	<b>KM6130</b>		
<b>Isomax S6</b>	4	800			<b>KI6210</b>	<b>KI6212</b>						<b>KI6230</b>	<b>KI6232</b>	
<b>Isomax S7</b>	3-4	600	<b>KR7110</b>	<b>KM7110</b>										
<b>Isomax S7</b>	4	800			<b>KI7210</b>	<b>KI7212</b>						<b>KI7230</b>	<b>KI7232</b>	
<b>Tmax T3</b>	3-4	300	<b>KT3115</b>				<b>KT3124</b>							

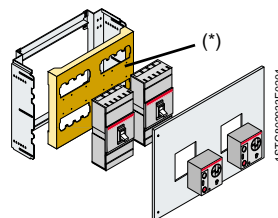
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### Vertical installation (only Form 2)

Isomax with direct rotary handle  
or motor operator



Isomax interlocked or  
interlocked motor operated



Rear circuit-breaker terminals	N° poles	Dimensions H (mm)	Fixed 24 mod. DIN W=600mm				Plug-in 24 mod. DIN W=600mm				Withdrawable 24 mod. DIN W=600mm			
			Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated	Direct rotary handle	Motor operator	Interlocked	Interlocked motor operated
<b>Isomax S3</b>	4	400			<b>KI3110</b>	<b>KI3110</b>			<b>KI3120</b>	<b>KI3122</b>			<b>KI3130</b>	<b>KI3132</b>
<b>Isomax S4</b>	4	500			<b>KI4110</b>	<b>KI4112</b>			<b>KI4120</b>	<b>KI4122</b>			<b>KI4130</b>	<b>KI4132</b>
<b>Isomax S5 (400A)</b>	3-4	500	<b>KS5210</b>	<b>KM5210</b>			<b>KS5220</b>	<b>KM5220</b>			<b>KS5230</b>	<b>KS5230</b>		
<b>Isomax S5 (400A)</b>	4	500			<b>KI5110</b>	<b>KI5112</b>			<b>KI5120</b>	<b>KI5112</b>			<b>KI5130</b>	<b>KI5130</b>
<b>Isomax S7</b>	3-4	600	<b>KR6210</b>	<b>KM6210</b>							<b>KS6230</b>	<b>KM6230</b>		
<b>Isomax S7</b>	4	800	<b>KR7210</b>	<b>KM7210</b>							<b>KS7230</b>	<b>KM7230</b>		

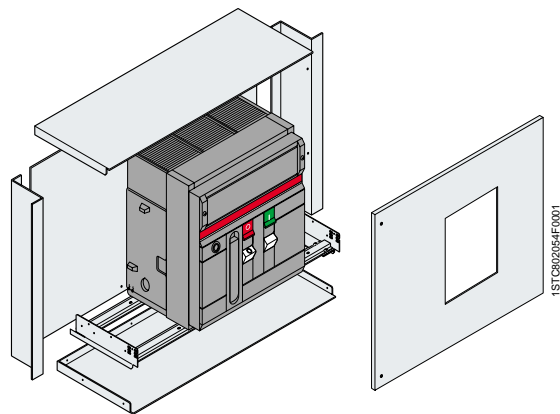
According to the type of set-up provided, the composition of the kit for installing Isomax circuit-breakers in segregated ArTu K switchboards varies according to what is indicated in the table. To select the glazed door to use (standard or extending) see the table on page 4/8.

(\*) Interlocking plate supplied with the circuit-breakers.

# ArTu K - segregated

## Kit for Emax circuit-breakers

### Vertical installation



Circuit-breaker	N° poles	Dimensions H (mm)	Fixed		Withdrawable	
			24 DIN mod. W=600mm	36 DIN mod. W=800mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm
<b>Emax E1-E2</b>	3-4	600	<b>KE2215</b>		<b>KE2235</b>	
<b>Emax E3</b>	3-4	600	<b>KE3205</b>		<b>KE3236</b>	
<b>Emax E3 interlocked</b>	3-4	600		<b>KE4214</b>		<b>KE4234</b>

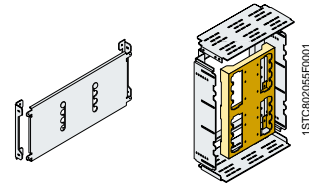
The kit for installing Emax air circuit-breakers in the ArTu K versions of switchboards includes the pre-drilled front panel, the resting crosspieces and the horizontal shelf. Always use structures with 800mm depth or several structures placed side by side at the rear.

To complete the 36 module structure, ask for the special back plates.

# ArTu K - segregated

## Form 2-3-4 segregations

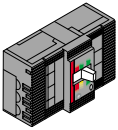
### Forms of segregation



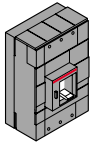
**Form 2**

#### Installation

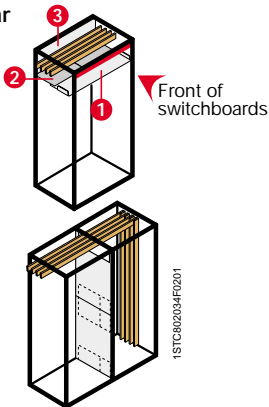
#### Horizontal



#### Vertical



#### Busbar



Rear terminals	N° poles	Dimensions H (mm)
<b>Isomax S1-S2 / Tmax T2</b>	3-4	200
<b>Isomax S3-S4 / Tmax T3</b>	3-4	300
<b>Isomax S5</b>	3-4	400
<b>Isomax S6</b>	3-4	500
<b>Isomax S7</b>	3-4	600
<b>Isomax S6 interlocked+access.</b>	-	800
<b>Isomax S7 interlocked+access.</b>	-	800
<b>Apparatus on DIN rail</b>	-	200
<b>Isomax S5</b>	3-4	500
<b>Isomax S6</b>	3-4	600
<b>Isomax S7</b>	3-4	800
<b>Emax E1-E2-E3</b>	3-4	600

See kit on page 5/21

See kit on page 5/22

See kit on page 5/20

See kit on page 5/21

See kit on page 5/23

12 DIN mod.  
W=400mm

24 DIN mod.  
W=600mm

#### Horizontal busbars

- 1 - Universal horizontal shelf
- 2 - Horizontal busbar segregation
- 3 - Vertical busbar segregation

**SH4000** <sup>(1)</sup>

**SH6000** <sup>(1)</sup>

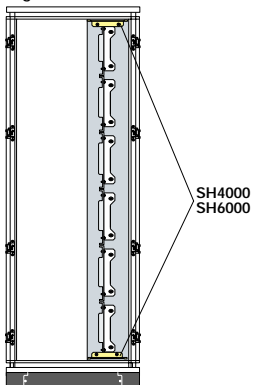
#### Vertical busbar

- Vertical segregation for structure H=1800mm
- Rear segregation<sup>(2)</sup> internal cable container H=1800mm
- Vertical segregation for structure H=2000mm
- Rear segregation<sup>(2)</sup> internal cable container H=2000mm

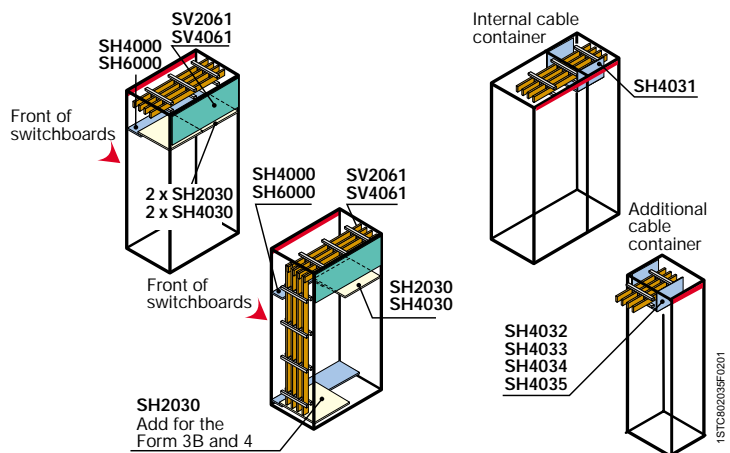
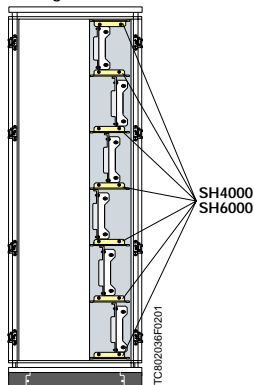
#### Horizontal busbar segregations inside the cable container-depth 600/800mms

Internal cable container W=200mm	Additional cable container W=200mm	Additional cable container W=300mm	Structure used as additional cable container W=400mm	Structure used as additional cable container W=600mm
<b>SH4031</b>	<b>SH4032</b>	<b>SH4033</b>	<b>SH4034</b>	<b>SH4035</b>

Example of segregation Form 2 plates aligned



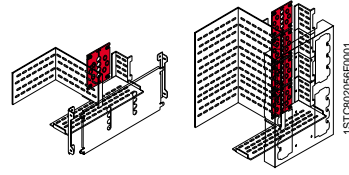
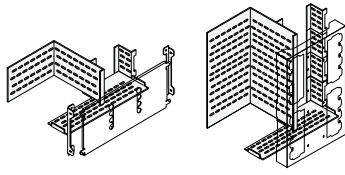
Example of segregation Form 2 plates not aligned



The SH 2030 and SV 2061 versions are indispensable to each other for assembly. Model SH 2030 and SH 4030 can also be used in combination with shelves SH 4000 and SH 6000 to make complete horizontal segregations of the busbar system.

# ArTu K - segregated

## Form 2-3-4 segregations



**Note**

The segregations can be made in ArTu K 400 and 600mm wide switchboards in 600, 800mm depths with closed functional frame. Form 2 is obtained automatically using the segregated type of kit. To obtain the desired form of segregation, the segregations kits relative to the previous forms must be ordered (e.g. Form 4 = Form 2 kit + Form 3 kit + Form 4 kit).

**Form 3**

12 DIN mod. W=400mm	24 DIN mod. W=600mm	Structure D=600mm	Structure D=800mm
FH3224	FH3220		
FH3434	FH3430		
FH3544	FH3540		
	FH3650		
FH3764	FH3760		
	FH3680		
	FH3780		
		FV3556	FV3558
			FV3668
			FV3788

**Form 4**

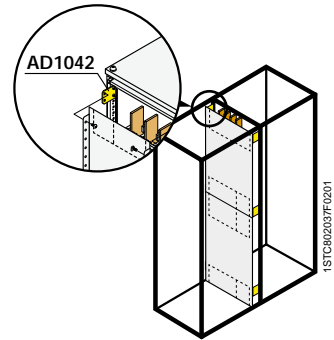
Structure D=600mm	Structure D=800mm
FH4220	
FH4430	
FH4540	
FH4650	
FH4760	
4 x FH4220	
4 x FH4220	
	FV4556
	FV4558
	FV4668
	FV4788

- (1) Segregation Form 2: order 1 piece for each circuit-breaker compartment + 1 piece per structure. Segregation Form 3 or 4: order 1 piece for each structure.
- (2) Possibility of front assembly only with external door.

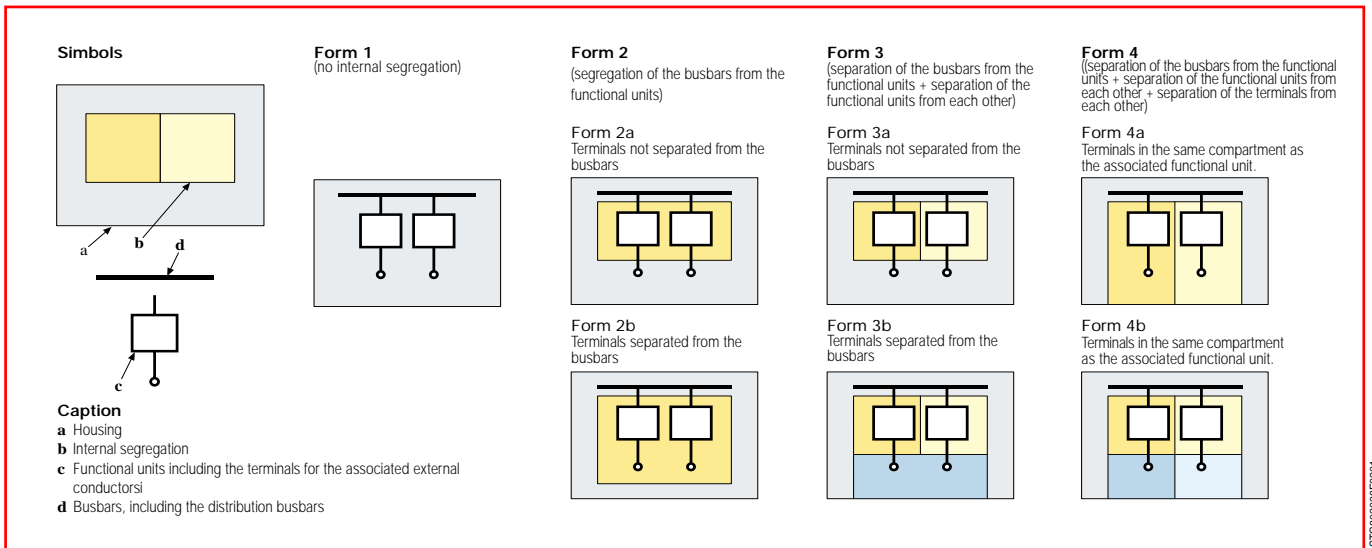
12 DIN mod. W=400mm	24 DIN mod. W=600mm	Structure D=600mm	Structure D=800mm
SH4030	SH2030		

12 DIN mod. W=400mm	24 DIN mod. W=600mm
SV4061	SV2061

	SV1860	SV1880
	AD1024	AD1024
	SV2265	SV2285
	AD1025	AD1025

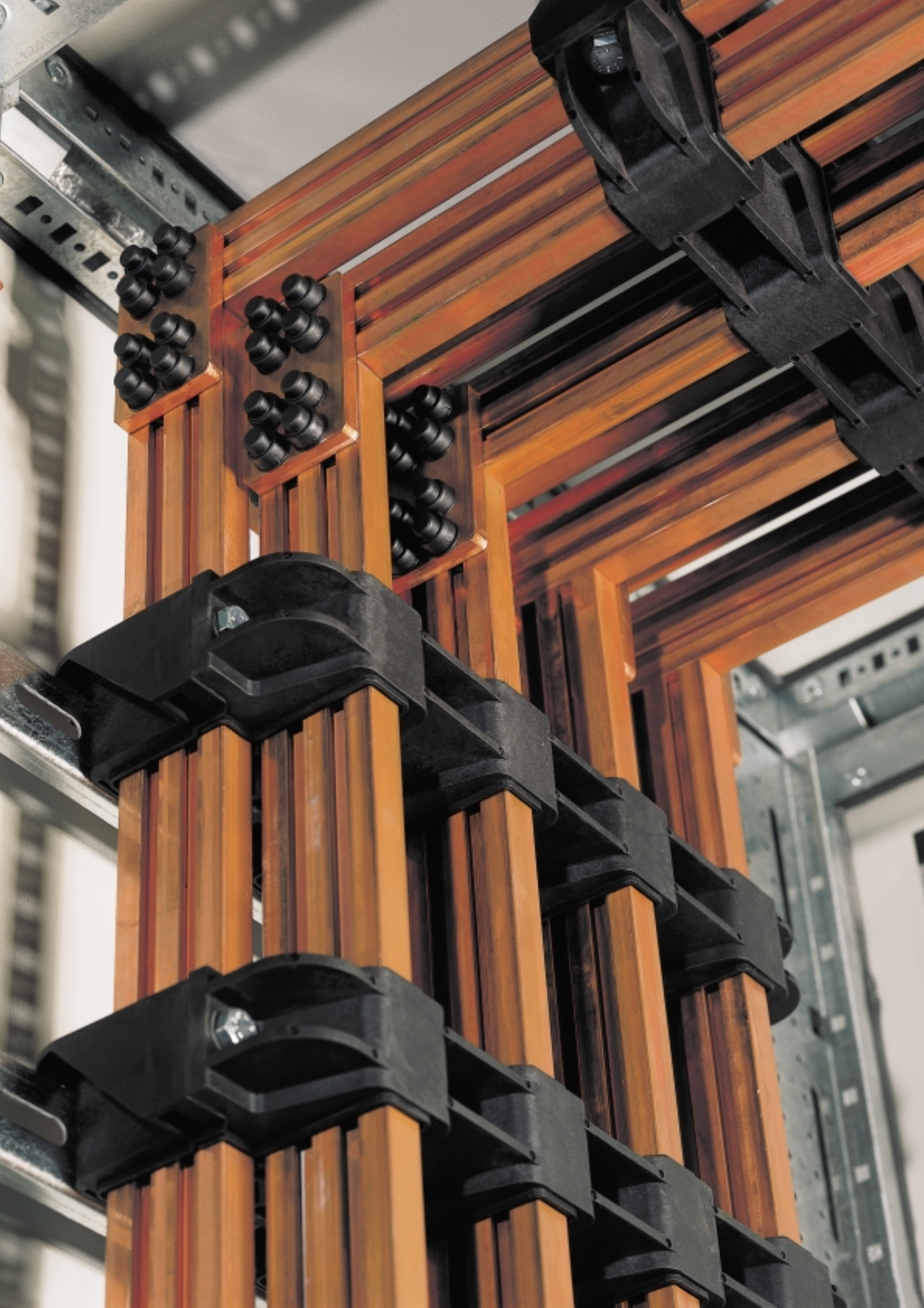
Spacers for AD1042 segregations allow simultaneous assembly of the vertical segregations and crosspieces positioned between the functional frame and rear upright (cannot be coupled with the side panel).





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# Distribution systems

## General

The distribution systems which can be used inside ArTu switchboards consist of:

- busbars with shaped section up to 3200A;
- flat drilled busbars up to 3200A;
- flexible busbars up to 630A;
- Unifix cabling system, structured up to 400A;
- divisions up to 400A.

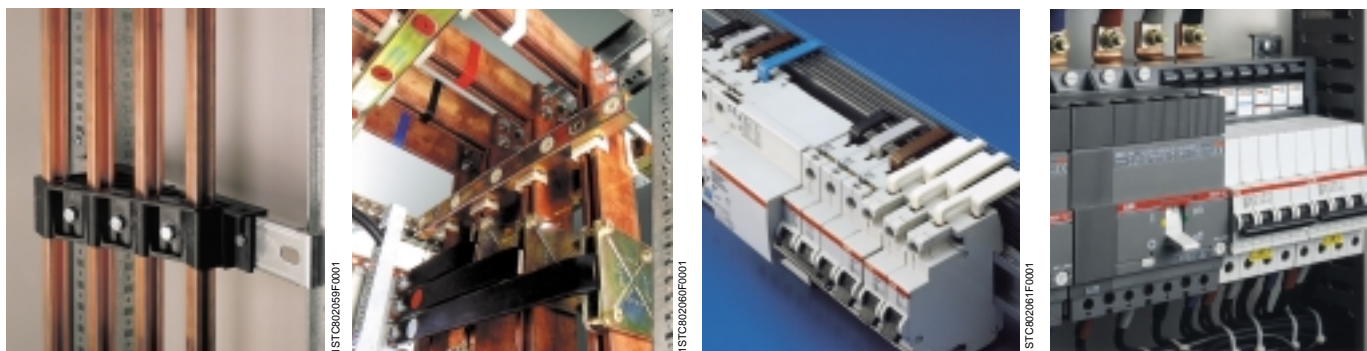
The ABB SACE busbar system and accessories prepared for installation in ArTu distribution switchboards have undergone short-circuit withstand tests according to the EN 60439-1 Standard with In value up to 3200 A and Icw of 105 kA (1s) in ABB laboratories recognised by ACAE/LOVAG. Selection of suitable components and respect of the assembly indications allow simple construction of AS (or ANS) type switchboards. With the specific distribution systems, ArTu switchboards for low voltage electrical distribution simplify integration with the other ABB SACE apparatus even further.

directly inside the switchboard, positioning them horizontally or vertically, on the back or side of the structure, keeping front access, also thanks to the practicality of the scaled type busbar-holder. The same installation possibilities are offered inside the cable container and for structures with reduced depth.

The flat distribution busbars, pre-drilled with 25 mm pitch and with capacity up to 1600A, can be installed on the side of the structure without having to use the cable container.

The flexible busbars are made with copper laminas on top of each other in a sliding insulating sheath which facilitates bending to make the connection in the required shape. The use of flexible busbars as an alternative to rigid cables or connections increases cabling speed, allows easy repositioning, and reduces the overall dimensions and length of connections.

The system is completed with the Unifix series, suitable for structured cabling of moulded-case circuit-breakers up to 250A (up to Tmax T3 and Isomax S2) and modular System Pro-M



In full respect of the CEI 17-3 Standard, the ArTu switchboards where modular and moulded-case circuit-breakers or other products in the ABB SACE range are installed can be certified simply by carrying out only the individual tests, without the need to carry out additional type tests.

Assembly of the busbars with shaped section is also considerably simplified, and is more rapid than the standard distribution systems thanks to perfect integration with the busbar-holders and dedicated crosspieces.

The ensemble of components of the busbar system with shaped section fully responds to all the functions required, without the need for further kits or accessories, including fixing screws. Another salient feature of this system consists of its extremely compact dimensions, which allow the busbars to be mounted

circuit-breakers, allowing cabling of all the apparatus to be carried out simply, rapidly and safely, thanks to perfect integration between ABB SACE products.

The basic characteristic of this system consists of the possibility of combining different types of circuits (single-phase/three-phase/auxiliary) inside a single module.

Unifix makes bench pre-cabling possible, with installation in the switchboard only carried out at a later time, without any limit to the types or combinations of apparatus which can be installed.

The use of Unifix notably reduces cabling times, making construction of the power supply by means of cables superfluous, taken care of, in fact, by the rigid coupled connectors, standardised for the different types of apparatus.

# Busbars with shaped section

## Main characteristics

### Busbars

The special section of these busbars - patented by ABB - ensures maximum practicality: also thanks to perfect integration with the dedicated busbar-holders and crosspieces, assembly only requires a single person. All the operations of each single installation phase are therefore carried out without the need for fixing screws, since this operation is postponed until assembly has been completed to guarantee resistance to the electrodynamic stresses in the case of a short-circuit.

A single technician can therefore carry out all the assembly stages, from positioning the busbar holders on the relative crosspieces, to placing the resting bases on the end busbar holders and to snapping on the busbars. The shaped section also provides access and connection on all four sides, ensuring a larger contact surface than rectangular sections: with the same capacity, the thermal exchange is greater and therefore cooling is facilitated.

### Busbar holders

These are made of moulded insulating material and ensure maximum resistance to electrodynamic stresses even in the most serious cases of short-circuit. The busbar holders are universal and can be used either in intermediate positions on the busbars or in the end position. In the latter case, the special resting base is used which has a supporting function, since it is housed in the busbar seat.

The busbar holders are also fitted with spring hooks for easy positioning on the crosspieces.



1STC802063F0001

# Busbars with shaped section

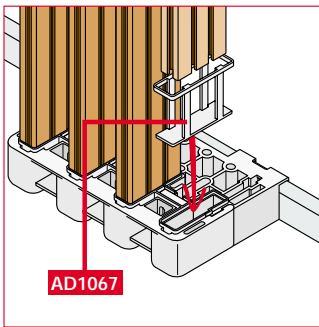
## Main characteristics

### Universal joints

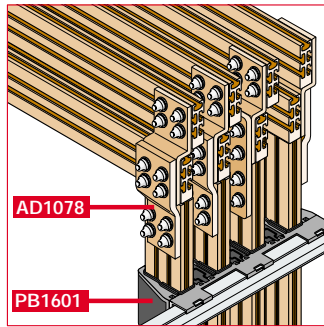
These allow construction of in-line and 90° connections between the busbars, with "T" or "L" joints, ensuring distribution inside the switchboard both horizontally and vertically. The design of these supports also offers the maximum surface for current passage, reducing the contact resistance to a minimum. Apart from the universal type of joint, integration joints are available between the busbars with shaped section and the traditional flat busbars, ensuring greater flexibility.

### Hammer screws

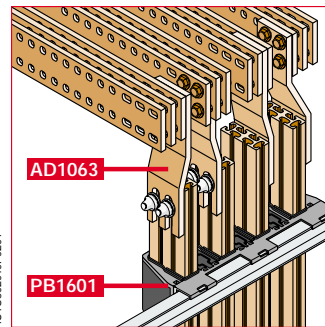
The hammer screws (M8) which slide inside the section, allow all the fixing between conductors (busbars or cables) without the need for further drilling, but simply allowing tightening at any point of the busbar or of any other conductor. Their special section allows positioning inside the busbars without addition of moving parts, guaranteeing an excellent seal during tightening (20 Nm). There are three different lengths (L=27-37-47mm), which means branch busbars 10, 20 and 30mm thick can be fixed.



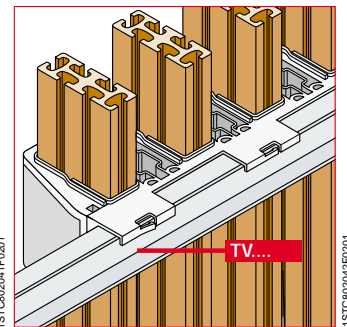
The busbar holders can be used both in intermediate and end positions, thanks to the special support.



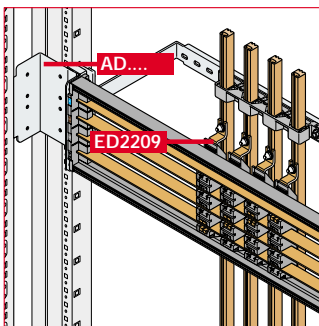
Branch between 3200A drilled flat busbars and 1250/1600A busbars with shaped section.



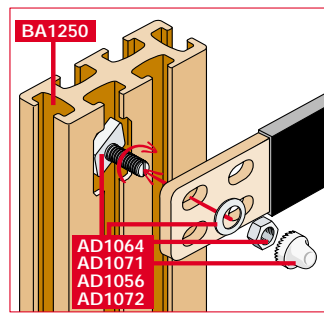
Branch between 3200A flat busbars with shaped section and 1250/1600A busbars with shaped section.



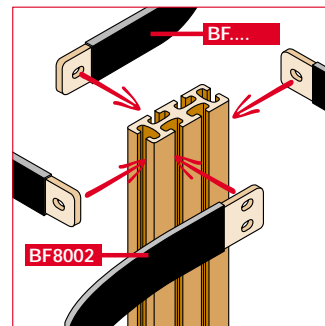
Snap-on assembly between busbar holders and assembly crosspieces.



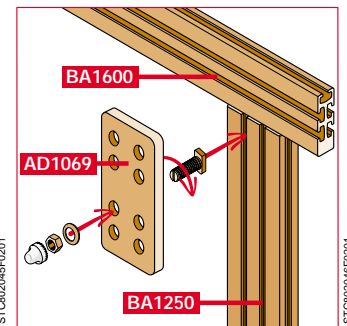
Direct connection with Unifix H system



A self-locking hammer screw allows fixing between conductors in any position along the busbar, ensuring a large contact surface.



The connections can be made on any side of the busbar.




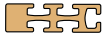
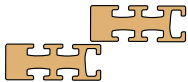


Joint for 1250-1600A busbars. Example of "T" or "L" coupling.



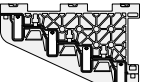
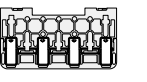

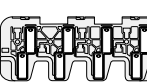
# ArTu L - M - K - Busbars with shaped section

## Rapid selection tables

### Busbars with shaped section for applications up to 3200 A

Section	In (A)	Code	N° busbars/phase	capacity (A)			max l <sub>cw</sub> (kA)	WxW (mm)	Section dimensions (mm <sup>2</sup> )	Length (mm)	Weight (kg)
				IP31	IP41	IP65					
	400	<b>BA0400</b>	1	630	520	400	35	20x20	200	1730	4
	800	<b>BA0800</b>	1	970	830	800	35	20x20	283	1730	4,4
	1250	<b>BA1250</b>	1	1400	1330	1250	75	20x60	603	1730	9,3
	1600	<b>BA1600</b>	1	1820	1710	1600	75	20x60	703	1730	10
	3200	<b>BA2000</b>	2	3600	3400	3200	100	25x60	2000	1730	29,6

### Busbar holders for busbars with shaped section up to 100 kA

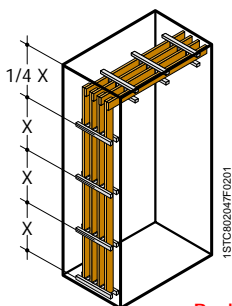
Type	I <sub>cc</sub> (kA)	Code	Busbars					Application				
			400A BA0400	800A BA0800	1250A BA1250	1600A BA1600	3200A BA2000	ArTu L cable cont drawer	ArTu M struct. cable cont	ArTu K struct. cable cont		
	35	<b>PB0802</b>	L1-L2-L3	3x BA0400	3x BA0800							
			N 100%	1x BA0400	1x BA0800							
			N reduced		1x BA0400							
	35	<b>PB0803</b>	L1-L2-L3	3x BA0400	3x BA0800							
			N 100%	1x BA0400	1x BA0800							
			N reduced		1x BA0400							
	75	<b>PB1600<sup>(1)</sup></b>	L1-L2-L3			3x BA1250	3x BA1600					
			N 100%			1x BA1250	1x BA1600				D≥800	D≥800
			N reduced				1x BA1250					
	65	<b>PB1603<sup>(1)</sup></b>	L1-L2-L3			3x BA1250	3x BA1600					
			N 100%			1x BA1250	1x BA1600				D≥600	D≥600
			N reduced				1x BA1250					
	75	<b>PB1601<sup>(1)</sup></b>	L1-L2-L3			3x BA1250	3x BA1600					
			N 100%			1x BA1250	1x BA1600				D≥600	D≥600
			N reduced				1x BA1250					
	100	<b>PB3201</b>	L1-L2-L3					6x BA2000				
			N 100%					2x BA2000			D≥800	D≥800
			N reduced					1x BA2000				

<sup>(1)</sup> It is possible to mount the 400/800A busbars with the special adapter **AD1066** see example on page 6/11.

# ArTu L - M - K - Busbars with shaped section

## Rapid selection tables

Table for selection and assembly of busbars with shaped section and busbar holders



The distance between the first busbar holder and the end of the busbar must not exceed  $1/4$  of "X".

N° of busbar holder according to the max.  $I_{cc}$

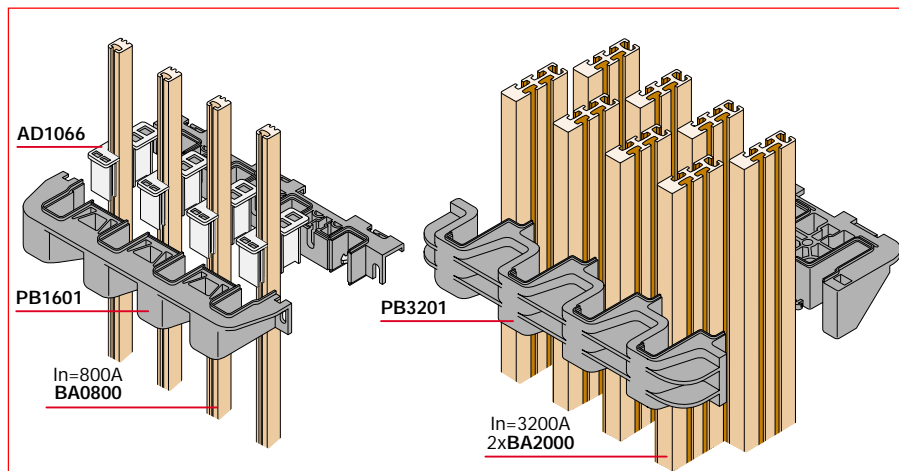
Busbar code	Busbar capacity	Busbar holder code	No. busbars per phase	25 kA		35 kA		50 kA		65 kA		75 kA		85 kA		100 kA	
				max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)	max X (mm)			
<b>Linear</b>																	
BA0400	400A	PB0803	1	4	550	5	425	-	-	-	-	-	-	-	-	-	-
		PB1601 <sup>(1)</sup>		4	550	4	550	-	-	-	-	-	-	-	-	-	-
		PB1603 <sup>(1)</sup>		4	550	4	550	-	-	-	-	-	-	-	-	-	-
BA0800	800A	PB0803	1	4	550	5	425	-	-	-	-	-	-	-	-	-	-
		PB1601 <sup>(1)</sup>		4	550	4	550	-	-	-	-	-	-	-	-	-	-
		PB1603 <sup>(1)</sup>		4	550	4	550	-	-	-	-	-	-	-	-	-	-
BA1250	1250A	PB1601	1	4	550	4	550	5	425	7	275	9	225	-	-	-	-
		PB1603		4	550	5	425	6	350	9	225	-	-	-	-	-	-
BA1600	1600A	PB1601	1	4	550	4	550	5	425	7	275	9	200	-	-	-	-
		PB1603		4	550	4	550	6	350	9	225	-	-	-	-	-	-
BA2000	2000A	PB3201	2	4	550	4	550	5	425	6	350	7	275	7	275	9	225
<b>Scaled</b>																	
BA0400	400A	PB0802	1	4	550	5	425	-	-	-	-	-	-	-	-	-	-
BA0800	800A	PB0802	1	4	550	5	425	-	-	-	-	-	-	-	-	-	-
		PB1600 <sup>(1)</sup>		4	550	4	550	-	-	-	-	-	-	-	-	-	-
BA1250	1250A	PB1600	1	4	550	4	550	5	425	7	275	8	250	-	-	-	-
BA1600	1600A	PB1600	1	4	550	4	550	5	425	7	275	8	250	-	-	-	-

<sup>(1)</sup> It can be used with the specific adapter AD1066.

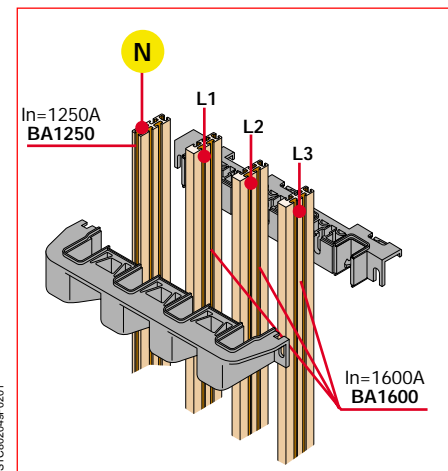
**max X** = maximum distance not to be exceeded between two consecutive busbar holders.

The use of the correct number of busbar holders ensures resistance to electrodynamic forces in the case of a short-circuit. Assess the maximum distance (max X) which must not be exceeded between two consecutive busbar holders according to the max.  $I_{cc}$ .

### Example of use of adapter for busbars



### Example of use of the 50% neutral busbar



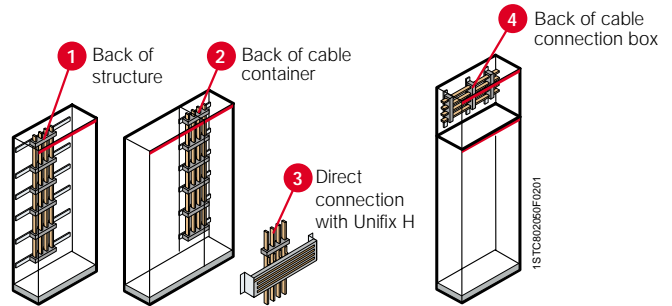
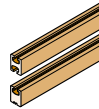
# ArTu L - M - K - Busbars with shaped section

## Rapid selection tables

### Selection of busbar holders and crosspieces

#### Vertical installation

#### Horizontal installation

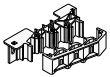


#### Busbar holder

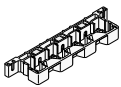
#### Busbars with shaped section

#### Crosspieces for fixing to structure

Type  
Scaled up to 800A  
**PB0802**



Linear up to 800A  
**PB0803**



15TCB02086F0001

$I_n \leq 400+800A$

BA0400  
BA0800

BA0400  
BA0800

Installation

Structure

Cable container

Cable connection box

2

TL2000 (W=300mm)

4

TL2000 (H=300mm)

1

TL1000 (W=600mm)

2

TL3000 (W=300mm)

3

TL1000 (W=600mm)

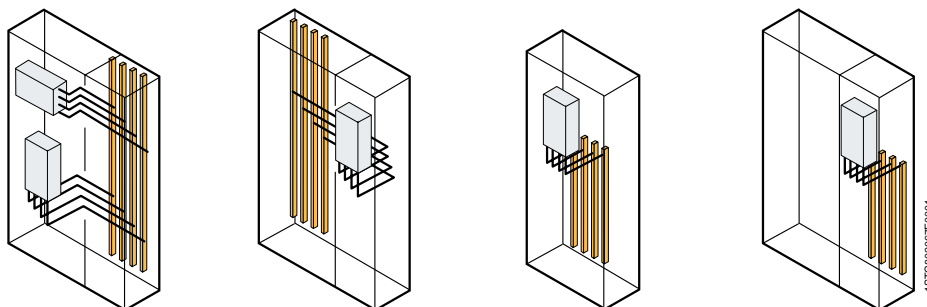
4

TL3000 (H=300mm)

# ArTu L - M - K - Busbars with shaped section

## Rapid selection tables

Prefabricated kit for connections between apparatus and busbars with shaped section 400/800A



Apparatus	Connection kit			
Type of installation	From circuit-breaker in struc. towards busbars in cable cont.	From circuit-breaker in cable cont. towards busbars in struc.	From circuit-breaker in structure towards back busbars	From cir.-breaker in cable cont. towards busbars on back
Type of busbar holder	Scaled PB0802	Linear PB0803	Linear PB0803	Linear PB0803
<b>Apparatus with front terminals fixed horizontal installation</b>				
<b>Tmax T1</b> 4 poles	KB1001 <sup>(1)</sup>			
<b>Tmax T2</b> 4 poles	KB1001 <sup>(1)</sup>			
<b>Tmax T3</b> 4 poles	KB1002			
<b>Isomax S4</b> 4 poles	KB1003			
<b>Isomax S5</b> 4 poles 400A	KB1004			
<b>Isomax S5</b> 4 poles 630A	KB1005			
<b>Apparatus with front terminals fixed vertical installation</b>				
<b>Tmax T3</b> 4 poles	KB1006	KB1010	KB1014 / KB1018 <sup>(2)</sup>	KB1014 / KB1018 <sup>(2)</sup>
<b>Tmax T3</b> 4 poles (wall-mount. struc.)	KB1006	KB1010	KB1014	KB1014
<b>Isomax S4</b> 4 poles	KB1006	KB1010	KB1015	KB1015
<b>Isomax S5</b> 4 poles 400A	KB1008	KB1012	KB1016	KB1016
<b>Isomax S5</b> 4 poles 630A	KB1009	KB1013	KB1017	KB1017

<sup>(1)</sup> For Tmax T1, use prolonged terminals

<sup>(2)</sup> KB1018: only with flat busbars and scaled busbar holder.

Apparatus	Dimensions of the conductors	
	 AxBxC (mm)	 cross-section (mm <sup>2</sup> )
<b>Tmax T1-T2</b>		50
<b>Tmax T3-Isomax S4</b>	20x5x1	150
<b>Isomax S5 400A</b>	24x6x1	
<b>Isomax S5 630A</b>	24x10x1	

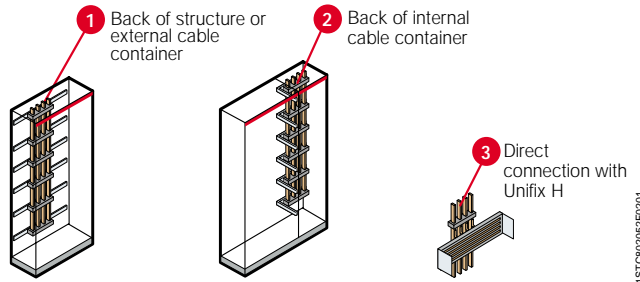
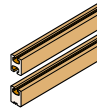
The use of the prefabricated connection kits is only possible with the cable container mounted on the right of the structure.

# ArTu M floor-mounted - Busbars with shaped section

## Rapid selection tables

### Selection of busbar holders and crosspieces

#### Vertical installation

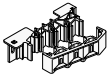
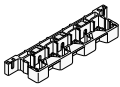


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#### Busbar holder

#### Busbars with shaped section

#### Crosspieces for fixing to structure

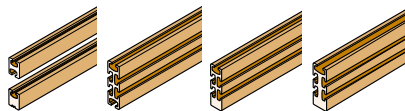
Type	In ≤ 400+800A	Installation	Structure 24/36 DIN modules	Internal cable container	Additional cable container
<b>Scaled up to 800A</b> <b>PB0802</b> 	<b>BA0400</b> <b>BA0800</b>	<b>1</b>			<b>TR3001</b> (W=300mm)
		<b>2</b>		<b>TV2000</b> (W=200mm)	
<b>Linear up to 800A</b> <b>PB0803</b> 	<b>BA0400</b> <b>BA0800</b>	<b>1</b>	<b>TV6200</b> (W=600mm) <b>TV8200</b> (W=800mm)		
		<b>3</b>	<b>TV6200</b> (W=600mm) <b>TV8200</b> (W=800mm)		

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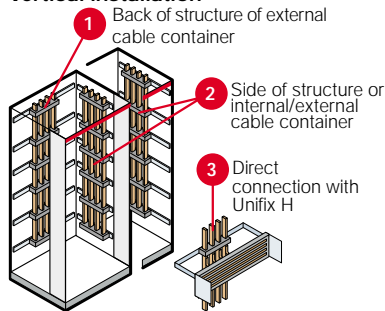
# ArTu K - Busbars with shaped section

## Rapid selection tables

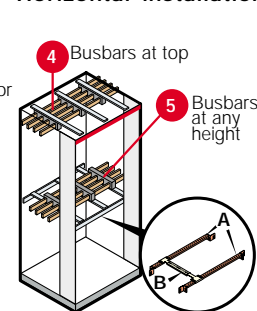
### Selection of busbar holders and crosspieces



#### Vertical installation



#### Horizontal installation

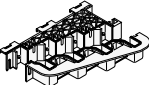
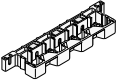
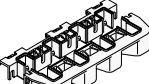
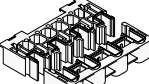



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#### Busbar holder

#### Busbars with shaped section

#### Crosspieces for fixing to structure

Type	In≤400+800A	In=1250A	In=1600A	In=3200A	Installation	Switchboard without segregation	Segregated switchboard	Internal cable container	Additional cable container
<b>Scaled up to 800A</b> <b>PB0802</b> 	BA0400 BA0800				1 2	TV4001 (W=400mm)		TV3000 (D=250mm) TV3101 (D=350mm)	TV2201 (W=200mm) TV3201 (W=300mm) TV3000 (D=250mm) TV3101 (D=350mm)
<b>Scaled up to 1600A</b> <b>PB1600</b> 	BA0400 BA0800 with adapter AD1066	BA1250	BA1600		1 2	TV4000 (W=400mm) TV8001 (D=800mm)	TV8005 (D=800mm)	TV8101 (D=800mm)	TV3201 (W=300mm) TV6101 (D=600mm) TV8101 (D=800mm)
<b>Linear up to 800A</b> <b>PB0803</b> 	BA0400 BA0800				1 3	TV4001 (W=400mm) TV6202 (W=600mm) TV8202 (W=800mm) TV6203 (W=600mm) TV8203 (W=800mm)			
<b>Linear up to 1600A</b> <b>PB1601</b> 	BA0400 BA0800 with adapter AD1066	BA1250	BA1600		1 2 4 5 A B	TV4000 (W=400mm) TV6201 (W=600mm) TV8201 (W=800mm) TV8001 (D=800mm) TV8211 (D=800mm) TV4221 (W=400mm) TV6221 (W=600mm) TV8221 (W=800mm) TV8011 (D=800mm)	TV6201 (W=600mm) TV8201 (W=800mm) TV8005 (D=800mm) TV8211 (D=800mm) TV4221 (W=400mm) TV6221 (W=600mm) TV8221 (W=800mm) TV8011 (D=800mm)	TV6101 (D=600mm) TV8101 (D=800mm) TV8211 (D=800mm)	TV6101 (D=600mm) TV8101 (D=800mm) TV8211 (D=800mm)
<b>Linear up to 1600A</b> <b>PB1603</b> 	BA0400 BA0800 with adapter AD1066	BA1250	BA1600		1 2 4 5 A B	TV4000 (W=400mm) TV6201 (W=600mm) TV8201 (W=800mm) TV6001 (D=600mm) TV8001 (D=800mm) TV6101 (D=600mm) TV8211 (D=800mm) TV4221 (W=400mm) TV6221 (W=600mm) TV8221 (W=800mm) TV6011 (D=600mm) TV8011 (D=800mm)	TV4000 (W=400mm) TV6201 (W=600mm) TV8201 (W=800mm) TV6005 (D=600mm) TV8005 (D=800mm) TV6101 (D=600mm) TV8211 (D=800mm) TV4221 (W=400mm) TV6221 (W=600mm) TV8221 (W=800mm) TV6011 (D=600mm) TV8011 (D=800mm)	TV6101 (D=600mm) TV8101 (D=800mm) TV6101 (D=600mm) TV8211 (D=800mm)	TV6101 (D=600mm) TV8101 (D=800mm) TV6101 (D=600mm) TV8211 (P=800mm)
<b>Linear up to 3200A</b> <b>PB3201</b> 				BA2000 2 bars per phase	2 4 5 A B	TV8001 (D=800mm) TV8211 (D=800mm) TV6221 (W=600mm) TV8221 (W=800mm) TV8011 (D=800mm)	TV8005 (D=800mm) TV8211 (D=800mm) TV6221 (W=600mm) TV8221 (W=800mm) TV8011 (D=800mm)	TV8101 (D=800mm) TV8211 (D=800mm)	TV8101 (D=800mm) TV8211 (D=800mm)

(1) Only Form 2

Selection by components ..... page 10/44

In-depth technical information ..... page 7/1

Overall dimensions ..... page 9/16

# Flat busbars, dividers and flexible busbars

## Main characteristics

### Flat busbars

The distribution busbars made of electrolytic copper are pre-drilled with 25mm pitch, to allow rapid connection.

The various sections allow applications up to 3200A; a special joint also allows branching with the busbars with shaped section. Up to 630A installation on the side or back of the structure is possible, with depths starting from 350mm. For higher currents, the flat busbars can be installed in switchboards or in the cable container, with depths starting from 600mm.

### Busbar holders

These are made of moulded insulating material and ensure maximum resistance to electrodynamic stresses even in the most serious cases of short-circuit.

The section is made of tropicalised steel, with insulating parts made of polyamide reinforced with glass fibre. Busbar tightening is carried out using polyamide M10 screws.



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# Flat busbars, dividers and flexible busbars

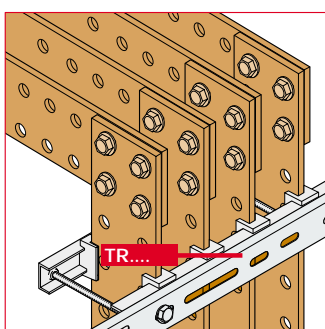
## Main characteristics

### Flexible busbars

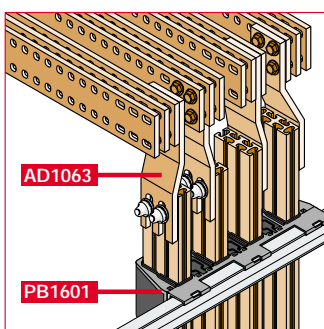
The flexible copper busbars are made using copper laminas on top of each other in an insulating sheath, whose sliding allows easy bending to make the connection of the desired shape. The use of these busbars minimises the space occupied inside the switchboard, thanks to the possibility of minimising the radius of curvature. Connection between the flexible busbars and those with shaped section is made using the special hammer screw.

### Dividers

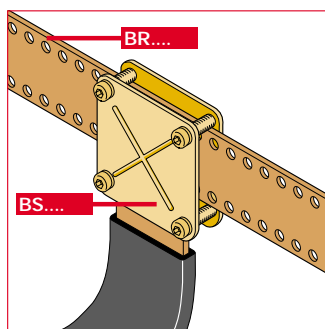
The dividers consist of the single-pole versions which can be placed side by side, and the four-pole versions, which can be mounted both on the functional frame and on a DIN rail. They allow simple "wire-to-wire" connection (for Isomax up to S5 and Tmax moulded-case or modular System Pro-M circuit-breakers) from a main circuit-breaker to several outgoing feeders. The 80 to 125A dividers are fitted with a protective screen. The dividers from 160...400A have IP20 degree of protection.



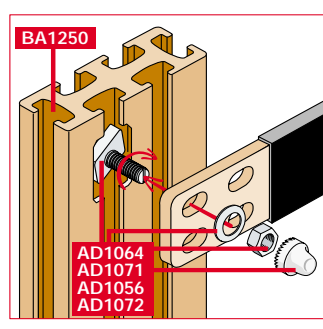
The 25mm pitch drilling allows branching between flat busbars at any point.



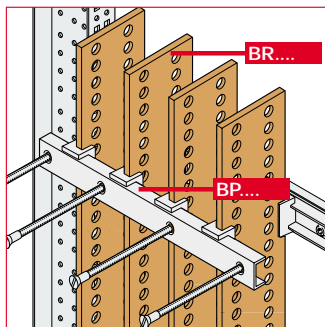
Branch between pre-drilled 3200A flat busbars and 1250/1600A busbars with shaped section (only with PB1601).



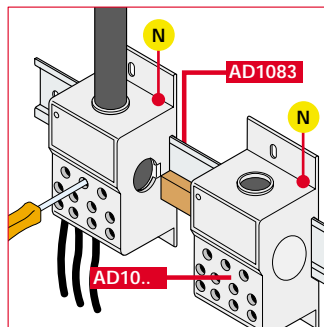
Branch between flat busbar and flexible busbar by means of tightening plate.



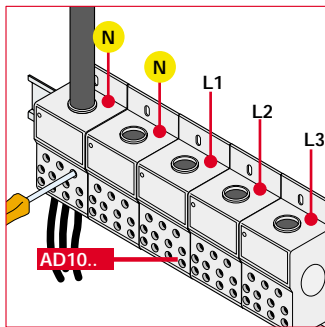
A self-locking hammer screw (M8) allows fixing between conductors in any position along the busbar with shaped section, ensuring a large contact surface.



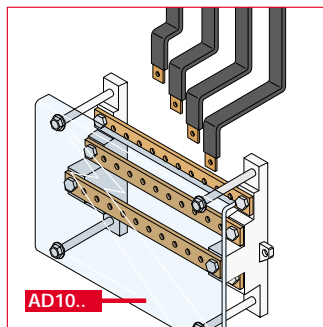
Busbar holder for flat busbars (one busbar per phase)



Single-phase divider with possibility of connection, which can be mounted on DIN rail.



Single-phase dividers up to 400A, which can be mounted on DIN rail.



Four-pole 250A divider.

# ArTu L - M - K - Dividers and flexible busbars

## Rapid selection tables







### Modular dividers

Type	Description Technical data	In (A)	Icw (A)	Version	ArTu L Installation
<b>AD1028</b>	Rated voltage 500V	80	6	four-pole	on DIN 35 rail
<b>AD1029</b>	Rated voltage 500V	125	6	four-pole	on DIN 35 rail
<b>AD1027</b>	Rated voltage 500V	160	6	four-pole	on DIN 35 rail
<b>AD1034<sup>(1)</sup></b>	Rated voltage 500V Threaded busbars (sec. 25x5)	250	15	four-pole	with AD1038 brackets
<b>AD1053</b>	Rated voltage 500V Threaded busbars (sec. 25x5)	250	15	four-pole	
<b>AD1080</b>	Rated voltage 500V IP20 degree of protection	125	10	single-pole	on DIN 35 rail or PF back plate
<b>AD1081</b>	Rated voltage 500V IP20 degree of protection	160	10	single-pole	on DIN 35 rail or PF back plate
<b>AD1030</b>	Rated voltage 500V IP20 degree of protection	250	21	single-pole	on DIN 35 rail or PF back plate
<b>AD1031</b>	Rated voltage 500V IP20 degree of protection	400	21	single-pole	on DIN 35 rail or PF back plate

<sup>(1)</sup> Excluding wall-mounted ArTu M  
D=150mm.

6

### Flexible busbars up to 1250A

Section	In (A)	Code	N° busbars/phase	Capacity (A)			LxL (mm)	Section dimensions (mm <sup>2</sup> )	Length (mm)	Weight (kg)
				IP31	IP41	IP65				
	250	<b>BF1602</b>	1	395	323	250	20x3	60	2000	1,42
	400	<b>BF2502</b>	1	498	460	400	20x5	100	2000	2,15
	500	<b>BF4002</b>	1	660	620	500	24x6	144	2000	3
	630	<b>BF4012<sup>(1)</sup></b>	1	758	702	630	32x5	160	2000	3,36
	1000	<b>BF6302</b>	1	1203	1140	1000	40x8	320	2000	6,33
	1250	<b>BF8002</b>	1	1650	1525	1250	50x10	500	2000	9,68

<sup>(1)</sup> Only for front extended terminals and rear terminals.

## ArTu L - M - K - Dividers and flexible busbars

### Rapid selection tables

ArTu M - K no segreg. Installation	Power supply Ø cable mm <sup>2</sup>		N° outgoing feeders Ø cable mm <sup>2</sup>				hxlyp	Dimensions mm N°DIN modules
	minimum	maximum	2,5+10	2,5+16	2,5+25	6+35		
on DIN 35 rail	6	16	8				80x116x44	7
on DIN 35 rail	10	35	7	4			80x143x44	8
on DIN 35 rail	10	50		8		3	90x160x50	9
with AD1038 brackets			N° 22 holes M5 with 17,5mm pitch per phase				150x600x70	24
with AD1038 brackets			N° 32 holes M5 with 17,5mm pitch per phase				150x800x70	36
on DIN 35 rail or PF back plate	6	35		6			75x25x47	1,5
on DIN 35 rail or PF back plate	10	70		6			92x35x49	2
on DIN 35 rail or PF back plate	35	120	4	5	2		96x45x49	3
on DIN 35 rail or PF back plate	95	185	4	5	2		96x45x49	3

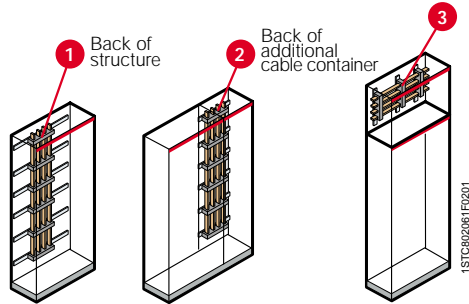
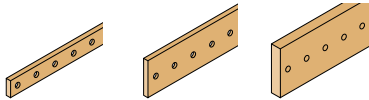
# ArTu L - Flat busbars

## Rapid selection tables

### Selection of busbar holders and crosspieces

#### Vertical installation

#### Horizontal installation

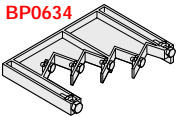


#### Busbar holder

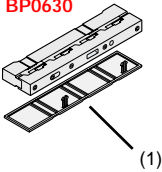
#### Flat busbars

#### Crosspieces for fixing to structure

Type  
Scaled up to 630A  
**BP0634**



Linear up to 630A  
**BP0630**



In=250A	In=400A	In=630A
<b>BR0250</b>	<b>BR0400</b>	<b>BR0630</b>
<b>BR0250</b>	<b>BR0400</b>	<b>BR0630</b>

Installation	Structure	Additional cable container	Cable connection box
2		<b>TL3000</b> (W=300mm)	
3			<b>TL3000</b> (H=300mm)
1	<b>TL1000</b> (W=600mm)		
2		<b>TL3000</b> (W=300mm)	
3			<b>TL3000</b> (H=300mm)

(1) The busbar terminal protection covers must be ordered separately **BP0632**.

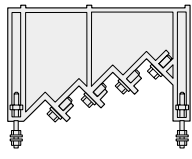

### Flat busbars up to 630A

Section	In (A)	Code	N° busbars/phase	Capacity (A) IP43	Icw max (kA)	LxL (mm)	Length (mm)	Weight (kg)
	250	<b>BR0250</b>	1	250	32	15x5	1750	1,35
	400	<b>BR0400</b>	1	400	32	25x5	1750	3,4
	630	<b>BR0630</b>	1	630	32	30x10	1750	4,4

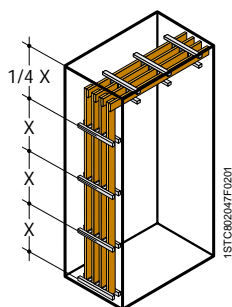
# ArTu L - Flat busbars

## Rapid selection tables

### Busbar holders for flat busbars up to 32 kA

Type	I <sub>cc</sub> (kA)	Code	Busbars			Application		
			250A BR4005	400A BR6305	630A BR8005	Structure	Cable cont/ box	
<b>Scaled</b> 	23	<b>BP0634</b>	L1-L2-L3	3x BR4005	3x BR6305	3x BR8005		•
			Neutral 100%	1x BR4005	1x BR6305	1x BR8005		
<b>Linear</b> 	32	<b>BP0630</b>	L1-L2-L3	3x BR4005	3x BR6305	3x BR8005	•	•
			Neutral 100%	1x BR4005	1x BR6305	1x BR8005		

### Table for selection and assembly of flat busbars and busbar holders



The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of "X".

Busbar code	capacity	Busbar holder	No. busbars per phase	N° busbar holders 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)
<b>BR0250</b>	400A	<b>BP0634</b>	1	-	-	-	-	18	102	-	-
<b>BR0400</b>	630A		1	-	-	-	-	18	102	-	-
<b>BR0630</b>	800A		1	-	-	-	-	18	102	-	-
<b>BR0250</b>	400A	<b>BP0630</b>	1	4	500	6	350	10	200	-	-
<b>BR0400</b>	630A		1	4	500	6	350	10	200	-	-
<b>BR0630</b>	800A		1	-	-	4	600	4	600	9	210

X max = maximum distance not to be exceeded between two consecutive busbar holders.

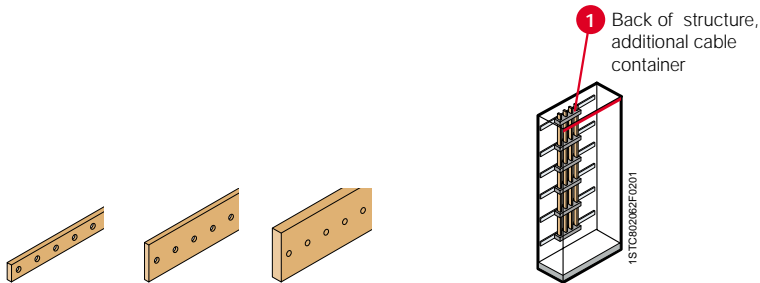
The use of the correct number of busbar holders ensures resistance to electrodynamic forces in the case of a short-circuit. Assess the maximum distance (max X) not to be exceeded between two consecutive busbar holders according to the max. I<sub>cc</sub>.

# ArTu M - Flat busbars

## Rapid selection tables

### Selection of busbar holders and crosspieces

#### Vertical installation



#### Busbar holder

#### Flat busbars

#### Crosspieces for fixing to structure

Type	In=250A	In=400A	In=630A	Installation	Structure	Additional cable container
Linear up to 630A <b>BP0630</b>						
	<b>BR0250</b>	<b>BR0400</b>	<b>BR0630</b>	<b>1</b>	<b>TV6200</b> (W=600mm) <b>TV8200</b> (W=800mm)	<b>TR3001</b> (W=300mm)

(1) The busbar terminal protection covers must be ordered separately **BP0632**.

### Flat busbars up to 630A

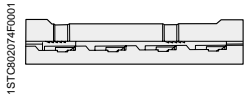
Section	In (A)	Code	N° busbars/phase	capacity (A) IP43	lcw max (kA)	LxL (mm)	length (mm)	weight (kg)
	250	<b>BR0250</b>	1	250	32	15x5	1750	1,35
	400	<b>BR0400</b>	1	400	32	25x5	1750	3,4
	630	<b>BR0630</b>	1	630	32	30x10	1750	4,4

# ArTu M - Flat busbars

## Rapid selection tables

### Busbar holders for flat busbars up to 32 kA

Type	I <sub>cc</sub> (kA)	Code	Busbars			Application	
			250A BR4005	400A BR6305	630A BR8005	Structure	Additional cable container
Linear	32	<b>BP0630</b>					
			L1-L2-L3 3x BR4005	3x BR6305	3x BR8005		
			Neutral 100% 1x BR4005	1x BR6305	1x BR8005		

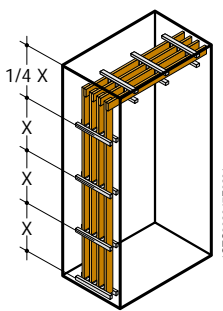


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L1-L2-L3

Neutral 100%

### Table for selection and assembly of flat busbar holders



1STCR02077F0201

The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of "X".

#### No. busbar holders according to the I<sub>cc</sub> max

Busbar code	capacity	Busbar holder code	No. busbar per phase	16 kA		20 kA		23 kA		32 kA	
				X max (mm)	X max (mm)	X max (mm)	X max (mm)	X max (mm)	X max (mm)		
<b>BR0250</b>	400A		1	4	500	6	350	10	200	-	-
<b>BR0400</b>	630A	<b>BP0630</b>	1	4	500	6	350	10	200	-	-
<b>BR0630</b>	800A		1	-	-	4	600	4	600	9	210

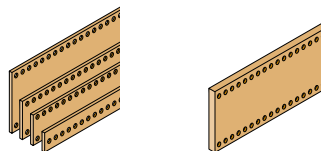
X max = maximum distance not to be exceeded between two consecutive busbar holders.

The use of the correct number of busbar holders ensures resistance to electrodynamic forces in the case of a short-circuit. Assess the maximum distance (max X) not to be exceeded between two consecutive busbar holders according to the max. I<sub>cc</sub>.

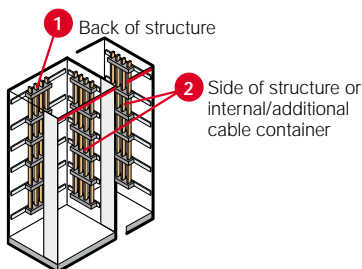
# ArTu M - Flat busbars

## Rapid selection tables

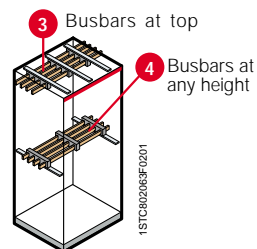
### Selection of busbar holders and crosspieces



#### Vertical installation



#### Horizontal installation

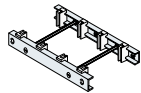


#### Busbar holder

#### Busbars with shaped section

#### Crosspieces for fixing to structure

Type  
Linear up to 1250A  
**BP1250**



In=400+1250A

**BR4005**  
**BR6305**  
**BR8005**  
**BR1250**  
1 busbar  
per phase

In=1600+3200A

Installation

Switchboard  
without segregation

Segregated  
switchboards

Internal cable  
container

Additional  
cable container

1

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR6101** (D=600mm)  
**TR8101** (D=800mm)

**TR6101** (D=600mm)  
**TR8101** (D=800mm)

2

**TR6001** (D=600mm)  
**TR8001** (D=800mm)

**TR6005** (D=600mm)  
**TR8005** (D=800mm)

**TV1261** (D=600mm)  
**TV8211** (D=800mm)

**TV1261** (D=600mm)  
**TV8211** (D=800mm)

3

**TR6201** (D=600mm)  
**TR8201** (D=800mm)

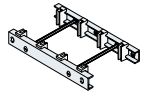
**TR6205** (D=600mm)  
**TR8205** (D=800mm)

**TR6301** (D=600mm)  
**TR8301** (D=800mm)

**TR6301** (D=600mm)  
**TR8301** (D=800mm)

4

Linear up to 1600A  
**BP1600**



**BR1600**  
1 busbar  
per phase

1

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR6101** (D=600mm)  
**TR8101** (D=800mm)

**TR6101** (D=600mm)  
**TR8101** (D=800mm)

2

**TR6001** (D=600mm)  
**TR8001** (D=800mm)

**TR6005** (D=600mm)  
**TR8005** (D=800mm)

**TV1261** (D=600mm)  
**TV8211** (D=800mm)

**TV1261** (D=600mm)  
**TV8211** (D=800mm)

3

**TR6201** (D=600mm)  
**TR8201** (D=800mm)

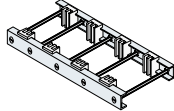
**TR6205** (D=600mm)  
**TR8205** (D=800mm)

**TR6301** (D=600mm)  
**TR8301** (D=800mm)

**TR6301** (D=600mm)  
**TR8301** (D=800mm)

4

Linear up to 2500A  
**BP2500**



**BR1600**  
2 busbars  
per phase

1

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR8101** (D=800mm)

**TR8101** (D=800mm)

2

**TR8001** (D=800mm)

**TR8005** (D=800mm)

**TR8101** (D=800mm)

**TR8101** (D=800mm)

3

**TV8211** (D=800mm)

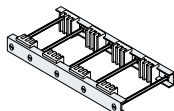
**TV8211** (D=800mm)

**TR8301** (D=800mm)

**TR8301** (D=800mm)

4

Linear up to 3200A  
**BP3200**



**BR1600**  
3 busbars  
per phase

1

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR7005** (W=600mm)  
**TR8000** (W=800mm)

**TR8101** (D=800mm)

**TR8101** (D=800mm)

2

**TR8001** (D=800mm)

**TR8005** (D=800mm)

**TR8101** (D=800mm)

**TR8101** (D=800mm)

3

**TV8211** (D=800mm)

**TV8211** (D=800mm)

**TR8301** (D=800mm)

**TR8301** (D=800mm)

4

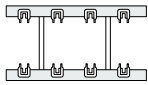
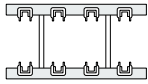
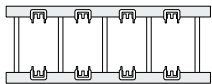
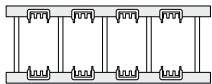
#### Flat busbars up to 3200A

Section	In (A)	Code	No. busbars/phase	capacity (A)			lcw max (kA)	LxL (mm)	length (mm)	weight (kg)
				IP31	IP41	IP65				
	400	<b>BR4005</b>	1	530	490	400	25	32x5	1750	1,35
	630	<b>BR6305</b>	1	772	695	630	35	50x5	1750	3,4
	800	<b>BR8005</b>	1	951	863	800	50	63x5	1750	4,4
	1250	<b>BR1250</b>	1	1431	1347	1250	50	100x5	1750	7,25
	1600	<b>BR1600</b>	1	1836	1710	1600	100	100x10	1750	14,5
	2500	<b>BR1600</b>	2	3056	2700	2500	100	100x10	1750	29
	3200	<b>BR1600</b>	3	4018	3600	3200	100	100x10	1750	43,5

# ArTu M - Flat busbars

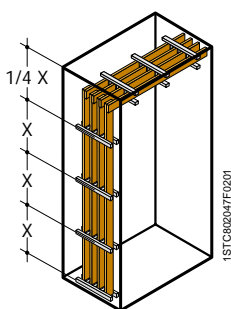
## Rapid selection tables

### Busbar holders for flat busbars up to 100 kA

Type	I <sub>cc</sub> (kA) Code	Busbars					Application ArTu K struct./cable cont.
		400A BR4005	630A BR6305	800A BR8005	1250A BR1250	1600A BR1600	
Linear 	50 <b>BP1250</b>  L1-L2-L3 Neutral 100%	3x BR405	3x BR6305	3xBR8005	3xBR1250		D≥600
		1x BR405	1x BR6305	1xBR8005	1xBR1250		
Linear 	75 <b>BP1600</b>  L1-L2-L3 Neutral 100%					3xBR1600	D≥600
						1xBR1600	
Linear 	100 <b>BP2500</b>  L1-L2-L3 Neutral 100%					6xBR1600	D≥800
						2xBR1600	
Linear 	100 <b>BP3200</b>  L1-L2-L3 Neutral 100%					9xBR1600	D≥800
						3xBR1600	

6

### Table for selection and assembly of flat busbars and busbar holders



The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of "X".

N° busbar holders according to the max I<sub>cc</sub>

Busbar code	capacity	Busbar holder	No. busbars per phase	25 kA		35 kA		50 kA		75 kA		100 kA	
				X max (mm)	X max (mm)	X max (mm)	X max (mm)	X max (mm)	X max (mm)	X max (mm)	X max (mm)		
<b>BR4005</b>	400A	<b>BP1250</b>	1	7	300	9	225	-	-	-	-	-	-
<b>BR6305</b>	630A	<b>BP1250</b>	1	6	375	7	275	9	225	-	-	-	-
<b>BR8005</b>	800A	<b>BP1250</b>	1	5	425	7	300	9	225	-	-	-	-
<b>BR1250</b>	1250A	<b>BP1250</b>	1	4	500	6	375	8	250	-	-	-	-
<b>BR1600</b>	1600A	<b>BP1600</b>	1	3	1000	3	1000	4	600	6	375	9	225
<b>BR1600</b>	1600A	<b>BP2500</b>	2	3	1000	3	1000	3	900	5	400	9	225
<b>BR1600</b>	1600A	<b>BP3200</b>	3	3	1000	3	1000	3	800	5	400	9	225

X max = maximum distance not to be exceeded between two consecutive busbar holders.

The use of the correct number of busbar holders ensures resistance to electrodynamic forces in the case of a short-circuit. Assess the maximum distance (max X) which must not be exceeded between two consecutive busbar holders according to the max. I<sub>cc</sub>.

# Unifix cabling system

## Unifix H - Main characteristics

### Four-pole frames

The frames consist of a system of busbars (25x5mm section) with 400A capacity and 50kA short-circuit current. The various basic modules dedicated to connection of the apparatus are fixed to this structure which, together with the power supply module, provide the following circuit situations:

- direct supply of the bases by means of the power supply module
- power supply with main row circuit-breaker by means of a dedicated base module.

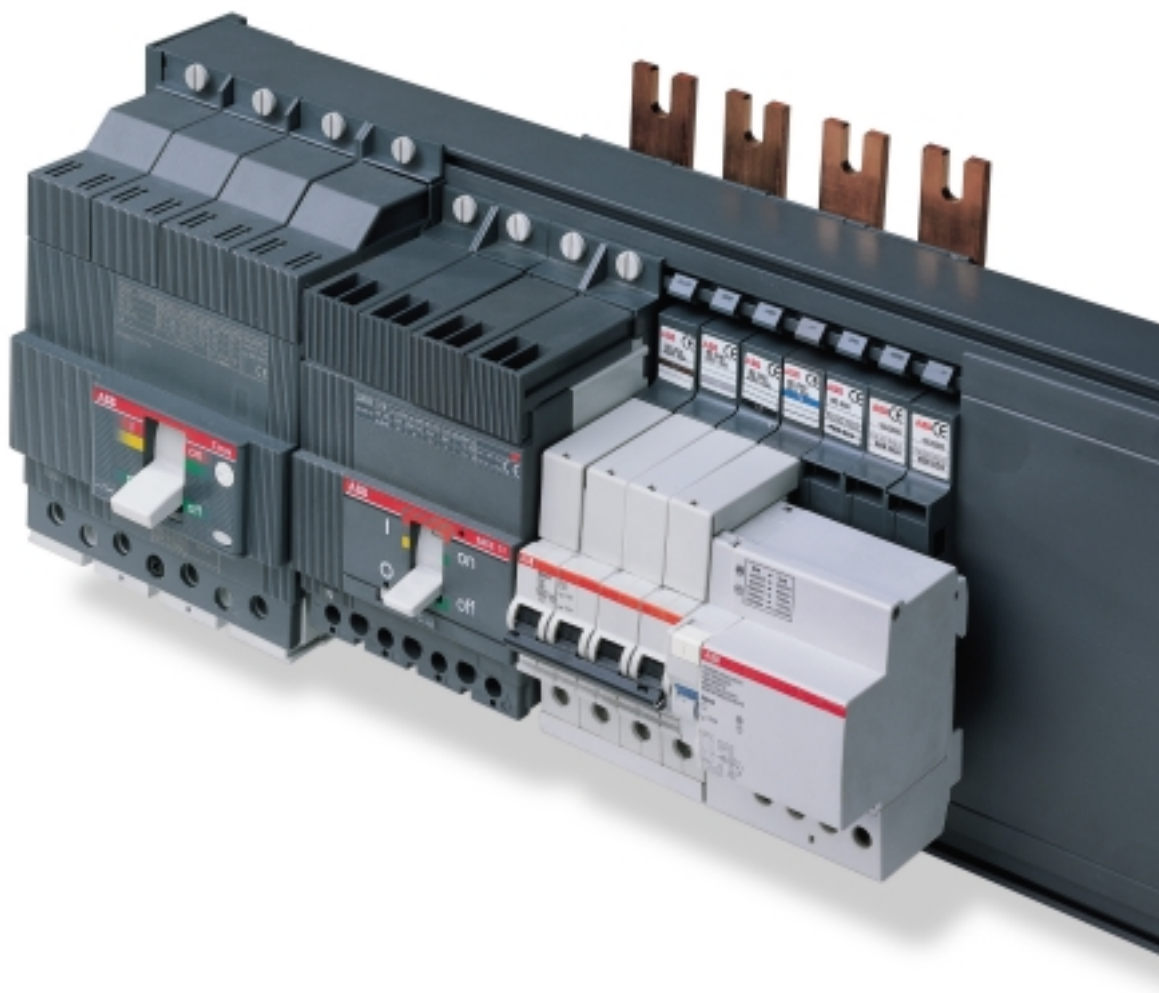
The frames, which can be installed in ArTu switchboards 600 and 800mm wide respectively, are available in the two 24 and 36 module widths. They are fixed to the structure by means of special kits.

### Power supply module

The 400A power supply module (L1-L2-L3-N) is fixed onto the rear side of the frames, therefore without losing any space dedicated to assembly of the equipment on the front. The power supply module allows direct connection to the 400/800A busbar system with shaped section, installed on the back of the cabinet.

### Base modules for apparatus

The modules have the function of mechanically supporting the apparatus and electrically connecting it to the distribution busbars contained in the frames. The modules for the System Pro-M modular apparatus are all of single-pole dimensions (i.e. they only



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# Unifix cabling system

## Unifix H - Main characteristics

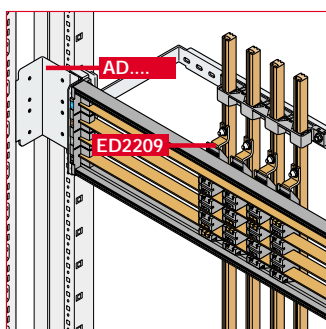
take up one DIN module). To connect single-pole, two-pole, three-pole or four-pole circuit-breakers, one, two, three or four single-pole bases are used respectively, placed side by side.

Each module connects a phase and is identified by the corresponding letter (L1, L2, L3, N) or, in the case of 1P+N circuit-breakers (1 module), by: L1+N, L2+N, L3+N. The modules for connecting the Tmax T1, T2, T3 and Isomax S1, S2 moulded-case circuit-breakers are available in the single-pole versions, whose association allows three-pole, four-pole versions or as a false pole to be obtained for installation of the residual current release side by side. The modules are available in the versions with capacities up to 40 and 63A, with power supply system from

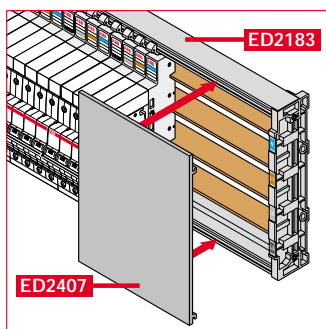
the top or bottom, and in the versions with cable (L1+N or L1+L2) for connecting auxiliary elements. In the case of Tmax circuit-breakers fitted with solenoid operator, provide the relative false module.

### Completion accessories

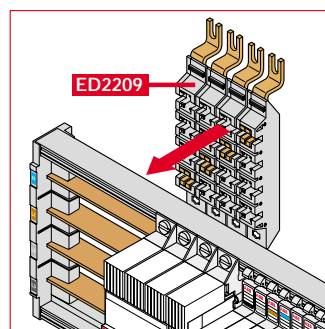
The system is completed with the "false pole" modules, whose function is to cover modules not occupied by apparatus or side by side with apparatus cabled in the traditional way. There is also a protective cover, which ensures IP20 degree of protection on the horizontal distribution busbars in the stretches where assembly of apparatus is not foreseen.



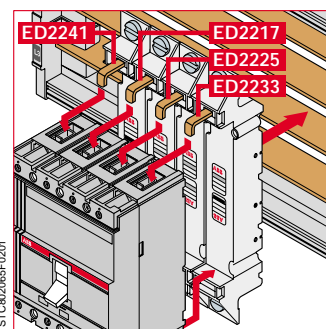
Direct connection with 400/800A system of busbars with shaped section.



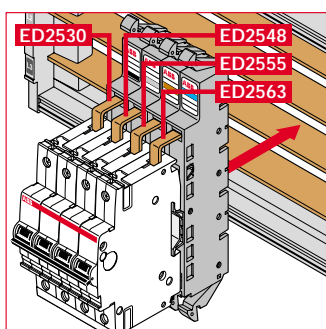
IP20 cover element.



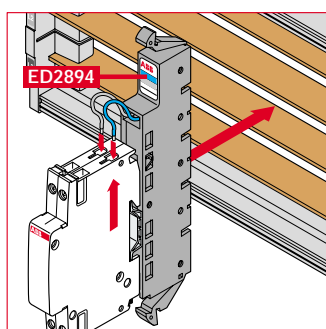
Power supply module for 400A frame (L1-L2-L3-N).



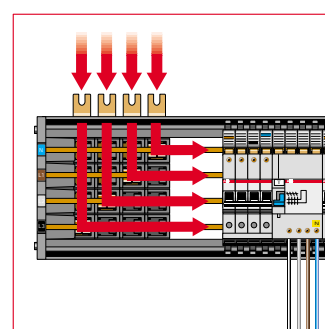
Base module for moulded-case circuit-breaker (L1-L2-L3-N).



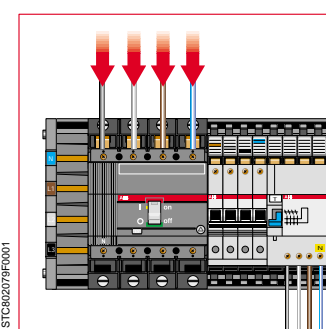
Base module for System Pro M modular circuit-breakers (L1-L2-L3-N).



Base module for auxiliary apparatus.



Direct power supply of the bases by means of power supply module ED2209.



Power supply by means of main row circuit-breaker.

# Unifix cabling system

## Unifix L - Main characteristics

### Busbars

The busbars consist of a support, containing a system of conductors with 100A capacity (central power supply) and 25 kA short-circuit current (conditioned). They are available in the two-pole and four-pole version, and in 12, 18, 24 or 36 module widths, and can be installed in ArTu switchboards with 400, 600 and 800mm widths (except 18 modules) respectively. Fixing is carried out by dove-tailing on the rear of the DIN rail, and installation is in two modules with H=200mm.

Thanks to the structure of the busbar system, it is possible to hook the special supports onto the rear for 60x80mm maximum dimension duct.

### Power supply module with cable

The 63A power supply module, in the two-pole and four-pole versions, is coupled directly into the busbar conductors. It has

overall dimensions equivalent to two base modules (17.5mm) and allows the busbars to be supplied directly when the main row circuit-breaker is not provided.

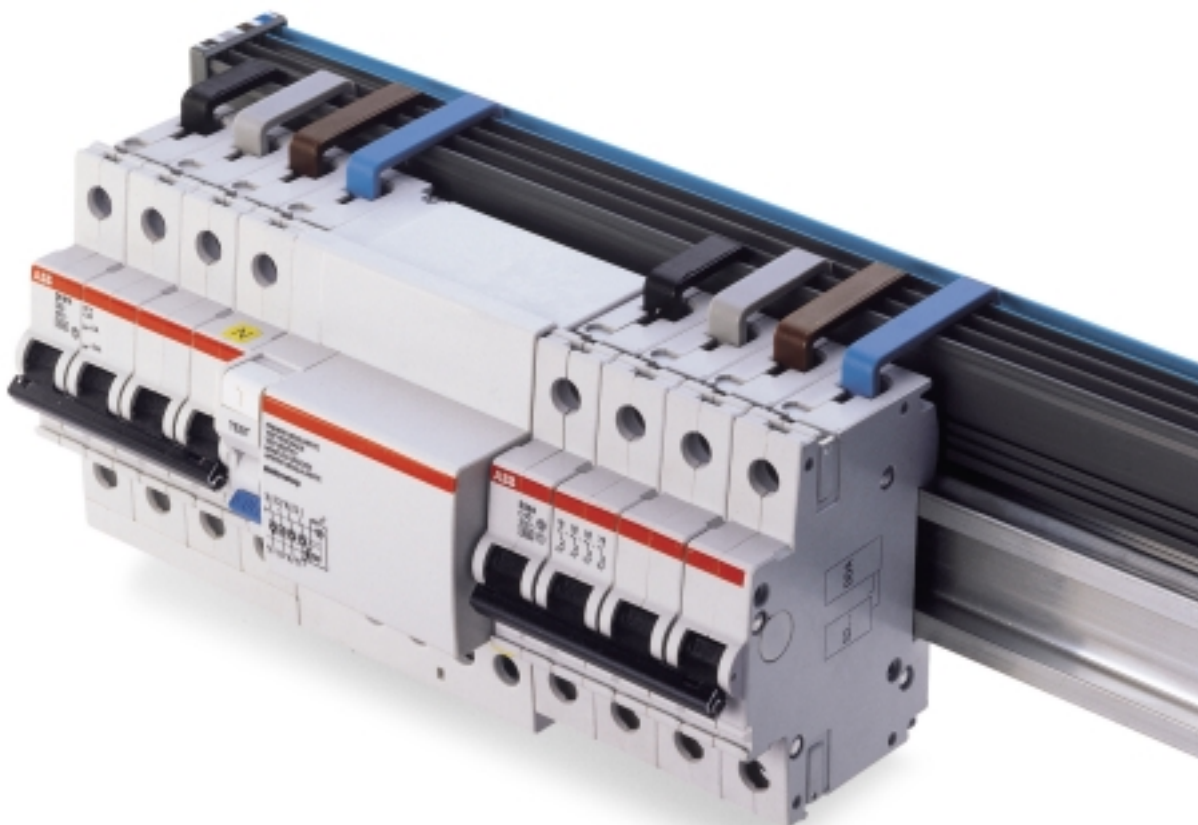
The four-pole version, with 16mm<sup>2</sup> section, is divided into the following cable lengths:

- 400mm;
- 600mm;
- 800mm;
- 1500mm.

### Power supply module without cable

The single-pole 100A power supply module in the L1, L2, L3, N versions is coupled directly into the busbar conductors.

It has overall dimensions equivalent to one base module (17.5mm) and allows the busbars to be supplied directly when the main row



1STC82076F001

# Unifix cabling system

## Unifix L - Main characteristics

circuit-breaker is not provided.

It is fitted with a terminal which allows connection of a conductor with 35mm<sup>2</sup> section.

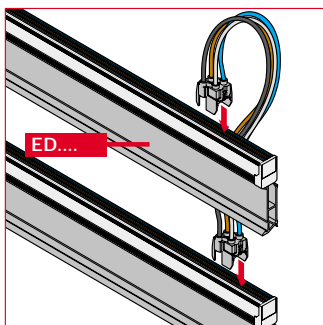
### Power supply terminals

The single-pole 100A power supply terminal is connected directly to the front terminals of any ABB SACE modular circuit-breaker, allowing supply of the busbars through the main row circuit-breaker. It is fitted with a terminal which allows connection of a conductor with 35mm<sup>2</sup> section.

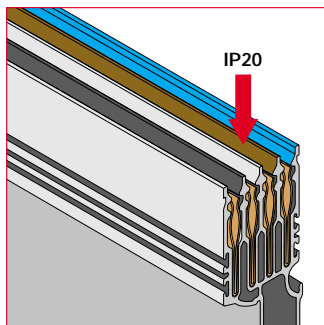
The single-pole 63A power supply terminal has the same characteristics as the previous one and is fitted with a terminal which allows connection of a conductor with 25mm<sup>2</sup> section.

### Connections for apparatus

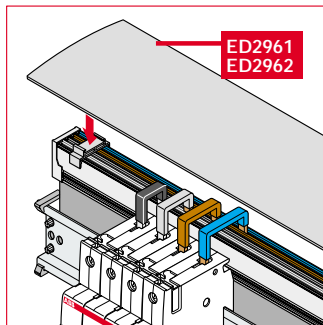
The connections consist of small insulated copper busbars, cut and bent to size. They allow power supply between each terminal of the System Pro *M* modular apparatus and the busbar system. The connections are provided according to the polarity of the apparatus to be cabled (connectors for L1, L2, L3, N and in the version dedicated to 1P + N apparatus in a DIN module are available). The supports with cable for auxiliary apparatus supply are also available, and these allow cabling of this apparatus placed side by side in the same row as the modular circuit-breakers.



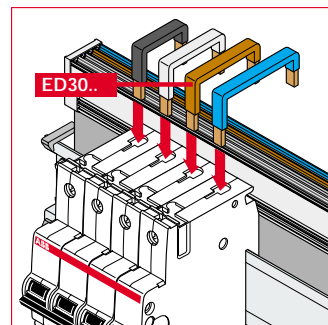
Power supply of the busbar with parallel module of different lengths (L=400/600/800/1500mm).



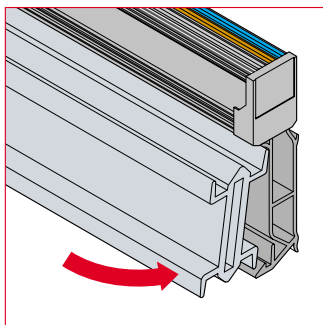
IP20 degree of protection busbar system.



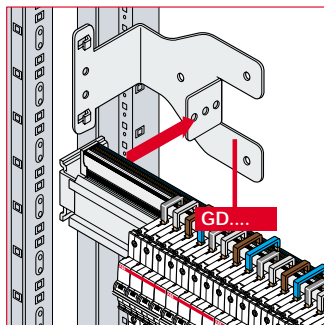
Use of the busbar protection cover.



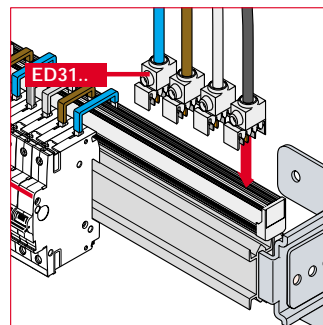
Connections (L1-L2-L3-N) for System Pro *M* modular apparatus.



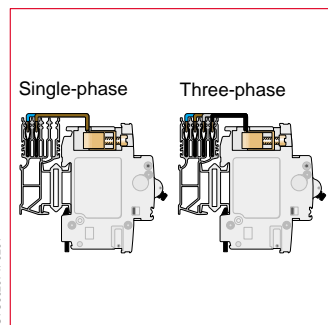
Snap-on fixing onto DIN rail.



Supports for horizontal duct.



Power supply of the busbar with 100A power supply module without cable. Terminal capacity 35mm<sup>2</sup>.



Construction of any circuit situation.

# Unifix cabling system

## Summarised outline

### Technical characteristics



1S TC620282F0001

Technical characteristics		Unifix H	Unifix L
Rated service voltage (Ue)		690V AC	400V AC
Rated insulation voltage (Ui)		1000V AC	500V AC
Rated impulse withstand voltage (Uimp)		8kV	6kV
Rated frequency		50/60Hz	50/60Hz
Rated current (I <sub>n</sub> )	central power supply	400A	100A
	lateral power supply	320A	80A
Rated short-time short-circuit current (I <sub>cs</sub> )		25kA	
Maximum peak current (I <sub>p</sub> )		52,5kA-400V	
Maximum installable circuit-breaker size		250A	100A
Conditioned short-circuit current (I <sub>cc</sub> )	Tmax T1 <sup>(1)</sup>	36kA-400V	
	Tmax T2 N, S <sup>(1)</sup>	50kA-400V	
	Tmax T3	50kA-400V	
With circuit-breaker	Isomax S1	25kA-400V	
	Isomax S2	50kA-400V	
	S250-DS650		6kA-400V
	S270-DS670		10kA-400V
	S280		25kA-400V
Degree of protection		IP20 with accessory	IP20
Characteristics of the insulating material		Self-extinguishing thermoplastic V1 (UL94)	Self-extinguishing thermoplastic V1 (UL94)
Characteristics of the conductor material		Electrolytic copper	Electrolytic copper
Width			12/400
(N° modules/mm)		24/600	24/600
		36/800	36/800

<sup>(1)</sup> Select circuit-breakers in version with front terminals for copper cables.

# Unifix cabling system

## Summarised outline

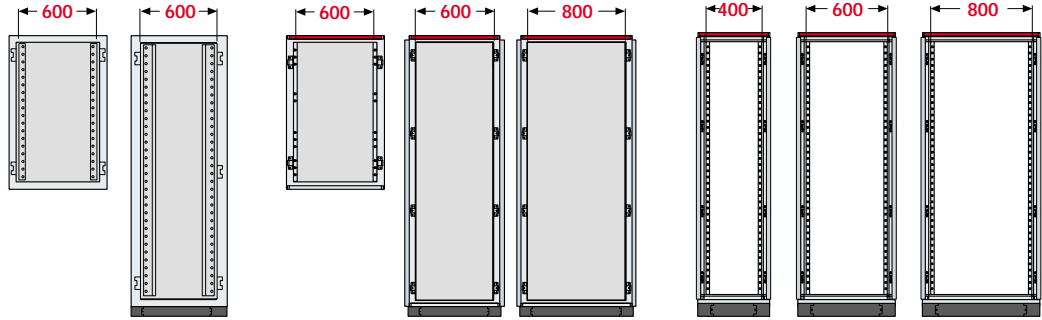
Table for selecting connections according to the circuit-breaker

Circuit-breaker series	Unifix H	Unifix L
S941 - S951 - S971 DS941 - DS951 - DS971	ED2654 L1/N 40A ED2662 L2/N 40A ED2670 L3/N 40A	ED3272 L1/N 40A ED3280 L2/N 40A ED3298 L3/N 40A
S240 - S250 - S270 - S280 F360 - F370	≤40A (top power supply) >40A(top pow. supply) ED2613 L1 40A ED2530 L1 63A ED2621 L2 40A ED2548 L2 63A ED2639 L3 40A ED2555 L3 63A ED2647 N 40A ED2563 N 63A ≤40A (bott. pow. supply) >40A (bott. pow. sup.) ED2688 L1 40A ED2571 L1 63A ED2696 L2 40A ED2589 L2 63A ED2704 L3 40A ED2597 L3 63A ED2712 N 40A ED2605 N 63A	ED3033 L1 100A ED3041 L2 100A ED3058 L3 100A ED3066 N 100A
F660 - F670 - S280 (80-100A) E270 - RS370	ED2720 L1 100A ED2738 L2 100A ED2746 L3 100A ED2753 N 100A	ED3132 Power supply L1/L2/L3/N - 350mm ED0026 Power supply L1/L2/L3/N - 1500mm ED0025 Power supply L1/L2/L3/N - 2500mm
MDRC - Various apparatus	ED2894 L1/N 16A Top power supply ED2902 L1/L2 16A Top power supply ED2910 L1/N 16A Bottom power supply ED2928 L1/L2 16A Bottom power supply	ED3108 Power supply 2 cables L1/N 16A ED3116 Power supply L1/L2/L3 16A ED3124 Power supply L1/L2/L3/N 16A  ED3355 Power supply 2 cables L1/N 40A ED3363 Power supply 3 cables L1/L2/L3 40A ED3371 Power supply 4 cables L1/L2/L3/N 71A
Tmax T1	Circuit-breaker Residual current Solenoid operator	
Tmax T2	Circuit-breaker Residual current Solenoid operator	
Tmax T3	Circuit-breaker Residual current	
Isomax S1	Circuit-breaker Residual current	
Isomax S2	Circuit-breaker Residual current	

# Unifix cabling system

## Summarised outline

### Applications of the Unifix System



1STC0202083F0001

#### Type

#### Unifix H



Frame for Tmax and Isomax H=300mm  
 Fixing brackets H=300mm  
 Cross-beam for direct connection with PB0803

#### Unifix L



1STC0202084F0001

2P busbars  
 4P busbar  
 Fixing supports

	ArTu L		ArTu M			ArTu K		
	24 DIN mod. W=600mm		Wall-mounted 24 DIN mod. W=600mm	Floor-mounted 24 DIN mod. W=600mm	Floor-mounted 36 DIN mod. W=800mm	only with open functional frame		
			12 DIN mod. W=400mm	24 DIN mod. W=600mm	36 DIN mod. W=800mm			
ED2183				ED2183	ED2191		ED2183	ED2191
AD1097				AD1061	AD1061		AD1061	AD1061
TL1000				TV6200	TV8200		TV6202 <sup>(1)</sup>	TV8203
ED3017				ED3017	ED3025		ED2993	ED3017
ED2969				ED2969	ED2977		ED2944	ED2969
GD1520				GD6002	GD8002		GD4002	GD6002
								ED3025
								ED2977
								GD8002

<sup>(1)</sup> ArTu D=250mm

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### Busbars with shaped section

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### Flat busbars

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### Unifix cabling system

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### Segregations

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# In-depth technical information

## Mechanical and electrical characteristics of the ArTu switchboards

### Compliance with CEI EN 60439-1 Standard

The ArTu switchboards have undergone the type tests foreseen by the CEI EN 60439-1 (CEI 17/13-1 3<sup>rd</sup> edition) Standards in the ABB laboratories. The results of these tests guarantee the performances of the ArTu switchboards and, by using the metalwork structures, ABB SACE air, modular and moulded-case circuit-breakers, mean that the end switchboard constructor does not have to carry out any further type tests by following the selection criteria and the assembly instructions for the various components. These results, which are indicated below, can be referred to for making out the declaration of conformity of the switchboard.

### Over-temperature (Ref. par. 8.2.1 of the Standard)

The table on page 7/5 and following pages shows the thermal dissipation values referred to all the dimensions of ArTu switchboards and to the type of installation, deriving from the type tests carried out. The dissipated power data (in Watt) is according to the admissible over-temperature inside the switchboard (appropriately taking into account the simultaneity factor).

### Dielectric properties (Ref. par. 8.2.2 of the Standard)

	ArTu L wall-mounted D=200mm	ArTu L floor-mounted D=250mm	ArTu M wall-mounted D=150/200mm	ArTu M floor-mount. ArTu K D=250mm	ArTu K
Rated service voltage:	up to 690 V ca	up to 690 V ca	up to 690 V ca	up to 690 V ca	up to 690V
Rated insulation voltage:	up to 1000V ca	up to 1000V ca	up to 1000V ca	up to 1000V ca	up to 1000V ca
Rated impulse withstand voltage:	6 kV	8 kV	6 kV	8 kV	8 kV

### Short-circuit withstand current (Ref. par. 8.2.3 of the Standard)

	ArTu L wall-mounted D=200mm	ArTu L floor-mounted D=250mm	ArTu M wall-mounted D=150/200mm	ArTu M floor-mounted ArTu K D=250mm	ArTu K
Short-circuit withstand current:					
phase-phase	25 kA (1s)	35 kA (1s)	25 kA (1s)	35 kA (1s)	105kA (1s) 50kA (3s)
phase-neutral	9 kA (1s)	21 kA (1s)	9kA (1s)	21 kA (1s)	60 kA (1s)
Rated max. peak short-circuit current:	15kA	73kA	15kA	73kA	254kA

### Short-circuit efficiency (Ref. par. 8.2.4 of the Standard)

	ArTu L wall-mounted D=200mm	ArTu L floor-mounted D=250mm	ArTu M wall-mounted D=150/200mm	ArTu M floor-mounted ArTu K D=250mm	ArTu K
(Rif. par. 8.2.4.1):	Following the assembly indications of the metal components, the effective electrical continuity between the exposed conductive parts is verified, with negligible resistance values.				
(Rif par. 8.2.4.2):	Protection circuit short-circuit withstand current: phase-earthing busbar				
	9 kA (1s)	15 kA (1s)	9 kA (1s)	15 kA (1s)	60 kA (1s)

### 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 instructions.

### Mechanical operation (Ref. par. 8.2.6 of the Standard)

Mechanical operation is verified by following the assembly and mounting instructions of the ABB SACE metalwork structures and circuit-breakers.

### Degree of protection (Ref. par. 8.2.7 of the Standard) According to CEI EN 60529 (CEI 70-1 publication IEC 529)

	ArTu L wall-mounted D=200mm	ArTu L floor-mounted D=250mm	ArTu M wall-mounted D=150/200mm	ArTu M floor-mounted ArTu K D=250mm	ArTu K
Without door	IP31	IP31	-	IP 31	IP31
With door and ventilated side panels	-	-	-	-	IP41
With door	IP43	IP43	IP 65	IP 65	IP 65

## In-depth technical information

### Mechanical and electrical characteristics of the ArTu switchboards

#### Mechanical characteristics

##### Material

ArTu L structure	12/10mm thick pickled steel sheet
ArTu M structure	15/10mm thick steel sheet (floor) / 15/10mm hot galvanised sheet (wall)
ArTu K structure	15/10mm thick steel sheet
Panels	12/15/10mm thick steel sheet
Doors	15/10mm hot galvanised steel sheet. 4mm thick glass tempered from inside
Plates	hot galvanised steel sheet, thickness: Plates 20/25/10mm

##### Painting

Structure	Colour Grey orange-peel RAL 7035
Base strip colour	Grey RAL 7012
Standard cycle	Sheet washing Phosphating with iron salt base Drying in tunnel at 100°C External and internal painting with electrostatic application of thermosetting powder enamel with epoxy polyester binders. Grey orange-peel RAL 7035 colour, total thickness: 60/70 micron. Polymerisation in oven at 180°C.
Paint characteristics	Binder: epoxy polyester Specific gravity: 1.61 g/cm <sup>3</sup> Theoretical coverage: 10.4 m <sup>2</sup> /kg with average film thickness 60 micron Melting point: 85-95°C (Kofler bench method) Granulometry: standard distribution between 5 and 100 micron with average size of the particles between 30 and 40 micron. Hardening: 12 min. at 190°C (temperature of object) Hardness: 1H - 2H DIN 53152 bending elasticity: unaltered on 1/4" spindle DIN 53151 reticular adherence: GT O (100%) Erichem elasticity: SEN DIN 53156: > 6mm Gardner resistance to impact: 25 Kg. x cm.

Tests carried out on degreased and phosphated sheets with film thickness of 60/70 micron.  
The painting has passed the resistance tests to saline fog (193 hours).

##### Ambient characteristics

Type of installation	indoors
Installation conditions	Wall / Floor
Service climate (t° /% r.h.)	constant 23°C/83% - 40°C/93% variable 23°C/98% - 40°C/98%
Ambient temperature limits	operating -5°C +40°C storage -25°C +55°C

# In-depth technical information

## Declaration of conformity

### ABB SACE declaration of conformity

ArTu switchboards with the following rated characteristics:

Rated service voltage	up to 690 V	
Rated insulation voltage	up to 1000V	
Rated current / $I_{cw}$	ArTu L wall-mounted	up to 250 A / 25 kA
	ArTu L floor-mounted	up to 630 A / 35 kA
	ArTu K	up to 3200 A / 105 kA
	ArTu M floor-mounted and K D=250mm	up to 630 A / 35 kA
	ArTu M D=150/200mm	up to 250 A / 25 kA
Degree of protection	ArTu L	IP 31 (without door), IP 43 (with door)
	ArTu K	IP 31 (without door), IP 41 (with door and side ventilation), IP 65 (with door)
	ArTu M D=250mm	IP 31 (with door), IP 65 (with door)
	ArTu M D=150/200mm	IP 65 (with door)

when correctly selected and assembled, as per the indications given in this catalogue and in the instruction manual, they allow construction of switchboards complying with the EN 60439-1 (CEI 17/13-1) Standard, on the basis of what is foreseen by the Low Voltage Directive of the European Community (Directive 73/23/EEC, Law 791/1977).

7

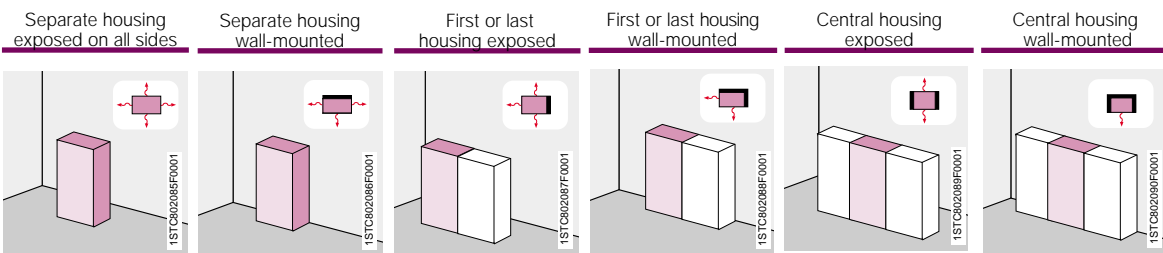
The above is valid if the switchboard is designed and constructed:

- selecting the materials according to the performances indicated in the ABB catalogues;
- sizing the conductors according to the prescriptions of the EN 60439-1 and CEI 64-8 Standards;
- carrying out the individual tests foreseen under the EN 60439-1 Standard successfully.

# In-depth technical information

## Dissipated power

### ArTu IP 31 switchboards



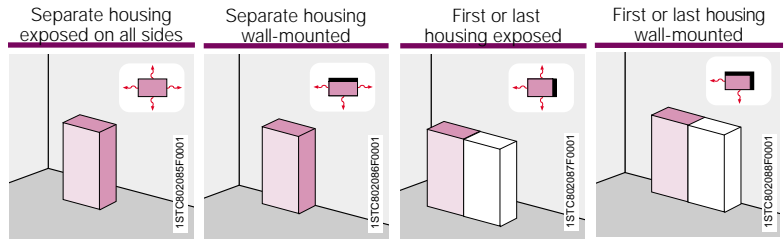
	Separate housing exposed on all sides				Separate housing wall-mounted				First or last housing exposed				First or last housing wall-mounted				Central housing exposed				Central housing wall-mounted											
	Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)											
Over-temperature	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	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C				
<b>ArTu L</b>																																
SL0600					99	125	150	176					95	118	143	168									91	113	137	160				
SL0800					106	134	160	188					100	125	152	178									107	132	160	189				
SL1000					122	152	184	216					116	143	174	204									113	141	170	201				
SL1200					135	170	205	241					128	161	193	228									126	156	189	223				
SL1400	174	217	265	312	155	195	237	278	168	211	255	301	145	183	221	261	164	206	250	295					140	176	213	252				
SL1600	194	242	294	347	171	213	259	306	185	232	281	332	160	200	242	286	180	226	274	323					154	193	233	276				
SL1800	211	264	320	378	184	231	281	331	200	251	305	360	173	217	262	309	195	244	296	350					166	208	252	298				
SL2000	227	285	345	408	197	248	300	354	215	270	327	386	185	231	281	331	206	262	318	375					178	223	271	319				
<b>ArTu M</b>																																
SM 1462	179	225	272	313	159	199	241	285	172	216	261	309	149	186	226	267	168	210	255	301					143	180	218	257				
SM 1662	196	246	298	352	173	217	263	310	187	235	285	336	161	203	245	290	182	229	277	327					156	195	236	279				
SM 1682	248	311	377	445	218	274	331	391	241	303	367	433	206	259	313	370	238	298	361	427					201	252	306	361				
SM 1862	212	266	323	381	186	233	282	333	202	253	307	362	174	218	264	311	196	246	298	352					167	210	254	300				
SM 1882	270	339	410	484	236	296	358	423	261	328	397	469	223	279	338	399	257	322	391	461					217	272	330	389				
SM 2062	228	286	346	409	198	248	301	355	215	270	327	386	185	232	281	331	209	262	317	375					178	223	270	319				
SM 2082	291	365	442	521	252	316	383	453	280	351	425	502	238	299	362	427	275	345	418	494					232	291	353	417				
<b>ArTu K H 1600mm</b>																																
SK 6025	206	257	310	367	185	229	275	325	198	247	298	351	172	215	257	305	192	242	290	342					167	207	248	283				
SK 8025	260	322	391	460	230	286	345	406	252	315	380	448	216	273	325	385	250	310	373	442					212	265	320	376				
<b>ArTu K H 1800mm</b>																																
SK 6025	222	278	338	396	196	245	295	348	212	255	320	377	184	230	276	325	206	258	310	368					178	222	267	315				
SK 8025	280	350	423	500	247	310	370	438	271	340	410	485	233	290	350	415	270	335	405	476					228	285	342	404				
SK 4040	223	280	338	400	208	258	314	371	208	262	315	374	187	234	281	332	193	246	296	350					170	215	260	310				
SK 4060	290	364	440	520	276	344	418	494	265	333	402	476	244	305	367	434	240	305	367	435					218	274	333	395				
SK 4080	371	461	560	668	349	440	535	622	329	410	495	588	300	377	457	539	297	370	455	536					273	343	415	491				
SK 6040	285	357	433	511	259	324	393	464	268	336	407	481	237	297	359	424	255	320	387	457					223	279	338	400				
SK 8040	356	446	540	638	319	400	484	572	339	425	515	608	296	371	449	530	327	410	496	586					283	355	430	508				
SK 6060	371	466	564	666	344	432	523	617	343	430	521	616	309	387	469	553	316	397	481	568					285	358	434	512				
SK 8060	423	531	643	759	415	521	631	745	408	512	621	733	381	478	579	684	402	505	611	722					359	451	546	645				
SK 6080	428	537	651	769	426	535	648	765	407	511	619	731	388	486	589	695	384	481	583	688					352	442	535	632				
SK 8080	489	614	743	877	478	599	726	857	463	581	703	830	450	564	683	807	454	570	690	815					434	544	659	778				
<b>ArTu K H 2000mm</b>																																
SK 6025	240	298	358	424	208	260	313	370	225	282	340	402	195	245	295	346	219	275	329	388					188	234	282	334				
SK 8025	306	377	457	536	262	328	395	468	290	363	440	520	248	312	377	442	285	358	429	509					242	304	365	432				
SK 4040	242	304	368	435	224	268	337	399	223	280	339	399	200	251	304	359	209	260	316	377					183	230	278	329				
SK 4060	312	393	476	561	297	360	448	530	284	356	431	508	260	327	395	467	258	322	392	466					233	293	354	419				
SK 4080	393	495	598	705	378	475	577	680	356	444	538	636	306	386	469	550	319	397	480	565					291	365	442	525				
SK 6040	304	382	463	546	277	347	420	496	287	360	436	514	253	317	384	454	273	342	415	489					237	298	360	426				
SK 8040	368	462	559	660	340	427	517	610	362	454	550	650	315	395	479	565	349	437	530	625					301	378	458	541				
SK 6060	382	479	581	685	370	464	562	663	367	460	557	658	331	451	503	594	340	426	516	609					304	381	462	545				
SK 8060	436	546	662	781	422	530	642	758	417	524	634	749	402	505	612	722	413	519	628	742					380	477	578	682				
SK 6080	441	554	671	792	435	546	662	781	416	522	632	746	408	512	620	732	406	509	617	728					373	468	566	669				
SK 8080	512	643	778	919	494	620	751	887	480	602	729	861	461	578	701	827	466	585	709	837					451	566	685	809				

Dissipated power inside the ArTu switchboards according to the admissible over-temperature.

# In-depth technical information

## Dissipated power

### ArTu IP 31 switchboards with ventilated side panels



#### Over-temperature

#### ArTu K H 1800mm

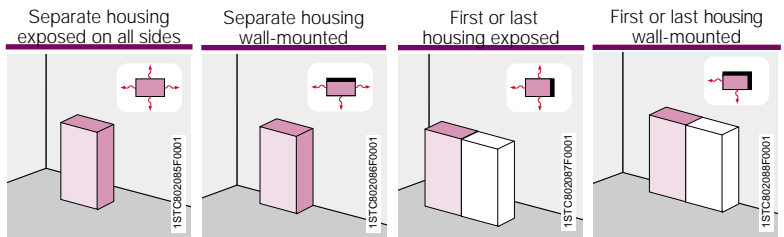
	Separate housing exposed on all sides				Separate housing wall-mounted				First or last housing exposed				First or last housing wall-mounted			
	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C
SK 4060	442	570	707	852	421	544	675	813	325	420	521	628	312	402	499	601
SK 4080	599	773	959	1155	581	749	930	1120	409	528	654	789	393	508	630	759
SK 6060	515	664	824	993	486	627	778	938	396	511	634	764	368	475	589	710
SK 8060	590	761	944	1138	553	713	885	1067	461	594	737	889	426	550	682	823
SK 6080	685	885	1097	1323	660	852	1057	1274	496	640	793	956	461	595	738	889
SK 8080	772	996	1236	1489	725	936	1161	1399	551	711	882	1064	498	695	863	1040

#### ArTu K H 2000mm

SK 4060	446	574	710	855	426	550	682	822	328	425	525	632	314	406	504	605
SK 4080	605	780	968	1167	584	754	935	1128	413	532	658	794	397	512	636	766
SK 6060	529	683	847	1021	491	634	786	948	399	515	639	770	372	480	595	717
SK 8060	596	769	955	1151	565	728	904	1089	464	598	742	894	431	556	690	831
SK 6080	691	892	1107	1334	665	858	1065	1283	503	648	804	970	472	608	755	910
SK 8080	804	1037	1287	1551	738	953	1182	1425	575	742	920	1109	536	692	859	1035

Dissipated power inside the ArTu switchboards according to the admissible over-temperature.

### ArTu IP 31 switchboards with 2 ventilated side panels and 2 ventilated front panels H=200mm



#### Over-temperature

#### ArTu K H 1800mm

	Separate housing exposed on all sides				Separate housing wall-mounted				First or last housing exposed				First or last housing wall-mounted			
	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
SK 6060	571	737	914	1102	541	698	866	1044	428	552	685	826	406	524	650	784
SK 8060	649	837	1038	1252	611	788	978	1179	502	648	804	969	460	593	736	887
SK 6080	737	951	1180	1422	712	919	1140	1374	552	713	884	1066	518	668	829	999
SK 8080	836	1079	1339	1613	787	1016	1261	1519	625	806	1000	1205	595	768	953	1149

#### ArTu K H 2000mm

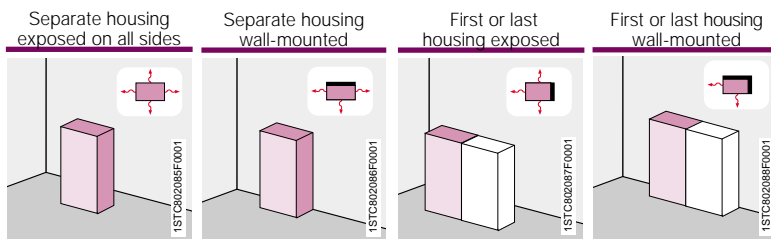
SK 6060	586	756	938	1131	546	705	874	1131	434	560	695	838	407	525	651	785
SK 8060	654	844	1047	1261	623	804	997	1202	507	654	811	978	468	604	749	903
SK 6080	741	956	1186	1429	715	923	1145	1380	560	723	897	1081	527	680	843	1016
SK 8080	861	1112	1379	1662	792	1022	1268	1528	640	826	1024	1234	596	769	955	1151

Dissipated power inside the ArTu switchboards according to the admissible over-temperature.

# In-depth technical information

## Dissipated power

### ArTu IP 41 switchboards with ventilated side panels



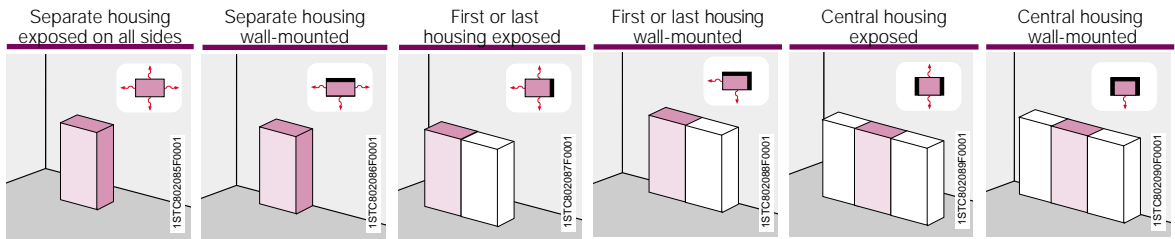
Over-temperature			Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)			
			25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C
<b>ArTu K H 1800mm</b>																		
SK 4060			418	539	669	806	398	514	637	768	317	409	507	611	304	392	486	586
SK 4080			562	725	899	1084	544	703	872	1051	395	509	632	761	382	493	612	738
SK 6060			489	631	783	944	462	596	739	891	376	485	602	725	350	451	560	674
SK 8060			560	723	897	1081	525	678	841	1013	438	565	700	844	405	523	648	781
SK 6080			651	840	1042	1256	627	809	1004	1210	471	608	754	909	438	565	701	845
SK 8080			733	946	1174	1415	689	889	1103	1329	524	676	838	1010	473	661	819	988
<b>ArTu K H 2000mm</b>																		
SK 4060			422	543	671	809	403	519	644	777	320	413	511	615	309	398	492	591
SK 4080			567	732	908	1094	547	706	876	1056	398	514	635	765	389	498	617	743
SK 6060			503	649	805	970	466	602	747	900	379	489	607	732	353	456	565	681
SK 8060			566	731	907	1093	536	692	859	1035	440	568	705	850	410	528	656	790
SK 6080			657	847	1051	1267	632	815	1011	1219	477	616	764	921	448	578	717	864
SK 8080			764	985	1222	1474	701	905	1123	1353	546	705	874	1054	510	658	816	983

Dissipated power inside the ArTu switchboards according to the admissible over-temperature.

# In-depth technical information

## Dissipated power

### ArTu IP 43 switchboards



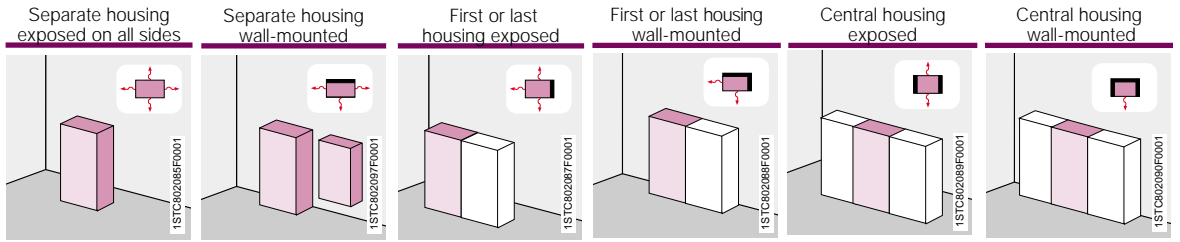
	Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)							
	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C				
<b>Over-temperature</b>																												
<b>ArTu L</b>																												
SL0600					90	113	137	162					86	108	131	155					82	103	125	147				
SL0800					97	122	147	174					92	115	140	165					98	122	148	175				
SL1000					113	141	171	202					107	134	162	191					104	131	158	187				
SL1200					126	159	192	227					120	151	181	214					117	146	177	209				
SL1400	158	197	241	284	141	177	215	253	153	192	232	274	132	166	201	237	149	187	227	268	127	160	194	229				
SL1600	176	220	267	315	155	194	235	278	168	211	255	302	145	182	220	260	164	205	249	294	140	175	212	251				
SL1800	192	240	291	344	167	210	255	301	182	228	277	327	157	197	238	281	177	222	269	318	151	189	229	271				
SL2000	206	259	314	371	179	225	273	322	195	245	297	351	168	210	253	301	190	238	289	341	162	203	246	290				

Dissipated power inside the ArTu switchboards according to the admissible over-temperature.

# In-depth technical information

## Dissipated power

### ArTu IP 65 switchboards



	Separate housing exposed on all sides				Separate housing wall-mounted				First or last housing exposed				First or last housing wall-mounted				Central housing exposed				Central housing wall-mounted											
	Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)				Max. dissipated power (W)											
Over-temperature	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	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C				
<b>ArTu M</b>																																
SM 6061					70	88	107	126																								
SM 8061					71	90	108	128																								
SM 8062					83	104	126	149																								
SM 1062					95	119	145	171																								
SM 1262					107	134	162	192																								
SM 1462	159	200	242	278	141	177	215	254	153	192	233	275	132	166	201	237	149	187	227	268	127	160	194	229								
SM 1662	175	219	265	313	154	193	234	276	167	209	253	299	144	180	218	258	162	204	247	291	138	174	210	248								
SM 1682	221	277	336	396	194	244	295	348	215	269	326	385	184	230	279	329	212	265	321	380	179	224	272	321								
SM 1862	189	237	287	339	165	207	251	297	180	225	273	322	154	194	235	277	175	219	265	313	149	186	226	267								
SM 1882	240	301	365	431	210	263	319	376	232	291	353	417	198	249	301	355	229	287	348	410	193	242	294	347								
SM 2062	203	254	308	364	176	221	268	316	192	240	291	344	164	206	250	295	186	233	282	334	158	199	241	284								
SM 2082	259	324	393	464	224	282	341	403	249	312	379	447	212	266	322	380	245	307	372	440	207	259	314	371								
<b>ArTu K H 1600mm</b>																																
SK 6025	182	228	276	326	161	202	245	289	175	219	266	314	151	189	229	271	170	214	259	306	145	182	221	261								
SK 8025	232	291	353	416	203	255	309	365	225	282	342	404	192	241	292	345	222	278	337	398	189	237	287	338								
<b>ArTu K H 1800mm</b>																																
SK 6025	199	250	303	357	175	220	266	315	190	239	289	342	164	206	249	294	185	233	282	333	158	198	240	283								
SK 8025	221	315	382	451	221	277	335	396	244	307	371	439	209	262	317	375	241	302	366	432	204	256	310	365								
SK 4040	193	242	293	346	179	224	271	320	178	223	270	319	160	201	243	287	165	207	251	296	146	184	222	263								
SK 4060	260	326	395	466	247	310	375	443	235	294	357	421	217	272	329	389	212	266	322	381	194	243	295	348								
SK 4080	328	411	498	588	317	398	482	569	290	364	440	520	274	344	417	492	259	325	394	465	243	304	369	435								
SK 6040	254	318	385	455	230	289	350	413	238	299	362	428	210	264	320	378	227	285	345	407	198	249	301	356								
SK 8040	316	397	481	568	284	356	431	509	302	378	458	541	263	330	400	472	291	365	442	521	252	316	383	452								
SK 6060	331	415	502	593	306	384	465	549	305	383	464	548	275	344	417	493	282	353	428	505	254	319	386	456								
SK 8060	377	473	572	676	369	463	561	663	363	456	552	652	339	426	516	609	358	449	544	642	320	401	486	574								
SK 6080	381	478	579	684	379	476	577	681	362	455	551	650	345	433	524	619	341	428	519	612	314	393	477	563								
SK 8080	435	546	661	781	425	533	646	763	412	517	626	739	400	502	608	718	404	507	614	725	386	484	586	692								
<b>ArTu K H 2000mm</b>																																
SK 6025	216	270	328	387	189	237	287	338	205	257	312	368	176	221	268	316	199	250	303	358	170	213	258	305								
SK 8025	273	343	415	490	239	299	362	428	265	332	402	475	225	283	343	404	261	327	396	467	220	276	334	395								
SK 4040	209	262	317	375	192	241	292	345	191	240	291	343	172	216	262	309	178	223	270	319	157	197	239	282								
SK 4060	279	351	425	501	265	333	403	476	252	316	383	452	232	292	353	417	227	285	346	408	207	260	315	372								
SK 4080	354	444	537	634	341	428	519	612	314	394	478	564	295	370	448	529	278	349	423	499	258	324	393	464								
SK 6040	271	340	412	486	246	309	374	442	255	320	388	458	225	282	342	404	243	305	369	436	211	265	321	379								
SK 8040	328	411	498	588	303	380	460	543	322	404	490	578	280	352	426	503	310	389	471	557	268	337	408	481								
SK 6060	340	426	517	610	329	413	500	590	326	409	496	585	295	402	448	528	302	379	459	542	271	339	411	485								
SK 8060	388	486	589	695	376	472	571	675	371	466	565	667	358	449	544	643	368	462	559	660	338	424	514	607								
SK 6080	393	493	597	705	387	486	589	695	370	464	562	664	363	455	552	651	361	453	549	648	332	416	504	595								
SK 8080	456	572	693	818	440	552	668	789	427	536	649	766	410	515	624	736	415	521	631	745	401	503	610	720								

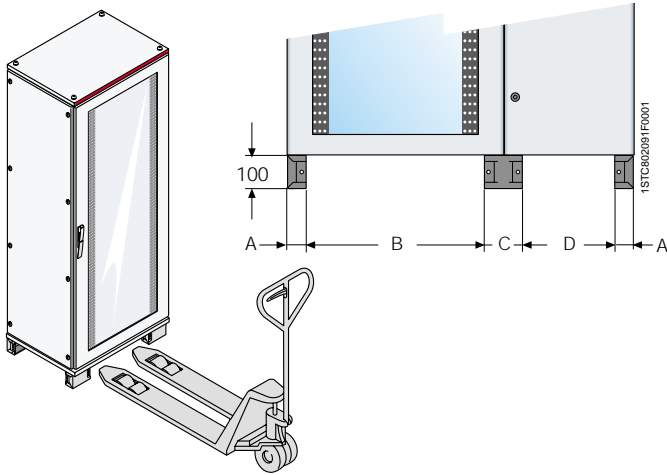
Dissipated power inside the ArTu switchboards according to the admissible over-temperature.

# In-depth technical information

## Handling

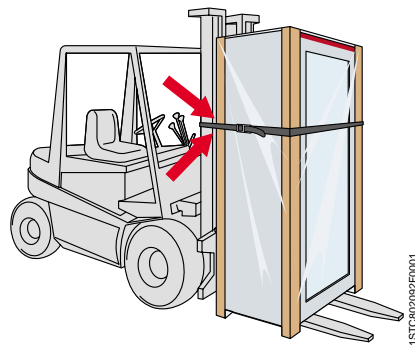
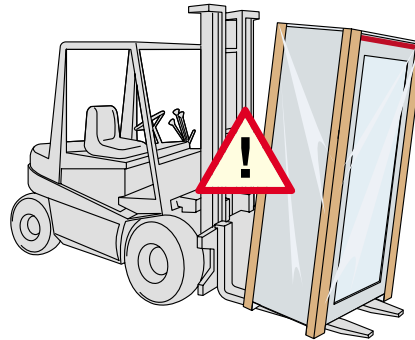
### With transpallet

Palletisable base strip for ArTu M and ArTu K



Structure	A (mm)	B (mm)	C (mm)	D (mm)
<b>ArTu L</b>				
Width 600mm	47	596	97	296
<b>ArTu M</b>				
Width 600mm	125,5	469	251	
Width 800mm	125,5	669	251	
<b>ArTu K</b>				
Width 400mm	125,5	259	251	
Width 600mm	125,5	469	251	
Width 800mm	125,5	669	251	
Width 200mm (cable container)	125,5		251	69
Width 300mm (cable container)	125,5		251	169

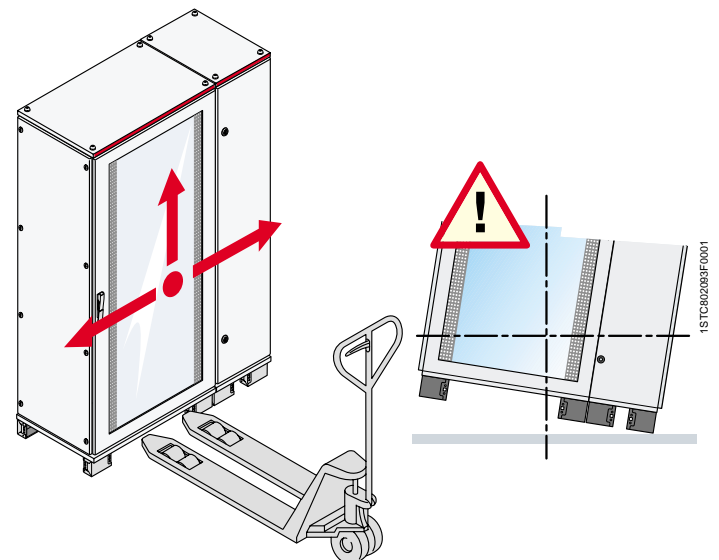
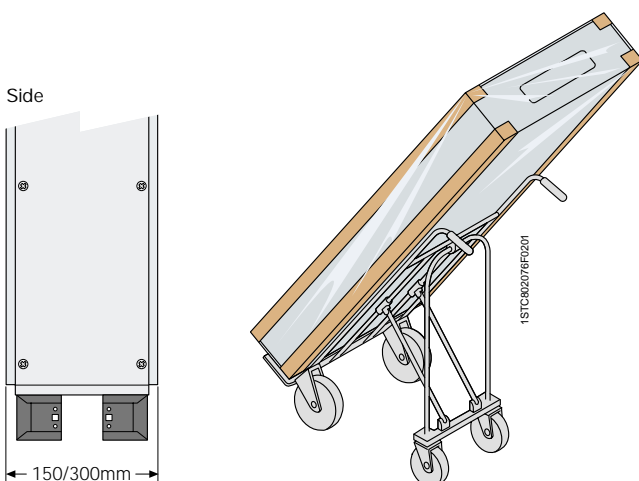
For greater safety during transport using a fork-lift truck, it is advisable to anchor the switchboard to the truck:



7

For switchboards with reduced depth, the following type of handling is recommended:

In the case of structures W=800mm (with internal or external cable container) containing busbar systems, check the centre of gravity before handling.



# In-depth technical information

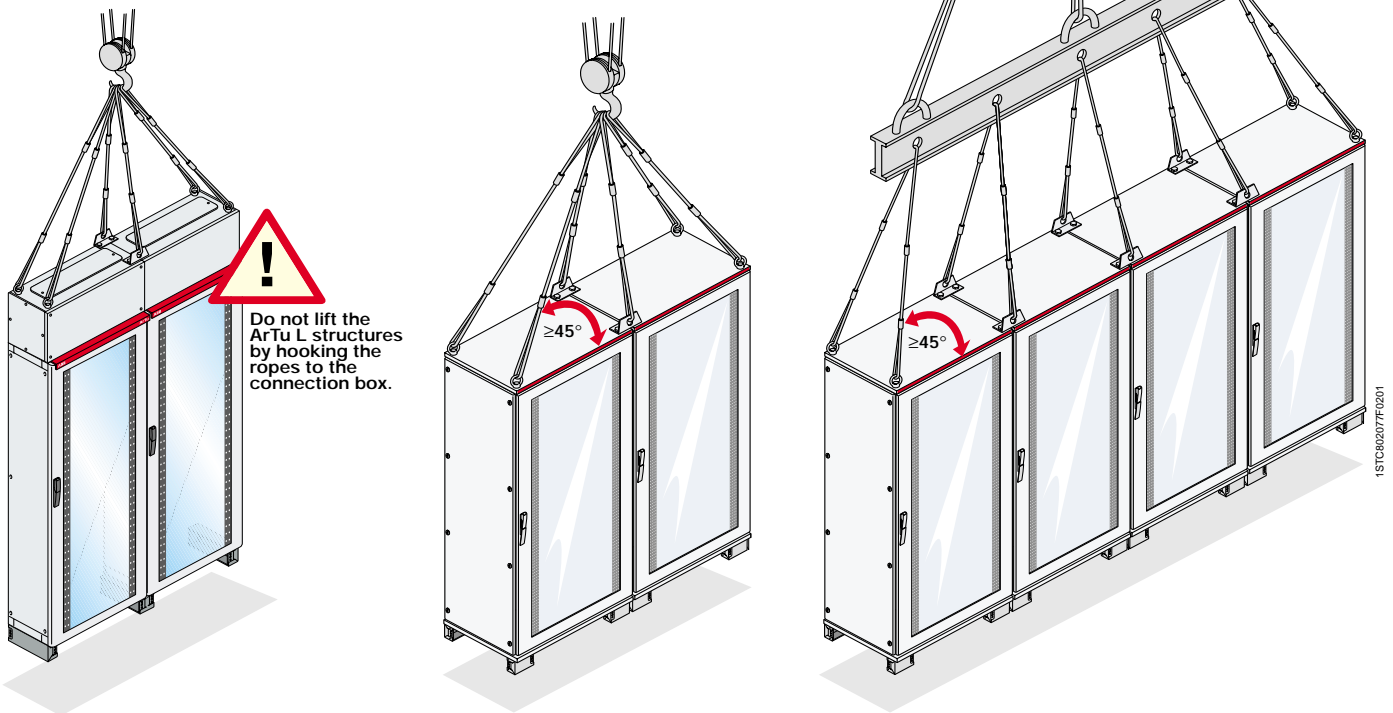
## Handling

### With overhead travelling crane

To handle using a crane or overhead travelling crane, check the following conditions before lifting the switchboard:

- excellent state of the ropes or chains;
- the angle between the lifting ropes and the switchboard roof must be  $\geq 45^\circ$ ;
- the maximum number of columns transported is 3;
- ArTu L maximum weight lifted as per DIN 580 (M8);
- ArTu M - K maximum weight lifted as per DIN 580 (M12) Standard.

To respect the conditions described above, a lifting beam with appropriate characteristics can be used when there are several columns side by side.



### DIN 580 Standard regarding mechanical connection elements (only for lifting eyebolts)

	A	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	1 <sup>st</sup> Load kg	2 <sup>nd</sup> Load kg	Tightening Nm
<b>Lifting eyebolt</b>										
ArTu L	M8	30	8	18	6	15	20	140	95	8
ArTu M - K	M12	54	12	28	10	22	30	340	240	28
<b>Lifting reinforcements</b>										
ArTu L	M8	ø40	37	80	25	ø14	60	210	140	22
ArTu M - K	M12	ø20	30	60	28	ø10	40	510	350	40

# In-depth technical information

## Electrical continuity

### Electrical continuity of the structure and of the fixed and mobile parts

**Fig.1**  
Electrical continuity in ArTu switchboards is guaranteed automatically just with assembly of the structure without the use of dedicated accessories.

**Fig.2**  
In the case of mobile parts (e.g. front panels), electrical continuity is guaranteed in the closed position by the special shape of the hinge (ABB patent) which is always supplied with the panels.

**Fig.3**  
The special shape of the hinge allows connection even using a traditional copper braid.

**Fig.4**  
When the switchboard is fitted with a glazed door, the latter does not need to be earthed.

**Fig.5**  
The blind door, side panels and rear panels are fitted with copper M6 captive screws. Panel earthing is obtained thanks to the fixing screws..

Fig.1

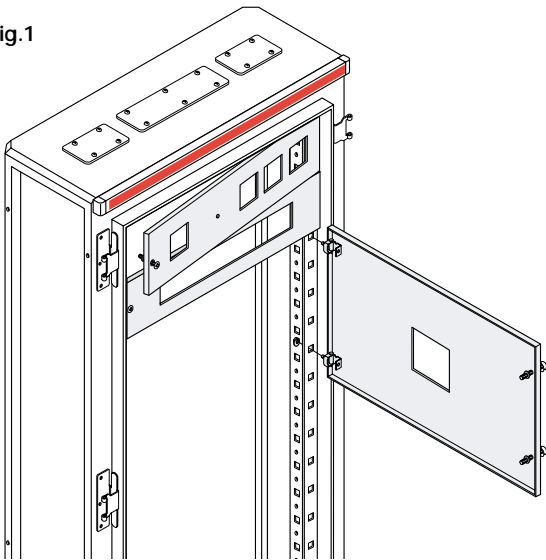


Fig.2

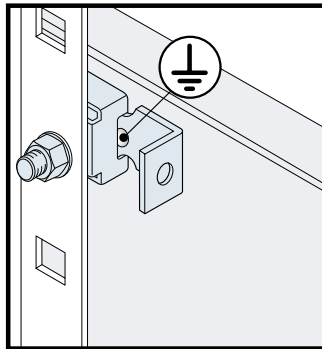


Fig.3

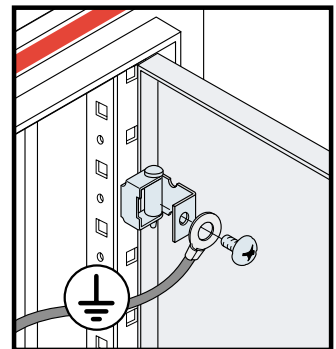


Fig.4

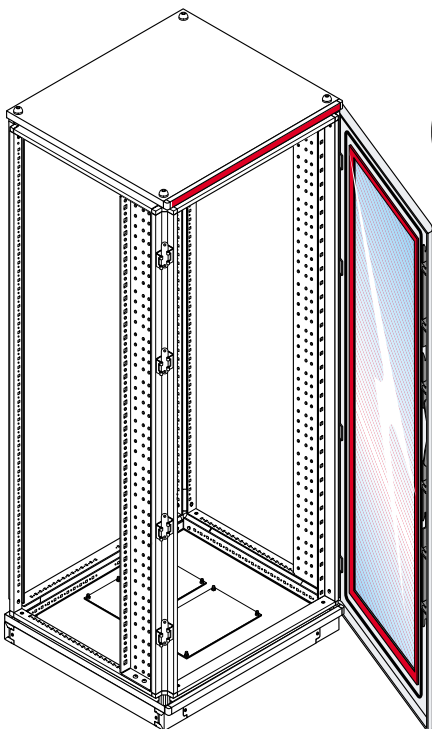
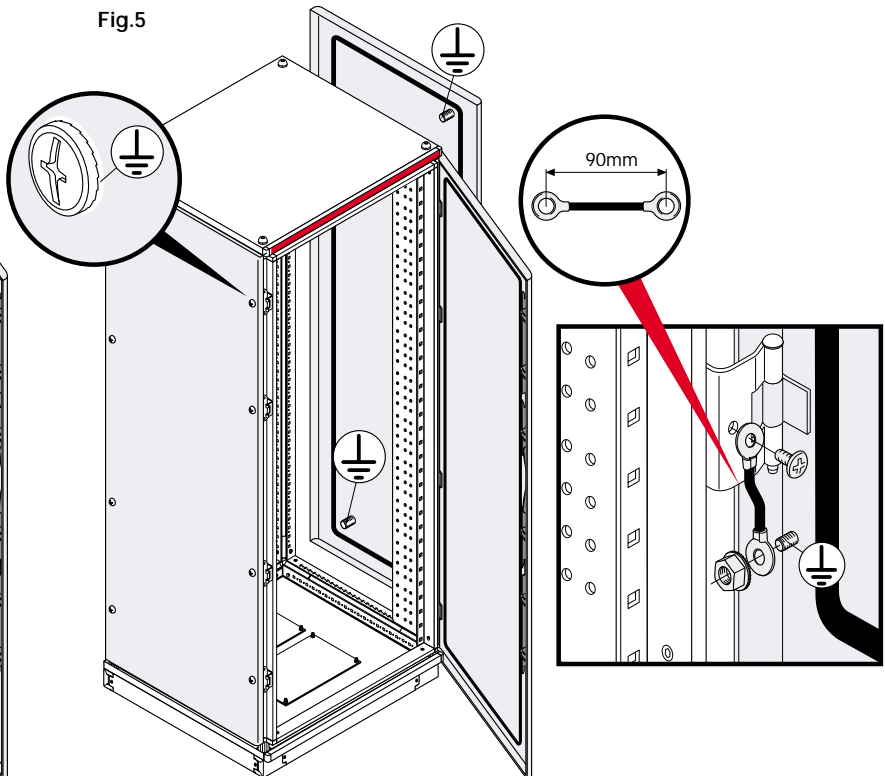


Fig.5



# In-depth technical information

## Equipotential conductors

### Calculation of the PE protection conductor

The EN 60439-1 Standard indicates the methods of calculation for the cross-section of the PE protection conductor which must be suitably sized to withstand the thermal and dynamic components of the fault currents.

In identifying the fixing position of the busbar, check the following conditions:

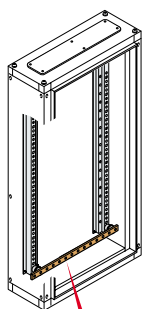
- the busbar must be connected directly to the switchboard exposed conductive parts (structure);
- the busbar must be connected in an easily accessible position.

For sizing, use the values in the table, taken from the CEI EN 60439-1 Standard (P.7.4.3.1.7).

Section of the phase conductor $S$ (mm <sup>2</sup> )	Minimum section of the corresponding protection conductor $S_p$ (mm <sup>2</sup> )
$S \leq 16$	$S$
$16 < S \leq 35$	16
$35 < S \leq 400$	$S/2$
$400 < S \leq 800$	200
$S > 800$	$S/4$

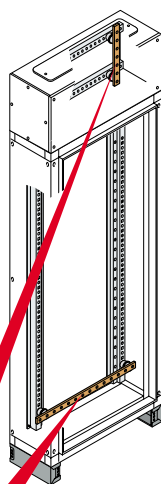
#### Wall-mounted ArTu L

Protection conductor section (25x4) 100mm<sup>2</sup> (art. BR0400)



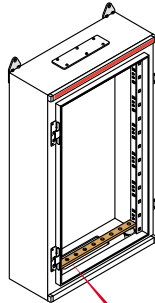
#### Floor-mounted ArTu L

Protection conductor section (25x4) 100mm<sup>2</sup> (art. BR0400)



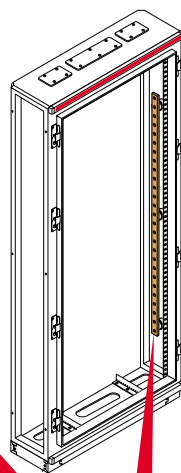
#### Wall-mounted ArTu M

Certified ACAE/LOVAG No. IT 99.024 with protection conductor section (25x4) 100 mm<sup>2</sup> (art. BR0400)



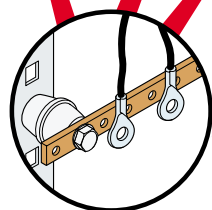
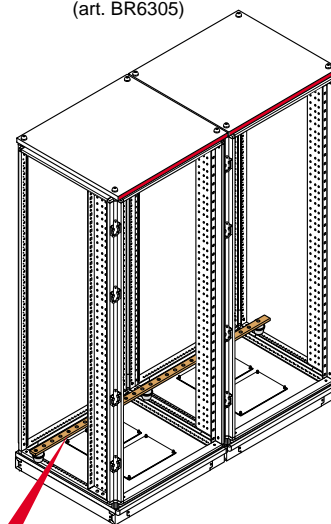
#### Floor-mounted ArTu M

Certified ACAE/LOVAG No. IT 99.022 with protection conductor section (25x4) 100 mm<sup>2</sup> (art. BR0400)

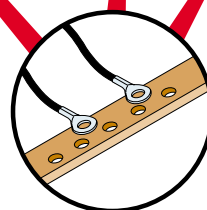


#### ArTu K

Certified ACAE/LOVAG No. IT 99.025 with protection conductor section (50x5) 250 mm<sup>2</sup> (art. BR6305)



The conductors must be connected singly.



The conductors must be connected singly.

### Equipotentiality

The accessible conductive parts of a device, which cannot be connected to the protection circuit by their 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 section must be selected according to the table given below.

Rated service current $I_e$ (mm <sup>2</sup> )	Minimum section of the equipotential protective conductor (mm <sup>2</sup> )
$I_e \leq 20$	$S$
$20 < I_e \leq 25$	2,5
$25 < I_e \leq 32$	4
$32 < I_e \leq 63$	6
$63 < I_e$	10

$S$  = section of the phase conductor (mm<sup>2</sup>)

### PEN conductor

The section of the Pen conductors of the apparatus must be determined using the same procedure followed for the neutral conductor (N).

The minimum section of a copper conductor must be 10(mm<sup>2</sup>).

The PEN conductor does not need to be insulated.

The parts of the structure must not be used as a PEN conductor. However, the assembly tracks, made of copper or aluminium, can be used as PEN conductors.


For conductors not made of copper, the sections above are replaced with equivalent conductivity sections, which may require larger sized terminals.

# In-depth technical information


## Degrees of protection


### 1<sup>st</sup> NUMBER: protection against solid bodies

**IP**  
**0** No protection


**1**  Protected against solid bodies larger than 50mm (accidental contact with hands)

**2**  Protected against solid bodies larger than 12mm (fingers)

**3**  Protected against solid bodies larger than 2.5mm (tools, wires)

**4**  Protected against solid bodies larger than 1 mm

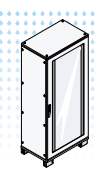
**5**  Protected against dust (no harmful deposit)

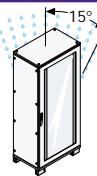
**6**  Totally protected against dust

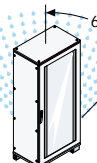
1<sup>st</sup> number defined by the CEI 70-1 – IEC 529 Standards

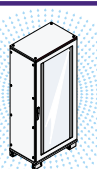
### 2<sup>nd</sup> NUMBER: protection against liquids

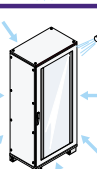
**IP**  
**0** No protection

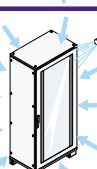
**1**  Protected against vertical fall of drops of water (condensation)

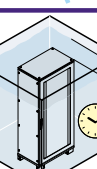
**2**  Protected against drops of water up to 15° from vertical

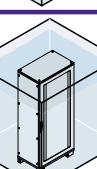
**3**  Protected against drops of water up to 60° from vertical

**4**  Protected against splashes of water from all directions

**5**  Protected against jets of water from all directions by means of a hose

**6**  Protection against jets of water similar to sea waves

**7**  Protected against the effects of temporary immersion

**8**  Protected against the effects of continual immersion

2<sup>nd</sup> number defined by the CEI 70-1 – IEC 529 Standards

1STC802095F0001

# In-depth technical information

## Degrees of protection

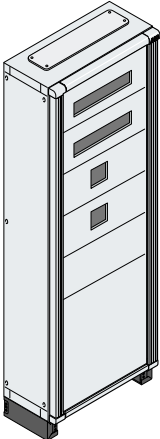

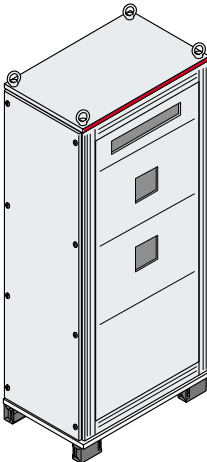
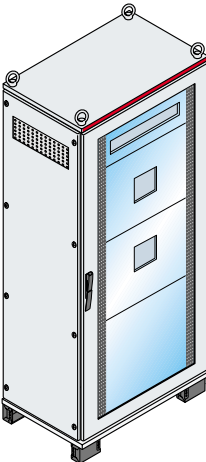
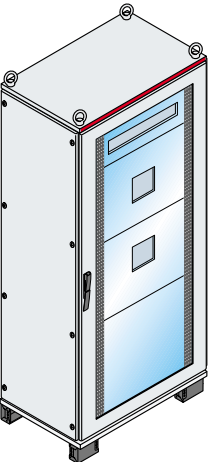
### PROTECTION AGAINST PENETRATION OF SOLID BODIES

1 <sup>st</sup> characteristics number	Brief description	Complete description
0	Unprotected	No particular protection is provided
1	Protected against solid bodies larger than 50mm	No large surface of the human body must be able to penetrate, for example a hand (voluntary protection is not provided) or solid bodies larger than 50mm in diameter.
2	Protected against solid bodies larger than 12mm	Fingers or similar objects of length not exceeding 80mm or solid bodies of diameter higher than 12mm must not penetrate
3	Protected against solid bodies larger than 2.5mm	Tools, wires, etc. with diameter or thickness greater than 2.5mm or solid bodies with diameter greater than 2.5mm must not be able to penetrate
4	Protected against solid bodies larger than 1.0mm	Wires or plates thicker than 1.0mm or solid bodies with diameter greater than 1.0mm must not be able to penetrate
5	Protected against dust	Penetration of dust is not totally excluded, but the amount penetrating is not enough to harm correct operation of the material
6	Totally protected against dust	No penetration of dust is allowed

### PROTECTION AGAINST PENETRATION OF WATER

2 <sup>nd</sup> characteristics number	Brief description	Complete description
0	Unprotected	No particular protection is provided
1	Protected against vertical fall of drops of water	The drops of water which fall vertically must not cause harmful effects
2	Protected against drops of water up to 15° from vertical	The drops of water which fall vertically must not cause harmful effects when the housings lean at any angle up to 15° in relation to its normal position
3	Protected against rain	The water which falls like rain from a direction with an angle of up to 60° to vertical must not cause harmful effects
4	Protected against splashes of water	Water splashed over the housing from all directions must not cause harmful effects
5	Protected against jets of water	Water sprayed with a nozzle onto the housing from all directions must not cause harmful effects
6	Protected against waves	In the case of waves or strong jets of water, the water must not enter the housing in a harmful amount
7	Protected against the effects of temporary immersion	Water in a harmful amount must not be able to penetrate inside the housing immersed in certain pressure and duration conditions
8	Protected against the effects of continual immersion	The material is suited to remaining immersed in water in the conditions specified by the manufacturer

### Degrees of protection which can be obtained with ArTu switchboards

ArTu L		ArTu M - K		
<b>IP31</b> Without door	<b>IP43</b> With door	<b>IP31</b> Without door	<b>IP41</b> (only ArTu K) With door and ventilated panels	<b>IP65</b> With door and blind panels
				

15 TCB02098F0001

# In-depth technical information

## IK mechanical resistance to impact

### IK mechanical resistance


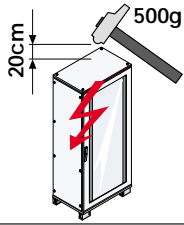
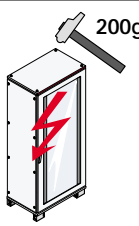
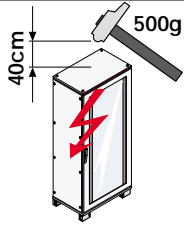
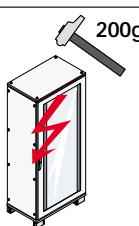
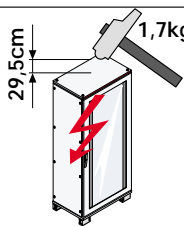
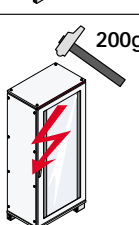
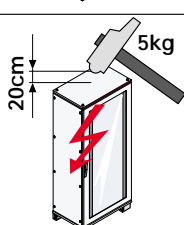
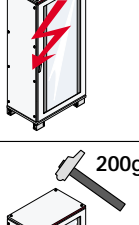
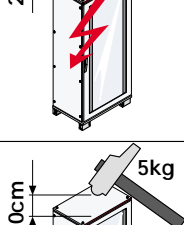
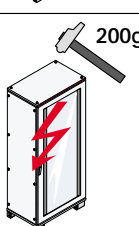
IK 0	 <p>Unprotected</p>	IK 06	 <p>Impact energy in Joules: <b>1,00</b></p>
IK 01	 <p>Impact energy in Joules: <b>0,150</b></p>	IK 07	 <p>Impact energy in Joules: <b>2,00</b></p>
IK 02	 <p>Impact energy in Joules: <b>0,200</b></p>	IK 08	 <p><b>ArTu L</b> Impact energy in Joules: <b>5,00</b></p>
IK 03	 <p>Impact energy in Joules: <b>0,350</b></p>	IK 09	 <p>Impact energy in Joules: <b>10,00</b></p>
IK 04	 <p>Impact energy in Joules: <b>0,500</b></p>	IK 10	 <p><b>ArTu M - K</b> Impact energy in Joules: <b>20,00</b></p>
IK 05	 <p>Impact energy in Joules: <b>0,700</b></p>		

Figure defined by the CEI EN 50102 Standard

1STC802086/F/0201

## In-depth technical information

### Mechanical and electrical characteristics of the busbars with shaped section

#### Compliance with CEI EN 60439-1 Standard

The ArTu switchboards have undergone the type tests foreseen by the CEI EN 60439-2 (CEI 17/13-2 3<sup>rd</sup> edition) Standards in the ABB laboratories. The results of these tests guarantee the performances of the ArTu switchboards and, by using the ABB SACE metalwork structures and accessories, such as the modular and moulded-case circuit-breakers, allow the end switchboard constructor not to carry out any further type tests by following the selection criteria and the assembly instructions for the various components, and only carrying out the individual tests foreseen under the CEI EN 60439 Standard. These results, which are indicated below, can be referred to for making out the declaration of conformity of the switchboard.

#### Technical characteristics

Components	Material
Busbars	electrolytic copper 99.9% CU-ETP
Busbar holders	self-extinguishing thermoplastic VO
Tightening screws	Mad. class 8.8

Busbars	Length (mm)	IP 31	IP 41	IP43	IP 65	I <sub>cw</sub> (kA)	I <sub>pK</sub> (kA)	Dimensions (mm)	Section (mm <sup>2</sup> )	Weight (Kg)
In 400	1730	630	520	500	400	35	74	20x20	200	4
In 800	1730	970	830	830	800	35	74	20x20	283	4.4
In 1250	1730	1400	1330		1250	75	165	20x60	603	9.3
In 1600	1730	1820	1710		1600	75	165	20x60	703	10
In 2000	1730	2500	2300		2000	100	220	25x60	1000	14,8

Tightening torque	Screws M8 - 20N.m
	Screws M10 - 30N.m

#### Ambient characteristics

Type of installation	indoors	
Installation conditions	Wall / Floor	
Service climate (t°/r.h.%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Ambient temperature limits	for operation	-5°C +40°C
	for storage	-25°C +55°C

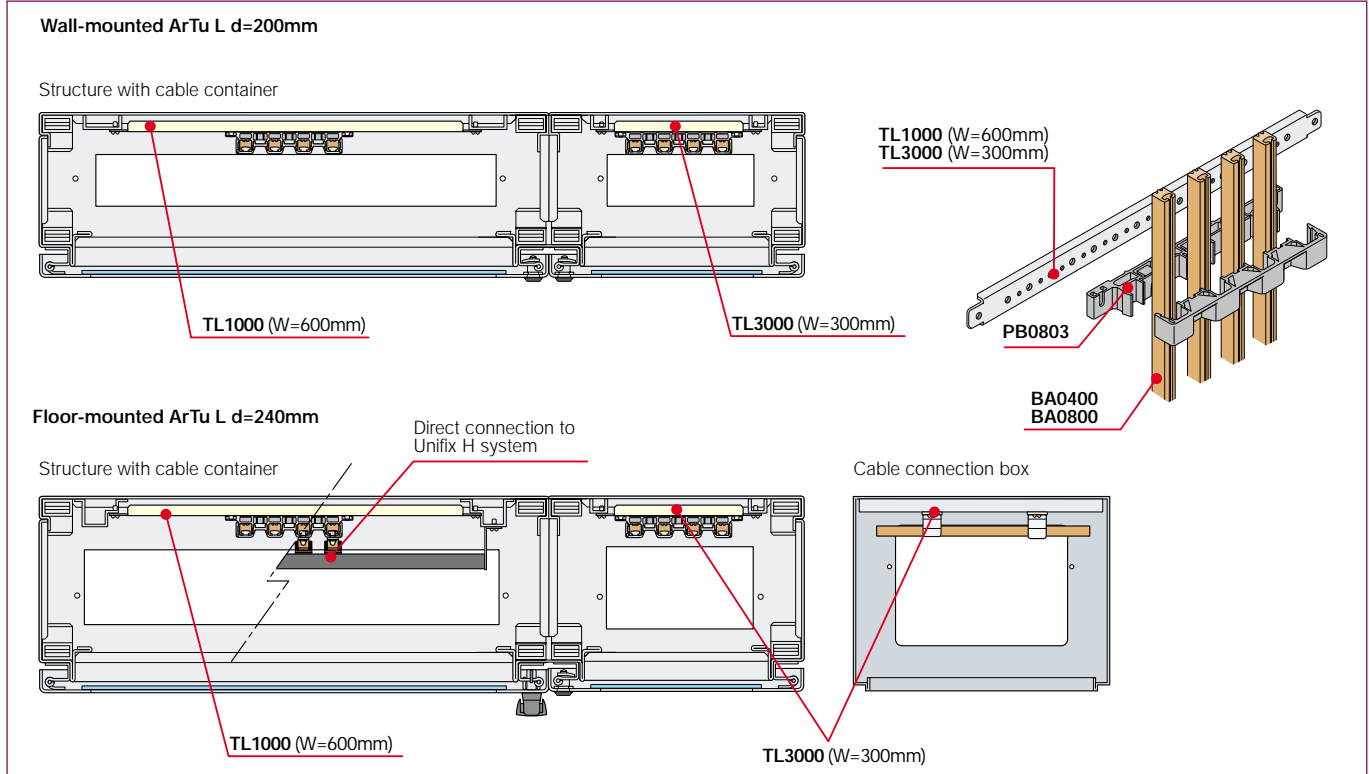
# In-depth technical information

Examples of use of the busbars with shaped section for currents up to 800A

## Linear insulator PB0803

### ArTu L

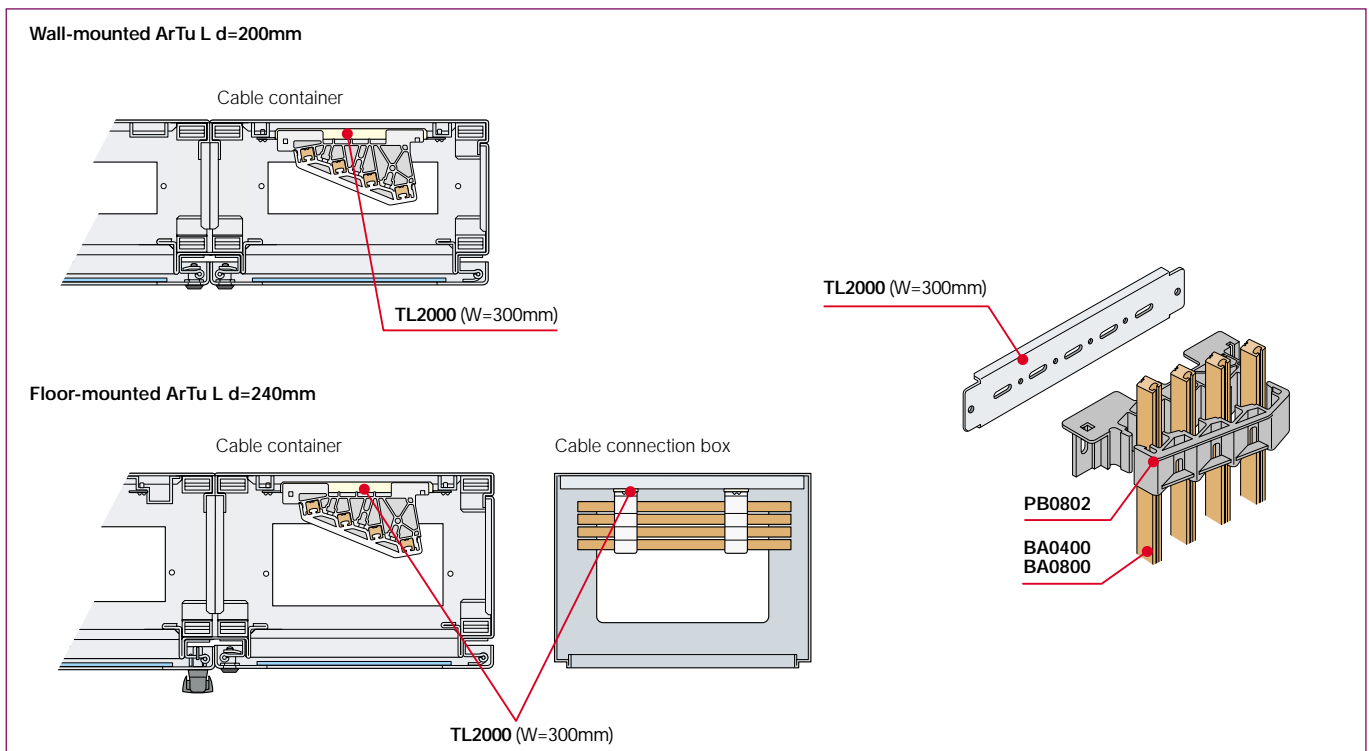
Connection to the Unifix H cabling system



## Linear insulator PB0802

### ArTu L

Busbars positioned vertically at the back of the structure with PB0803 busbar holder, in the cable container with PB0802 busbar holder, or horizontally in the box.



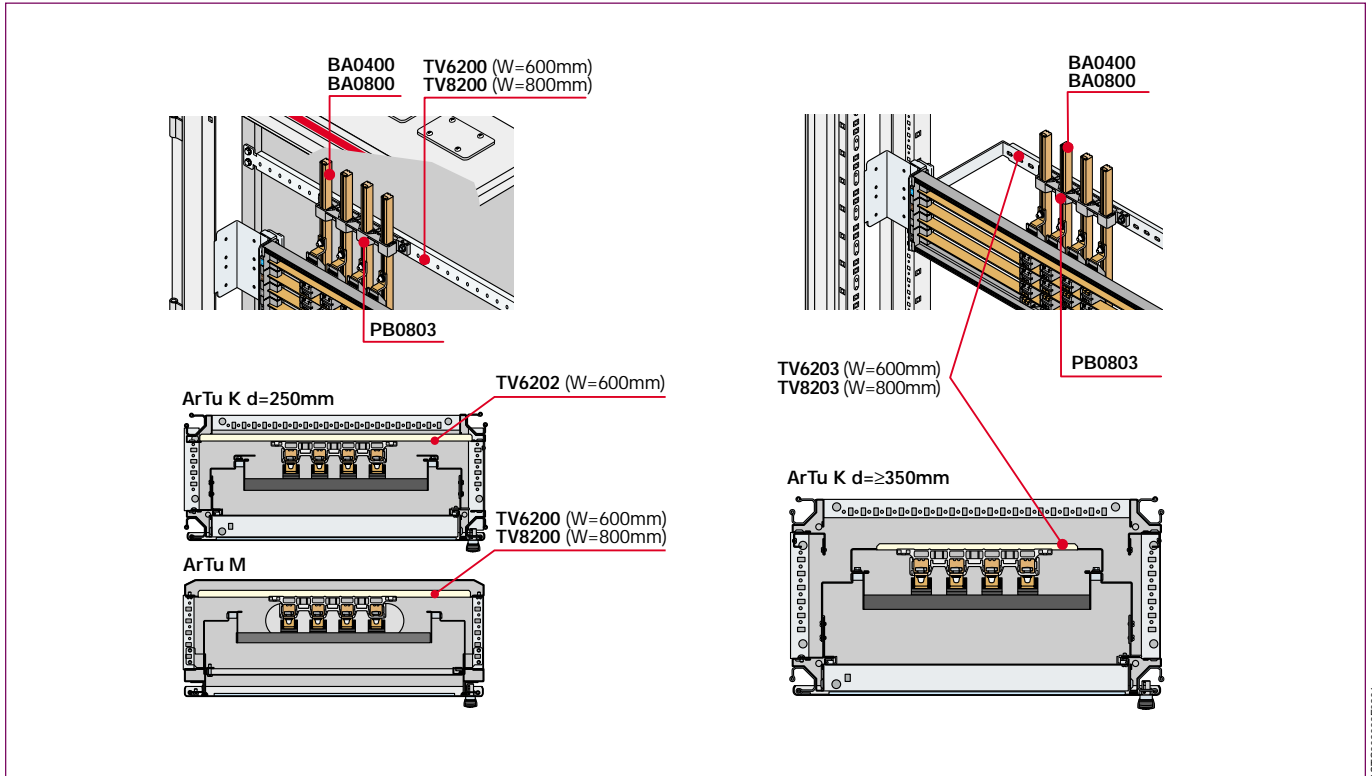
# In-depth technical information

## Examples of use of the busbars with shaped section for currents up to 800A

### Linear insulator PB0803

#### ArTu M - K

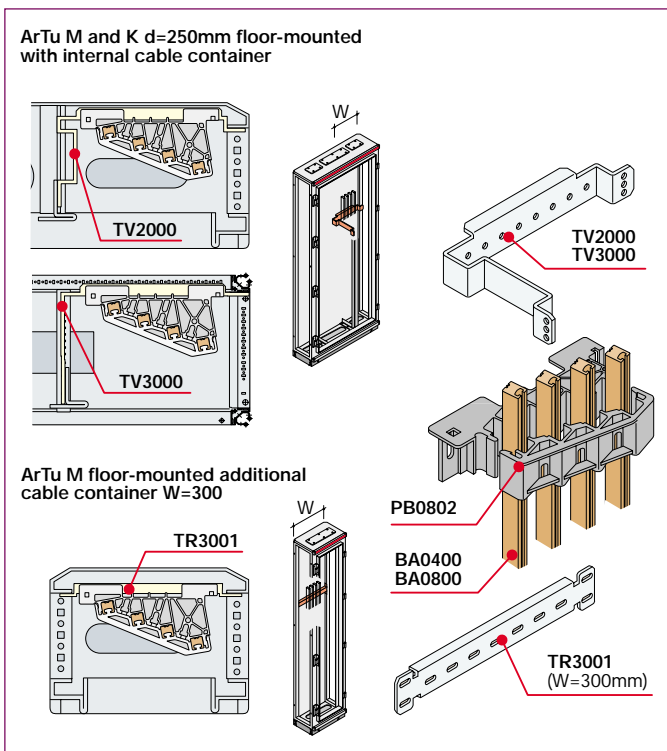
Direct connection to the Unifix H cabling system



### Scaled insulator PB0802

#### ArTu M - K

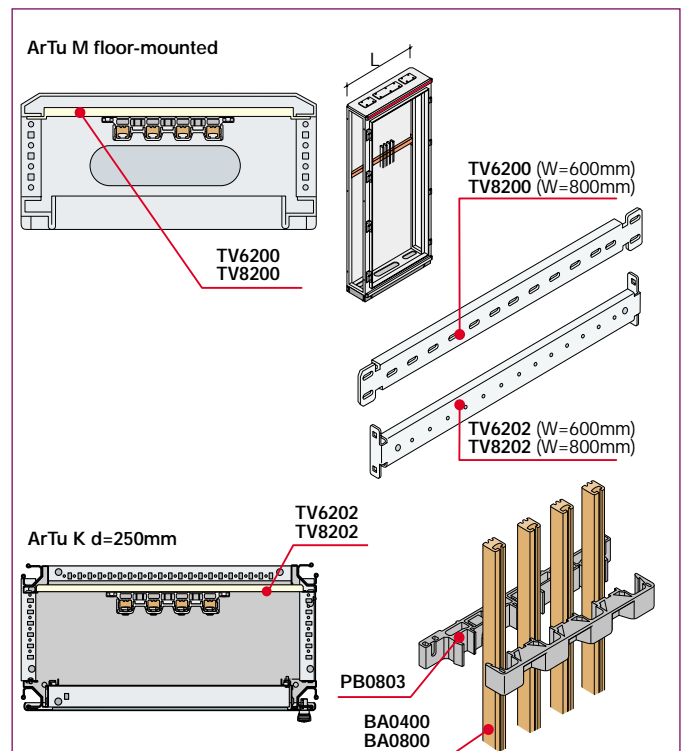
Busbars positioned vertically in the cable container and on the structure



### Linear insulator PB0803

#### ArTu M - K

Busbars positioned vertically on the back of the back of the structure (only floor-mounted ArTu M and ArTu K D=250mm)



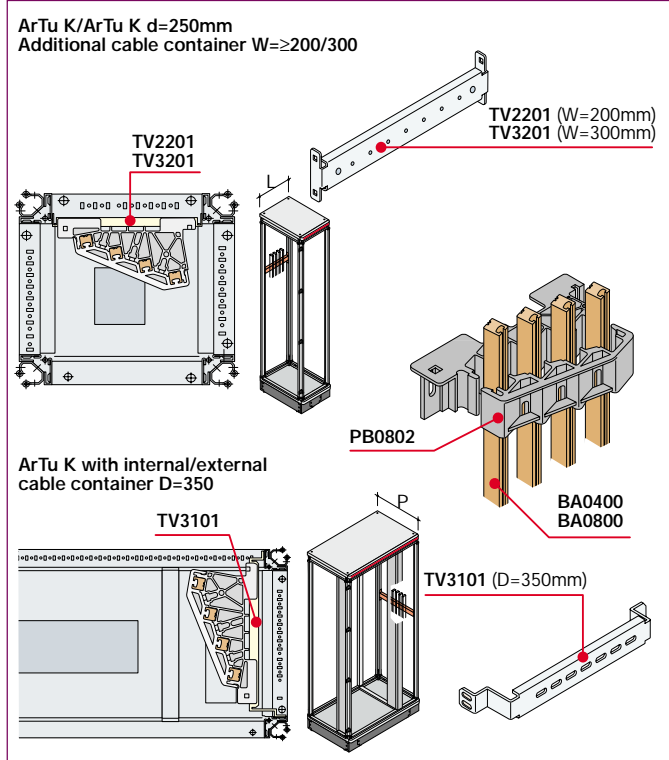
# In-depth technical information

## Examples of use of the busbars with shaped section for currents up to 800A

### Scaled insulator PB0802

#### ArTu K

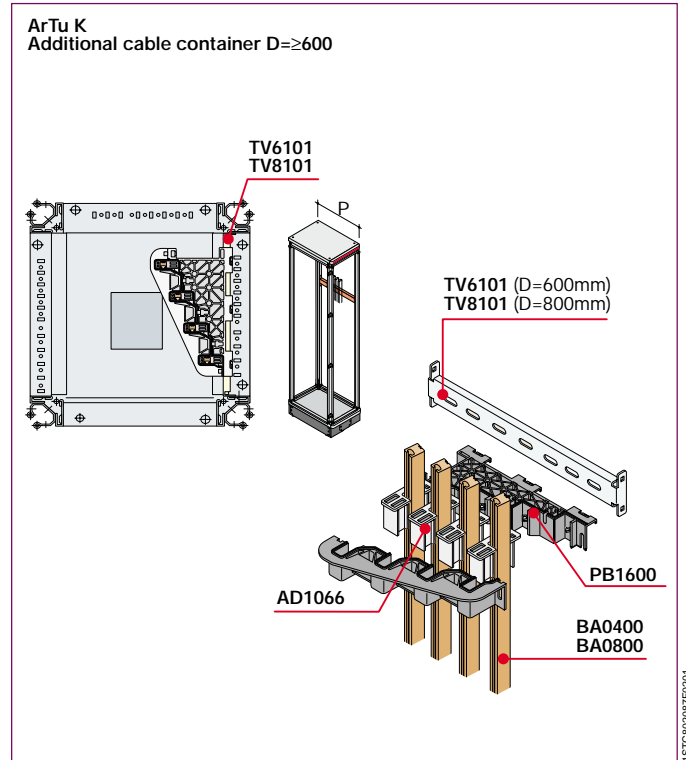
Busbars positioned vertically on the side in the additional cable container and on the side in the internal cablecontainer of the structure



### Linear insulator PB1600

#### ArTu K

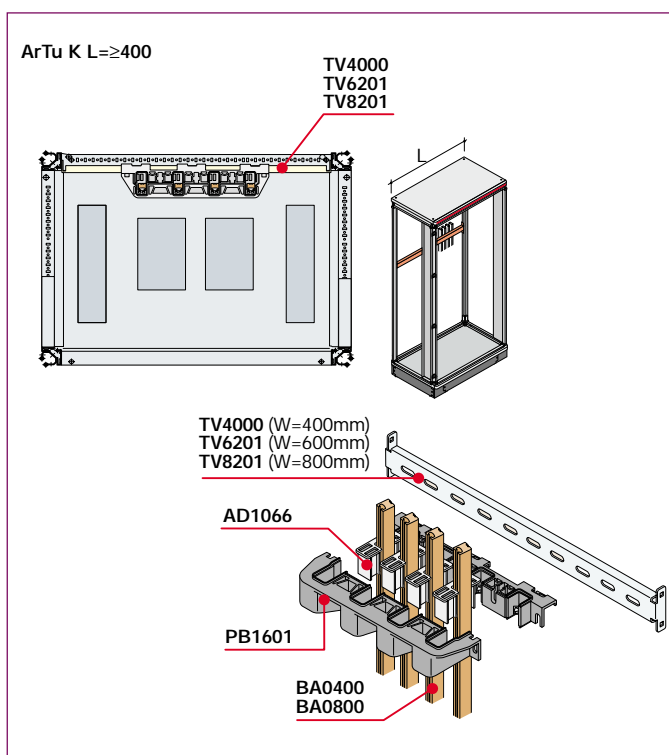
Busbars positioned vertically on the rear in the additional cable container of the structure



### Scaled insulator PB1600

#### ArTu K

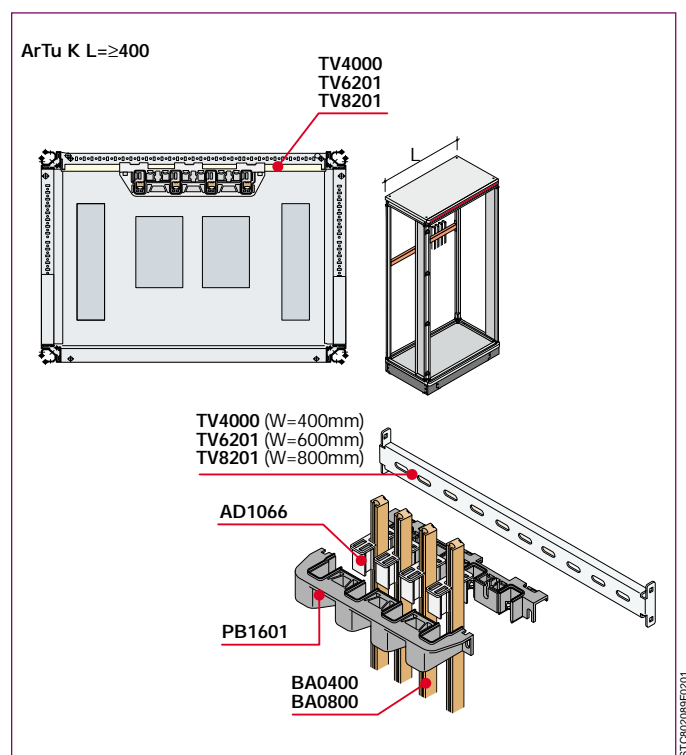
Busbars positioned vertically on the side of the structure with functional frame



### Linear insulator PB1601

#### ArTu K

Busbars positioned vertically on the rear of the structure



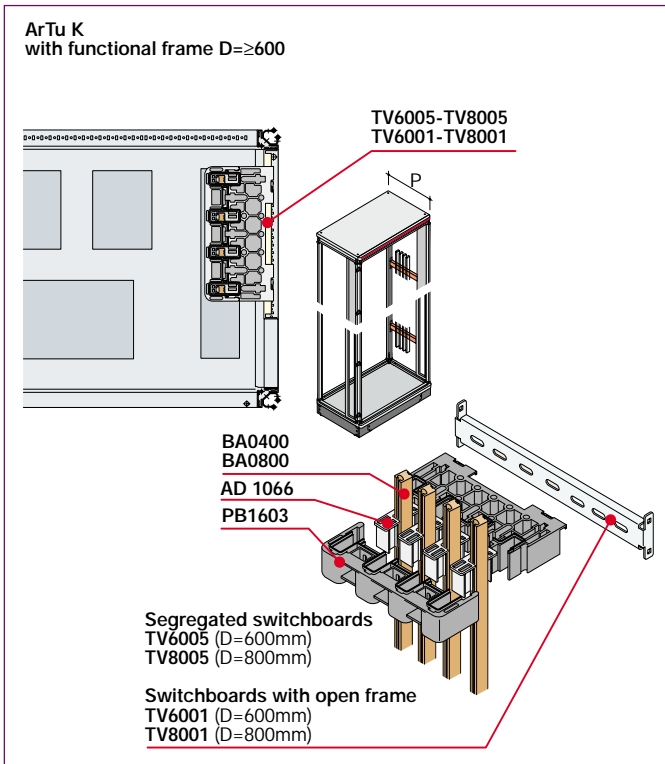
# In-depth technical information

## Examples of use of the busbars with shaped section for currents up to 800A

### Linear insulator PB1603

#### ArTu K

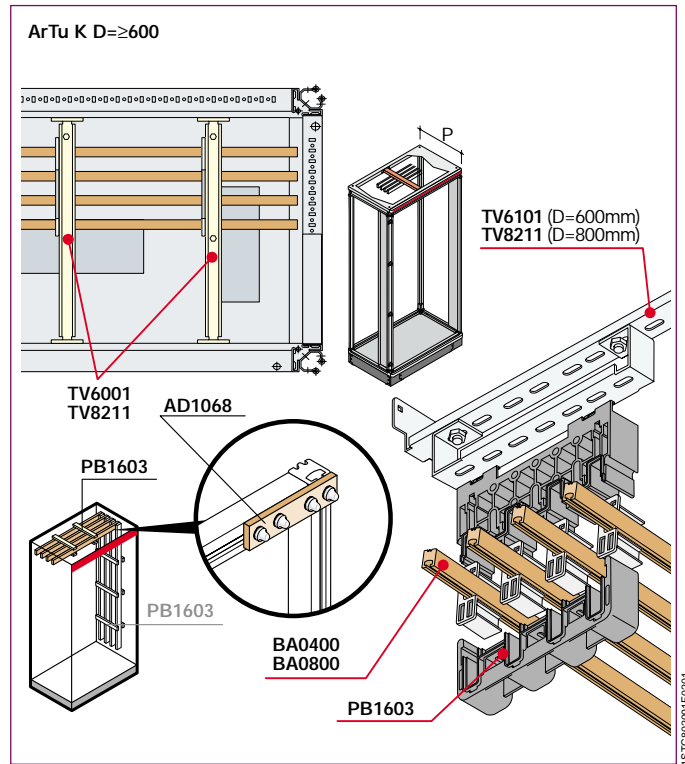
Busbars positioned horizontally at the top in the structure with functional frame



### Linear insulator PB1603

#### ArTu K

Busbars positioned vertically on the side of the structure

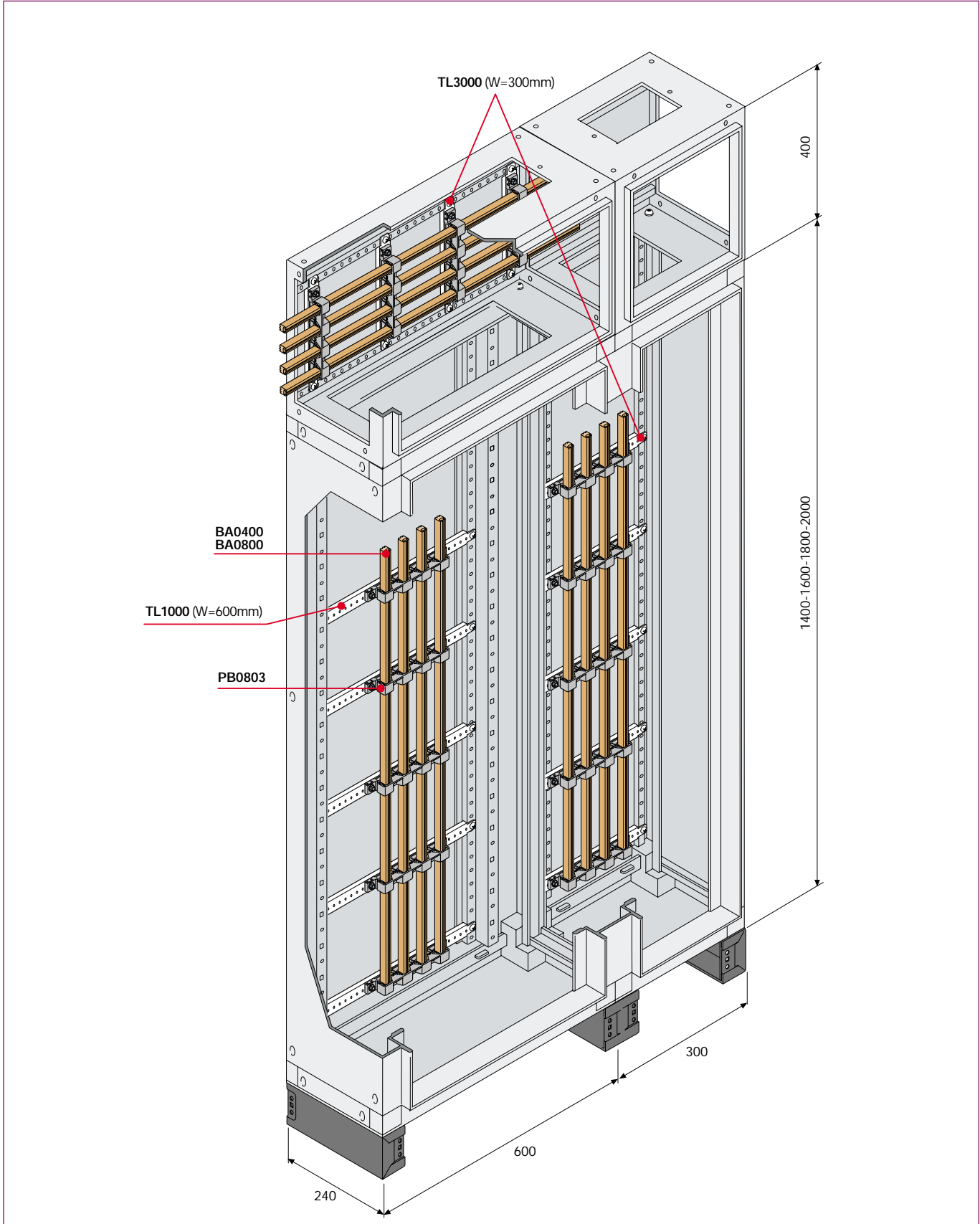


## In-depth technical information

### Examples of use of the busbars with shaped section for currents up to 800A

#### ArTu L

Busbars (BA0400-BA0800 with busbar holder PB0803) vertically on the rear of the structure and cable container, horizontally in the connection box.



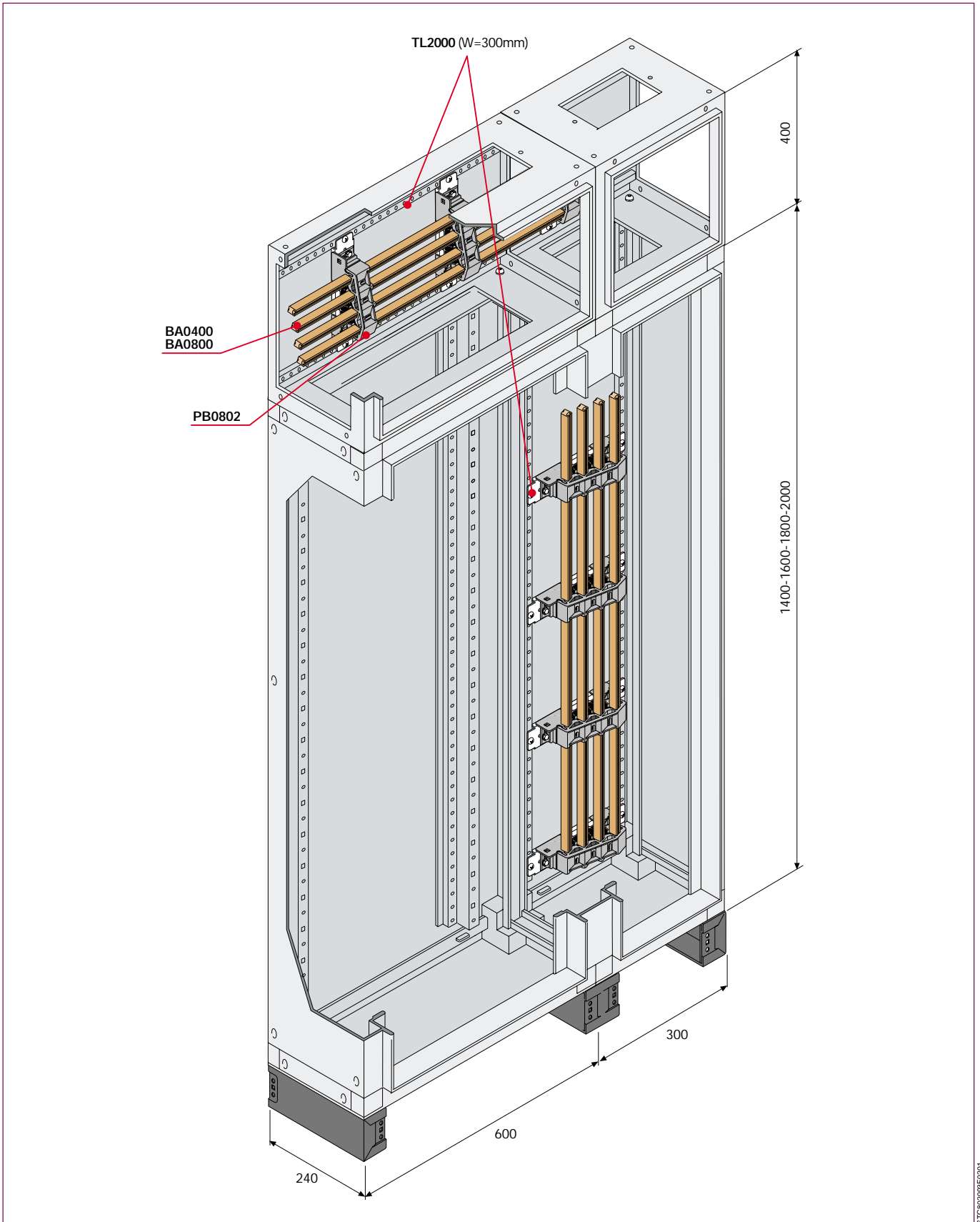
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## In-depth technical information

### Examples of use of the busbars with shaped section for currents up to 800A

#### ArTu L

Busbars (BA0400-BA0800 with busbar holder PB0802) vertically on the rear of the cable container, horizontally in the connection box.

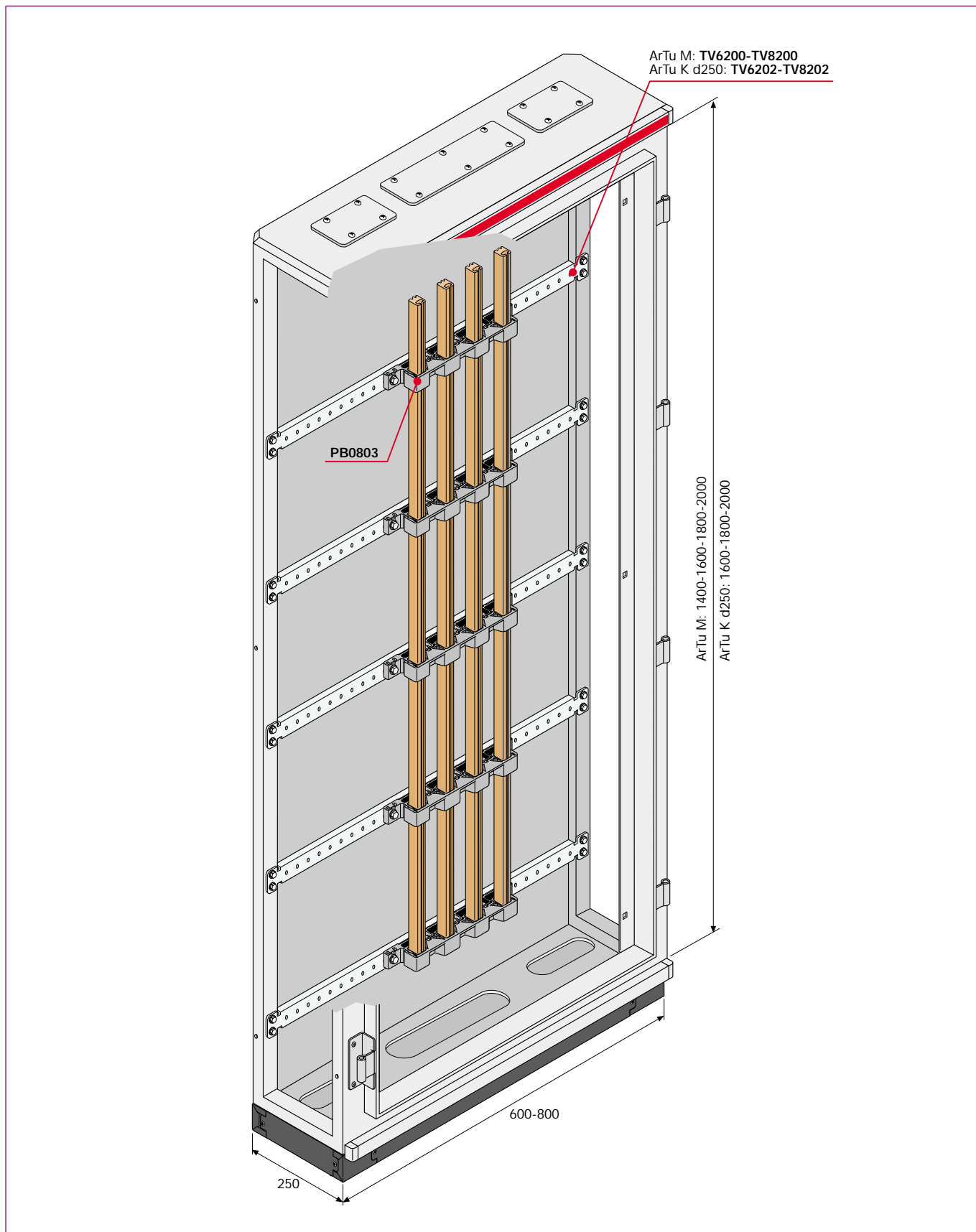


## In-depth technical information

Examples of use of the busbars with shaped section for currents up to 800A

ArTu M and K d=250mm

Busbars on the back with PB0803 busbar holder

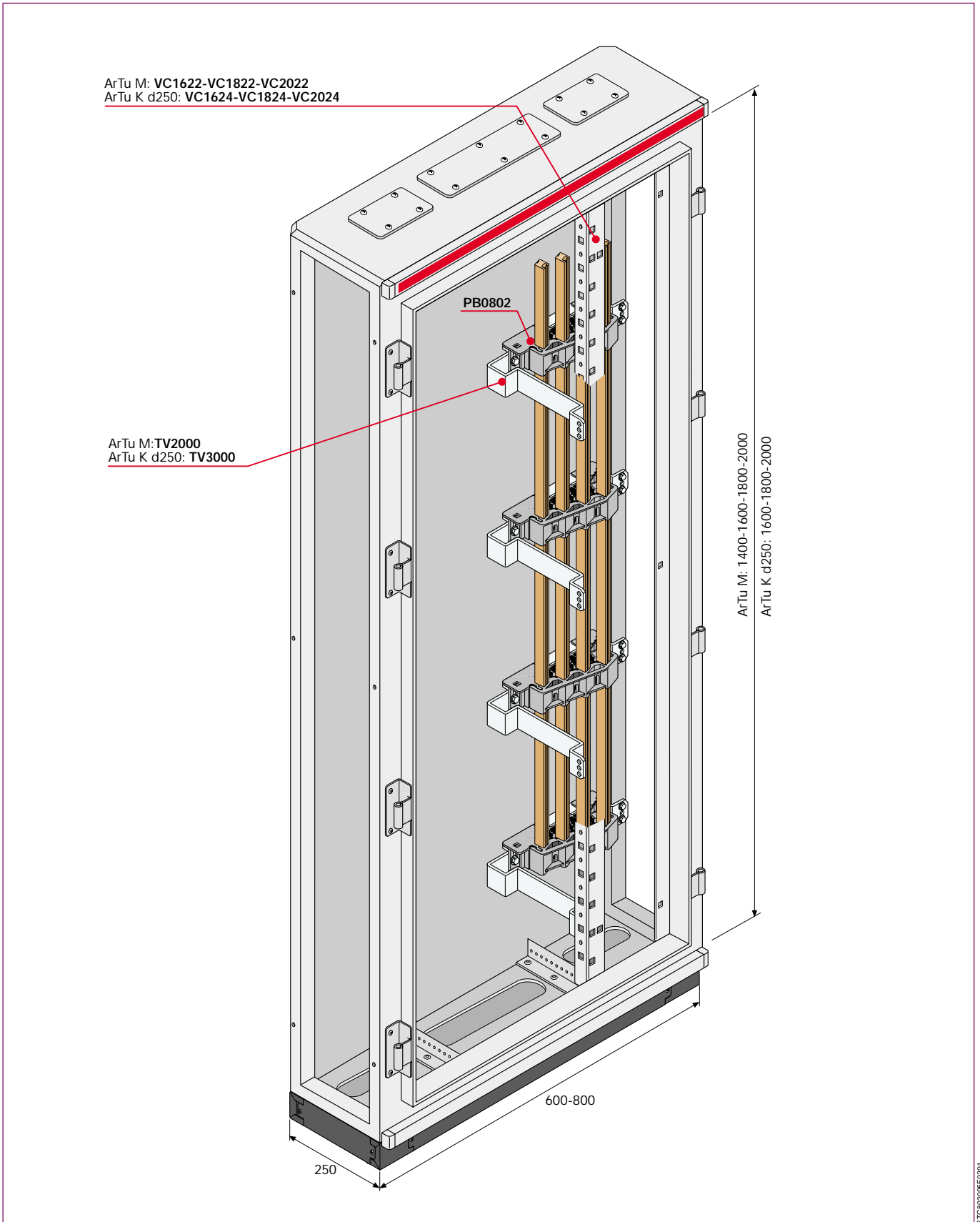


## In-depth technical information

### Examples of use of the busbars with shaped section for currents up to 800A

ArTu M and K d=250mm

Busbars in internal cable container with PB0802 busbar holder



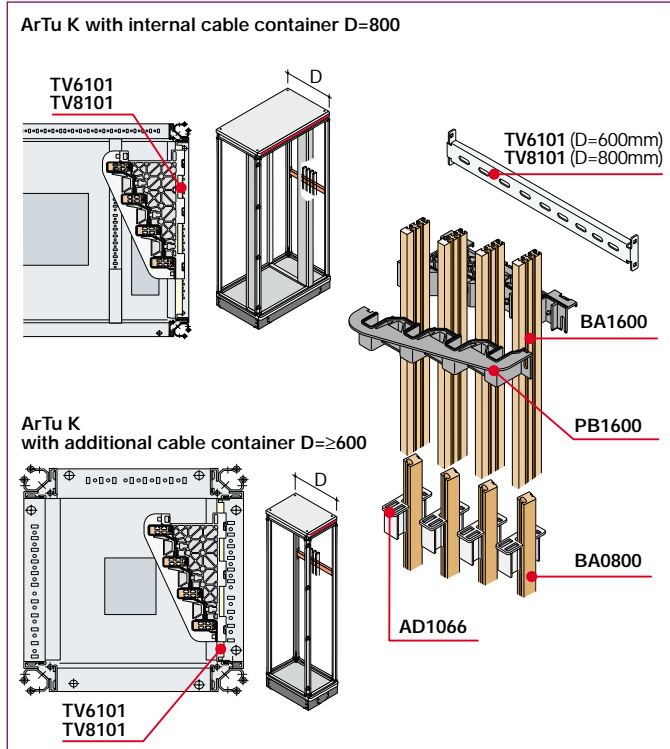
# In-depth technical information

Examples of use of the busbars with shaped section for currents up to 1600A

## Scaled insulator PB1600

### ArTu K

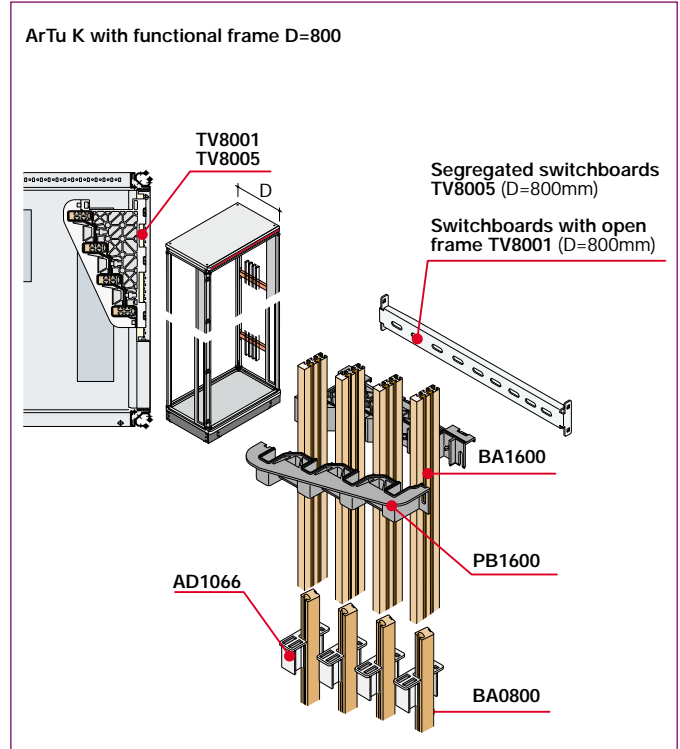
Busbars positioned vertically on the side in the internal external container of the structure



## Scaled insulator PB1600

### ArTu K

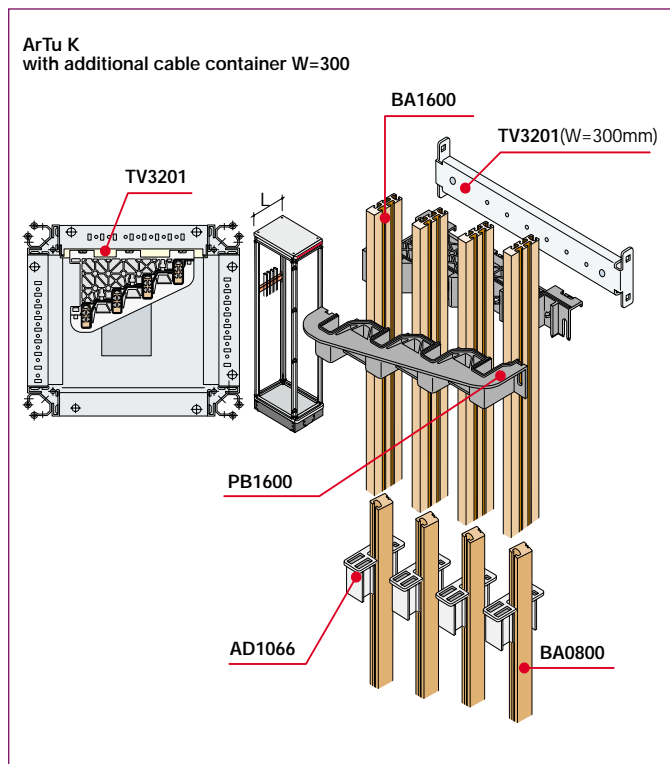
Busbars positioned vertically on the side of the structure or with functional frame



## Scaled insulator PB1600

### ArTu K

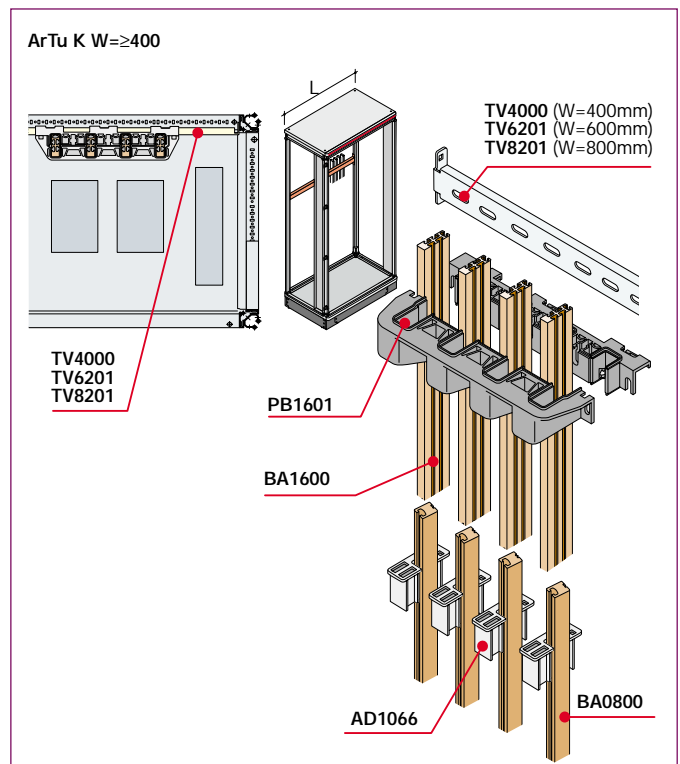
Busbars positioned vertically on the back in the external cable container of the structure



## Linear insulator PB1601

### ArTu K

Busbars positioned vertically on the back of the structure



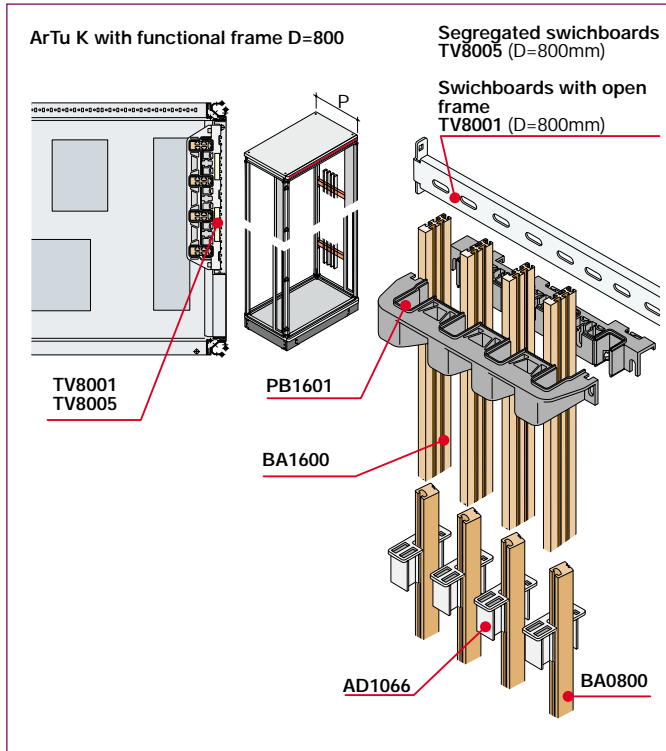
# In-depth technical information

## Examples of use of the busbars with shaped section for currents up to 1600A

### Linear insulator PB1601

#### ArTu K

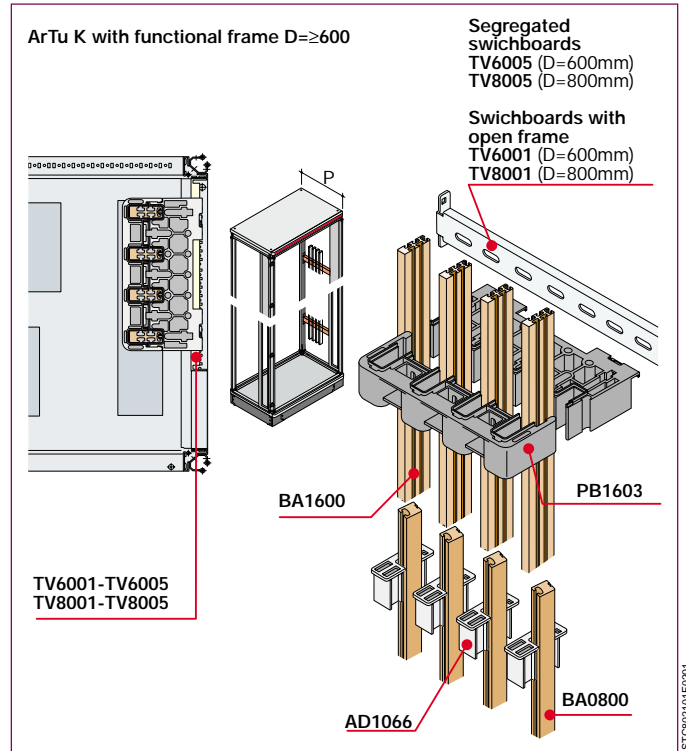
Busbars positioned vertically on the side of the structure with functional frame



### Linear insulator PB1603

#### ArTu K

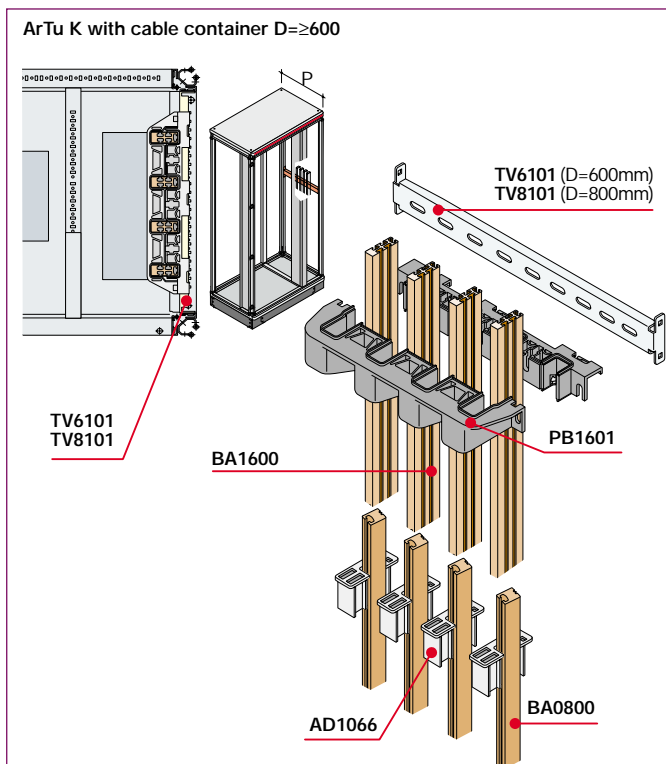
Busbars positioned vertically on the side of the structure with functional frame



### Linear insulator PB1601

#### ArTu K

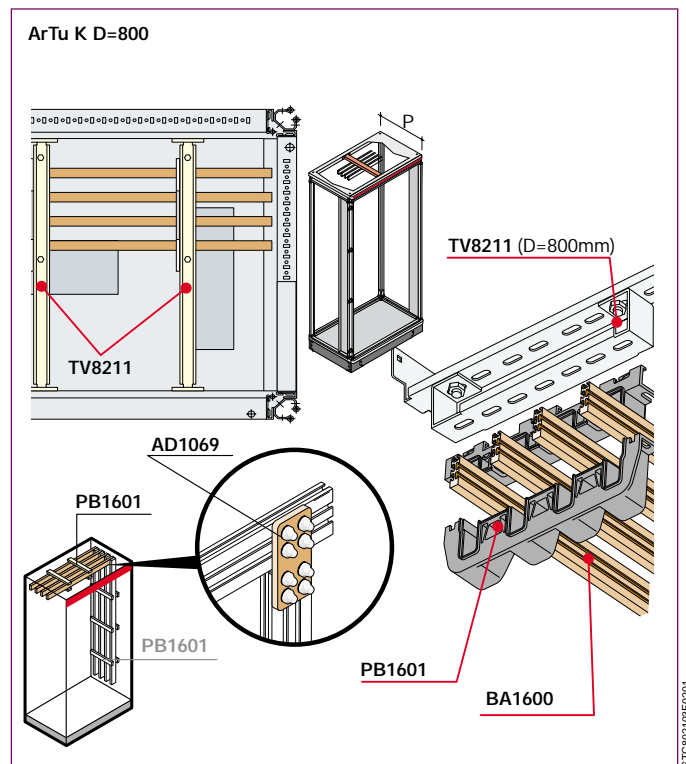
Busbars positioned vertically on the side of the structure with internal cable container



### Linear insulator PB1601

#### ArTu K

Busbars positioned horizontally at the top in the structure



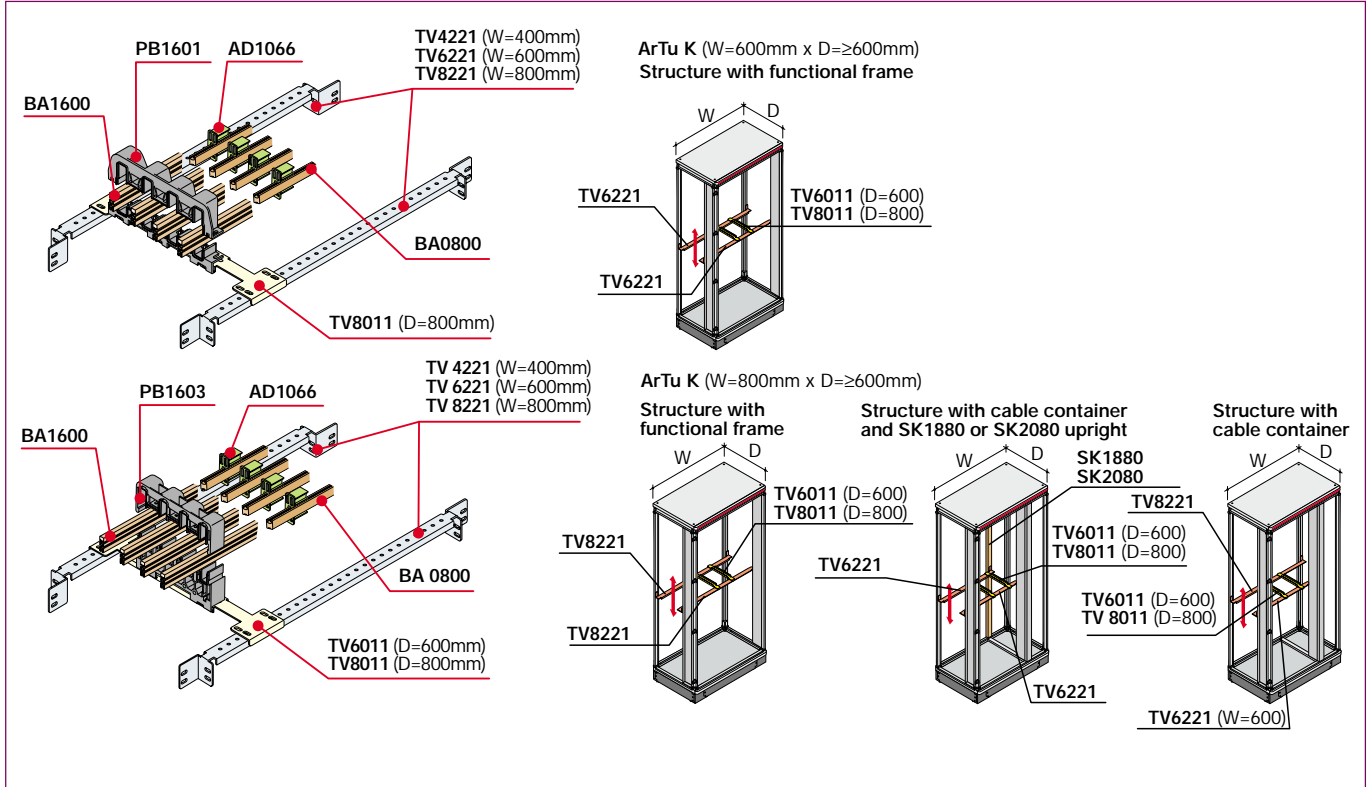
# In-depth technical information

Examples of use of the busbars with shaped section for currents up to 1600A

## Linear insulator PB1601/ PB1603

### ArTu K

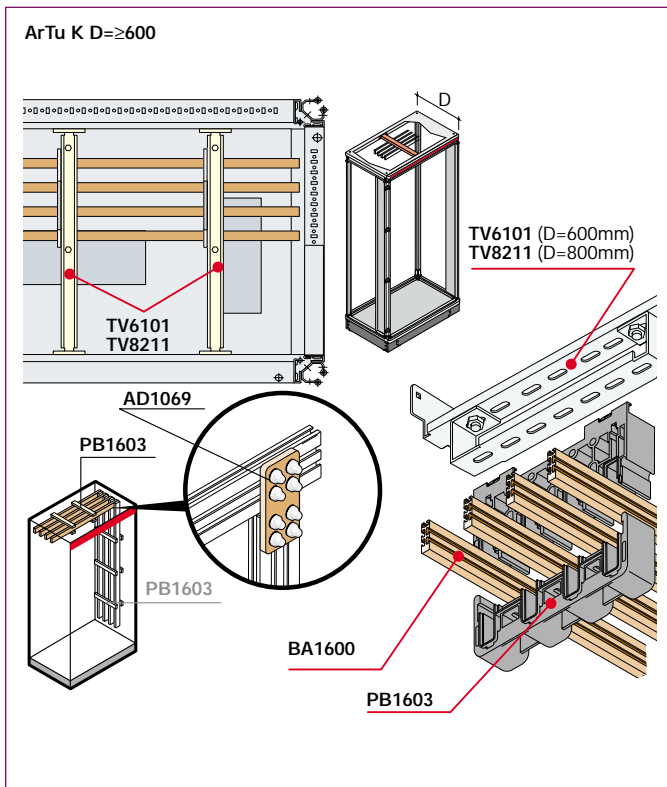
Busbars positioned at all heights in the structure



## Linear insulator PB1603

### ArTu K

Busbars positioned horizontally at the top in the structure

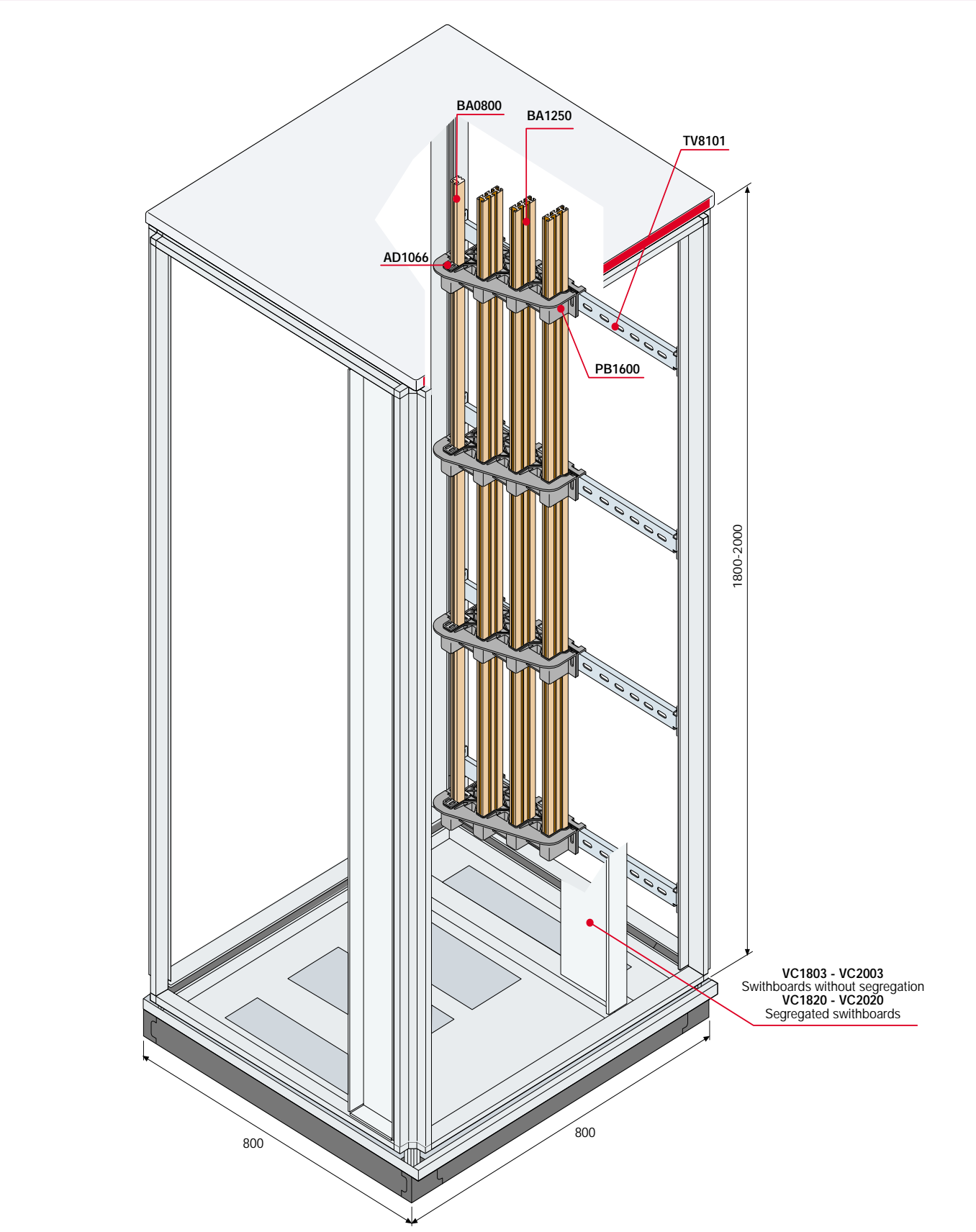


# In-depth technical information

Examples of use of the busbars with shaped section for currents up to 1600A

## ArTu K

Busbars in internal cable container with PB1600 busbar holder

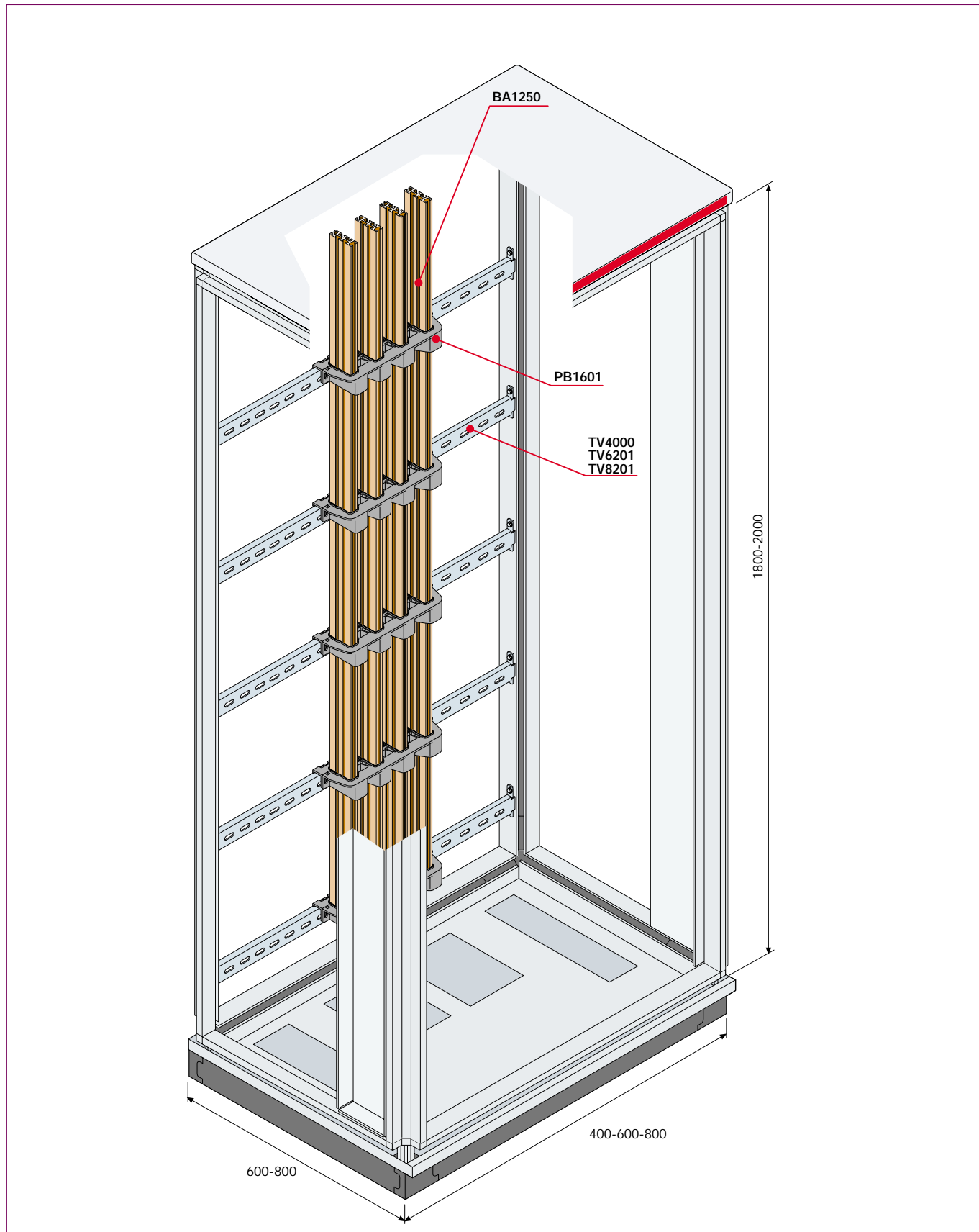


## In-depth technical information

Examples of use of the busbars with shaped section for currents up to 1600A

ArTu K

Busbars on back of structure with PB1601 busbar holder



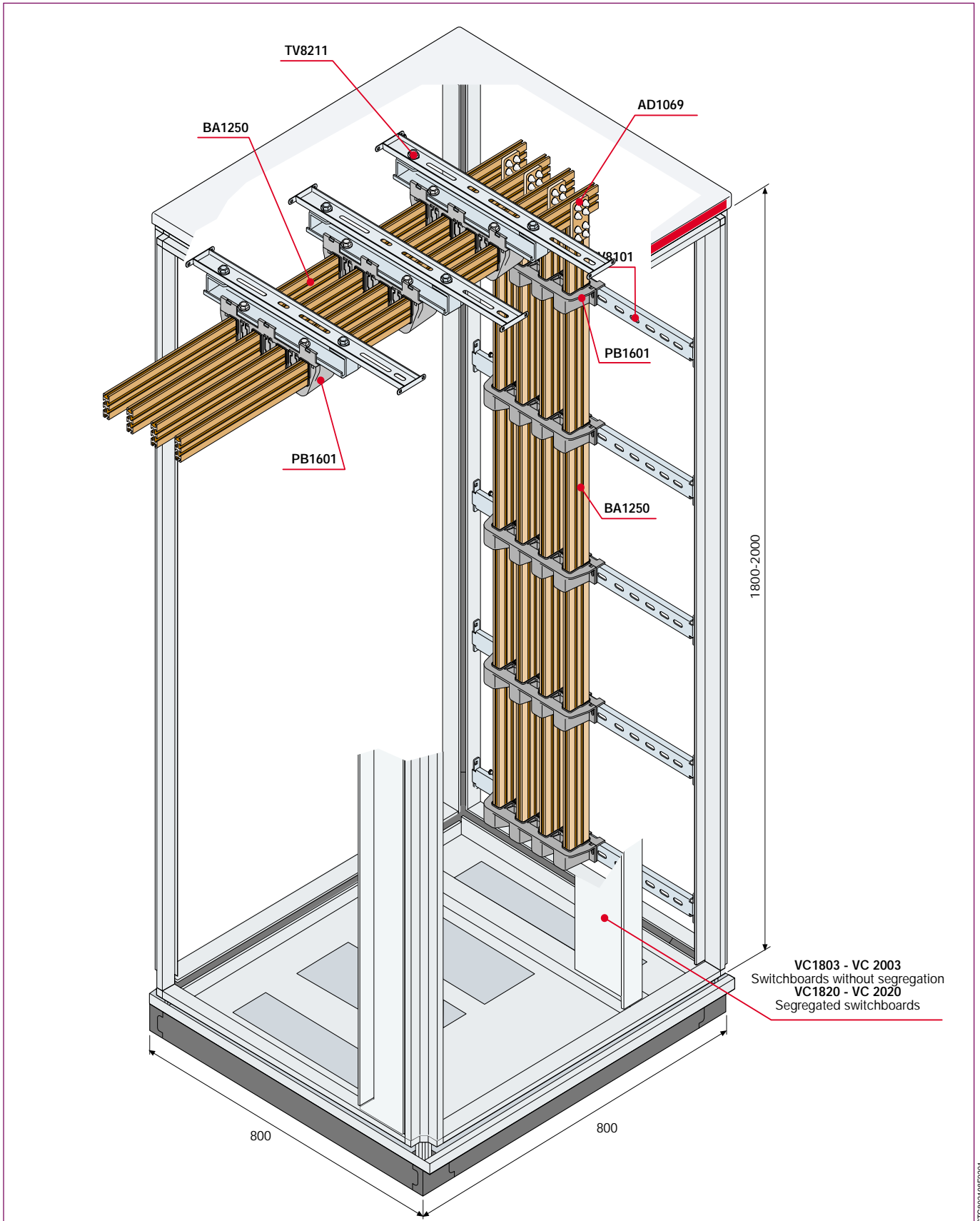
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## In-depth technical information

Examples of use of the busbars with shaped section for currents up to 1600A

ArTu K

Busbars vertically in internal cable container and horizontally at the top in the structure with PB1601 busbar holder

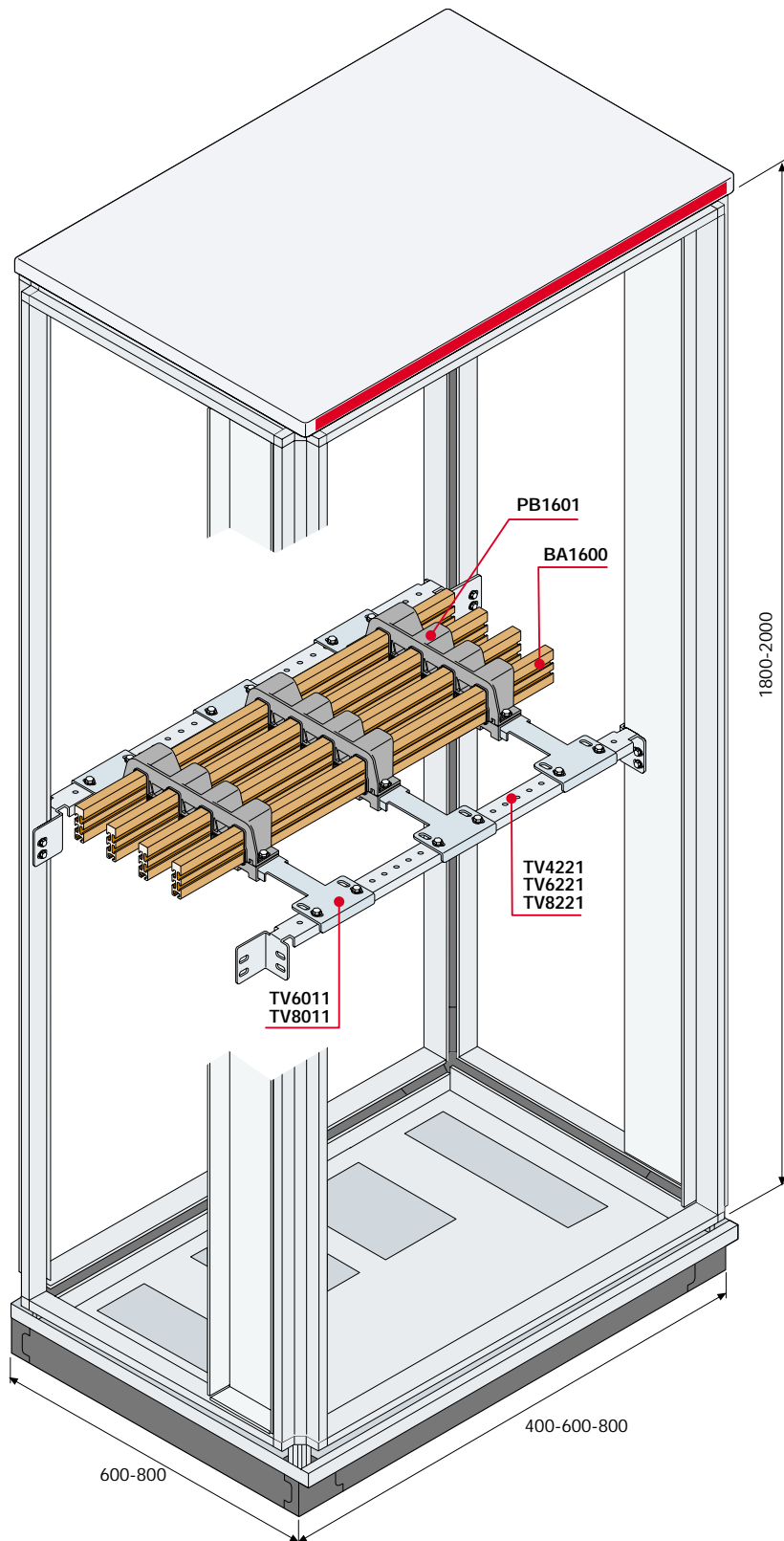


## In-depth technical information

Examples of use of the busbars with shaped section for currents up to 1600A

ArTu K

Busbars at any height with PB1601 busbar holder



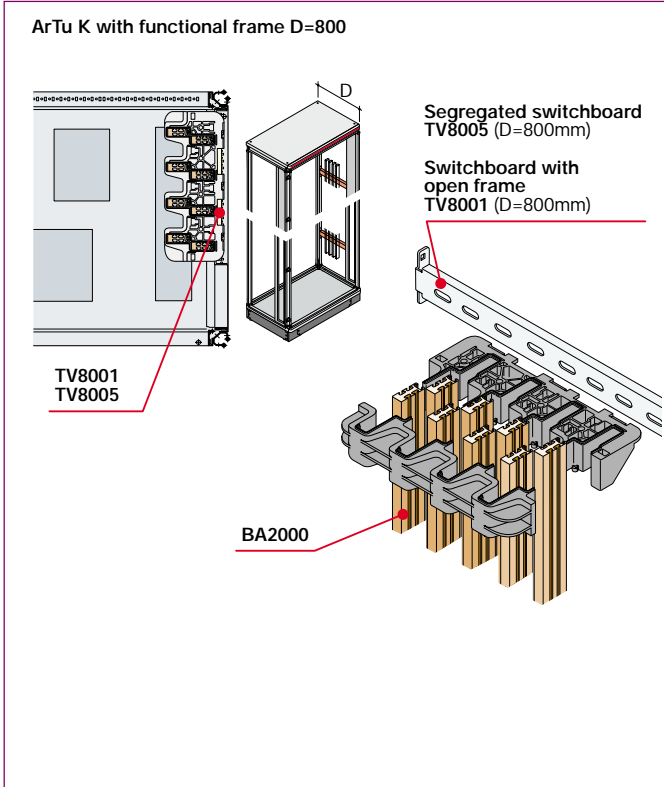
1S7C622166F0201

# In-depth technical information

## Examples of use of the busbars with shaped section for currents up to 3200A

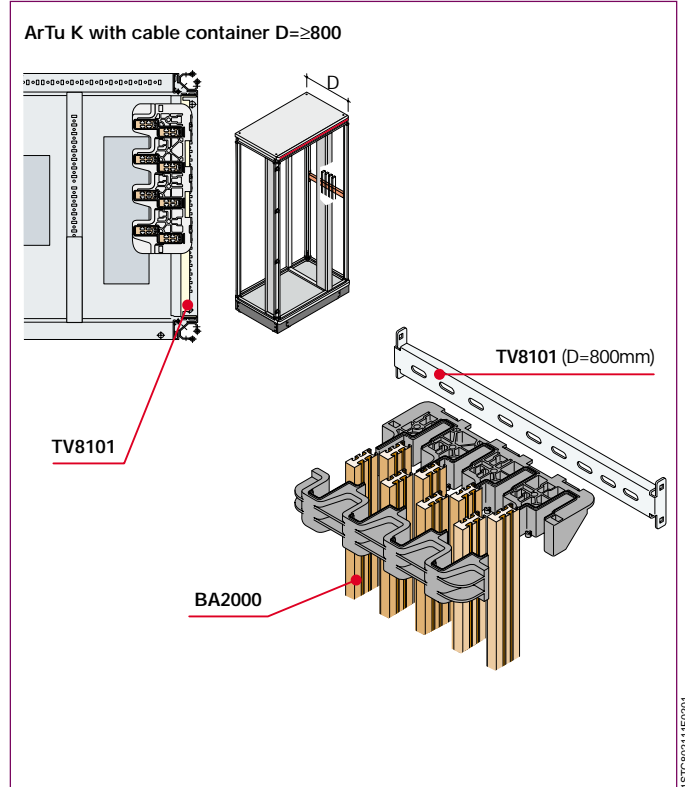
### Linear insulator PB3201

Busbars positioned vertically on the side of the structure with functional frame



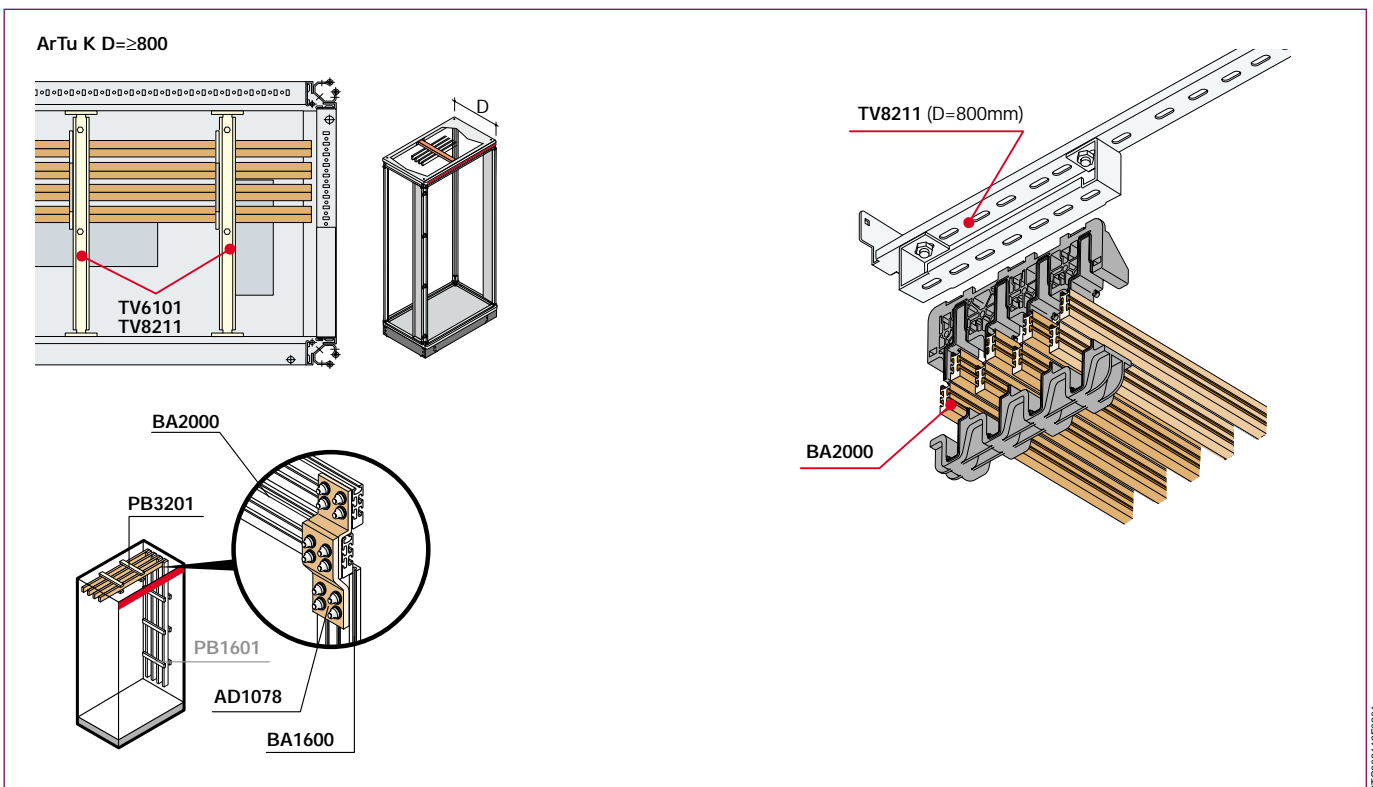
### Linear insulator PB3201

Busbars positioned vertically on the side of the structure with functional frame



### Linear insulator PB3201

Busbars positioned vertically on the side of the structure with internal cable container

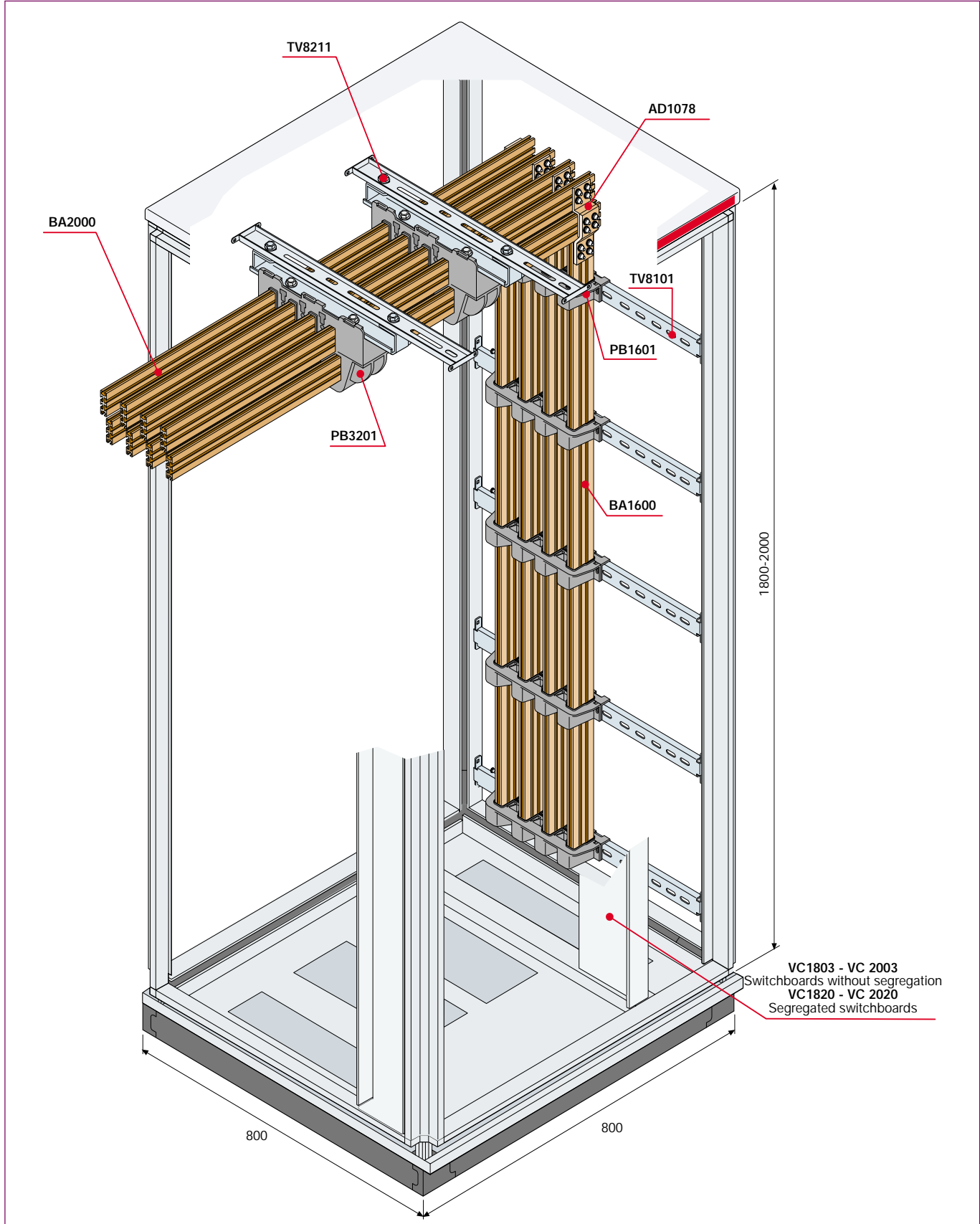


## In-depth technical information

Examples of use of the busbars with shaped section for currents up to 3200A

ArTu K

Busbars (BA2000 and BA1600) vertically in the internal cable container and horizontally at the top in the structure with PB1601 and PB3201 busbar holders



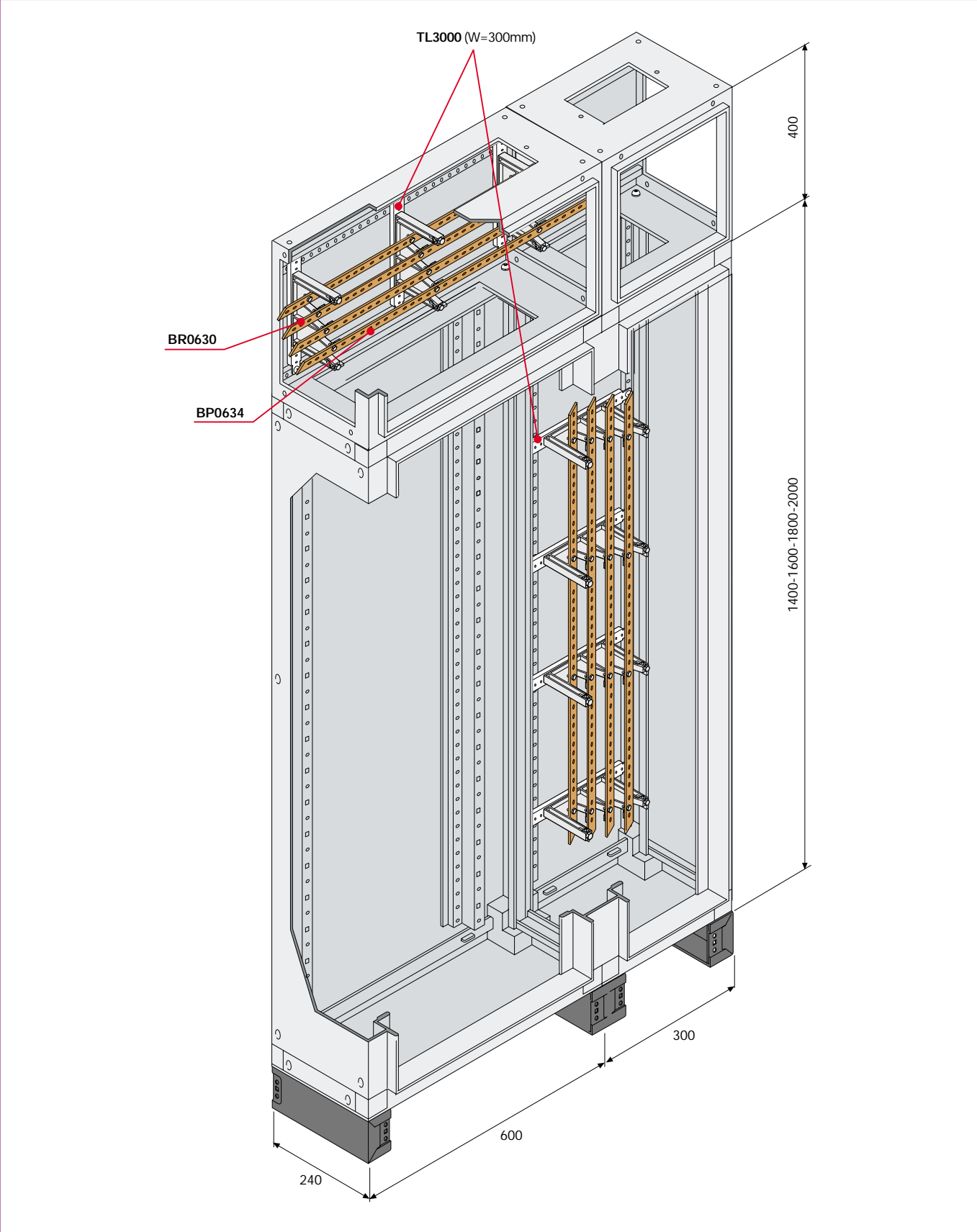
1S7C62113F0201

# In-depth technical information

## Examples of use of flat busbars for currents up to 630A

### ArTu L

Busbars (BR0630 with PB0634 busbar holders) vertically on the rear of the structure and cable container, horizontally in the connection box.

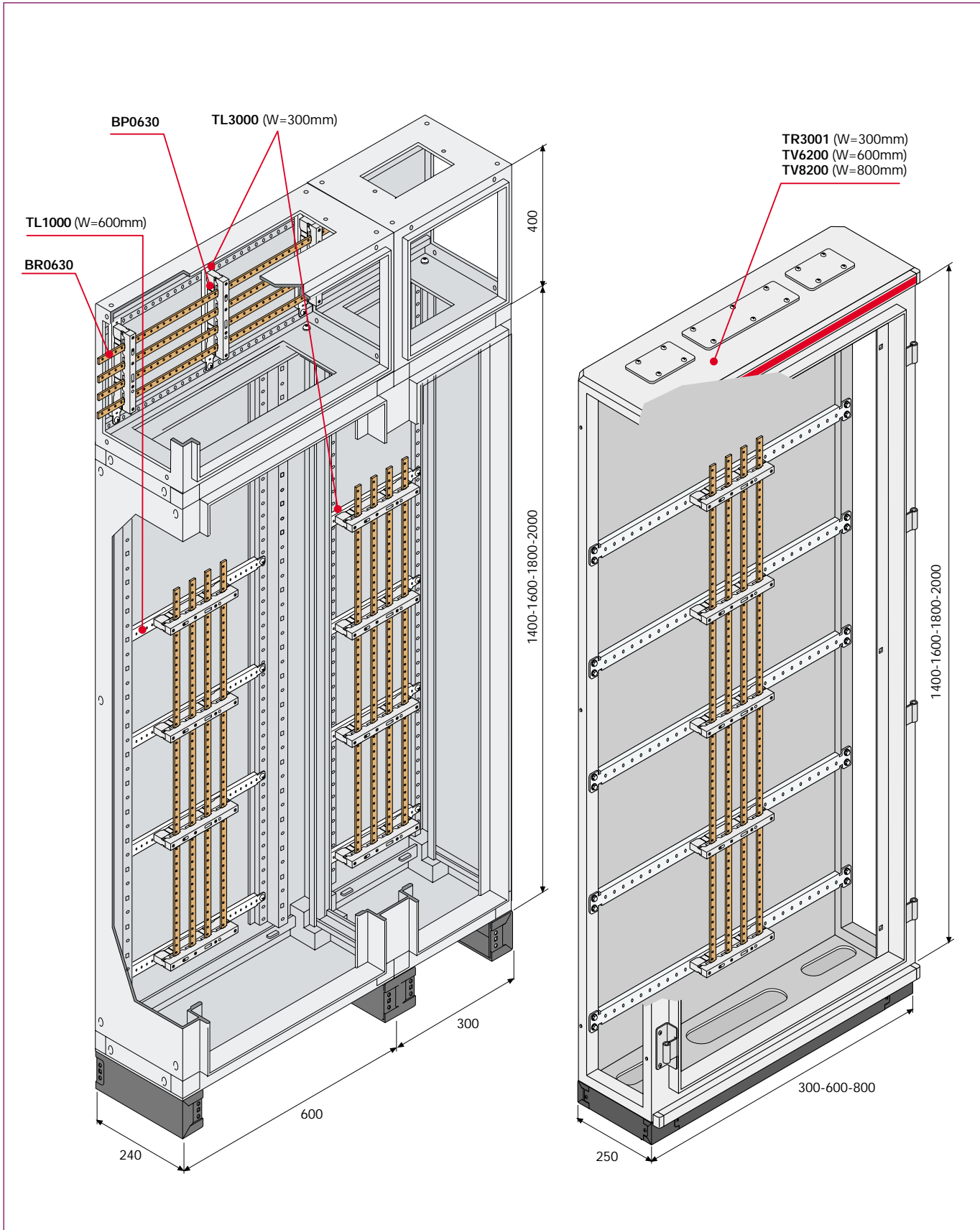


# In-depth technical information

## Examples of use of flat busbars for currents up to 630A

### ArTu L - M

Busbars (BR0630 with BP0630 busbar holder) vertically on the rear of the structure or cable container.  
Only for ArTu L also in the connection box.



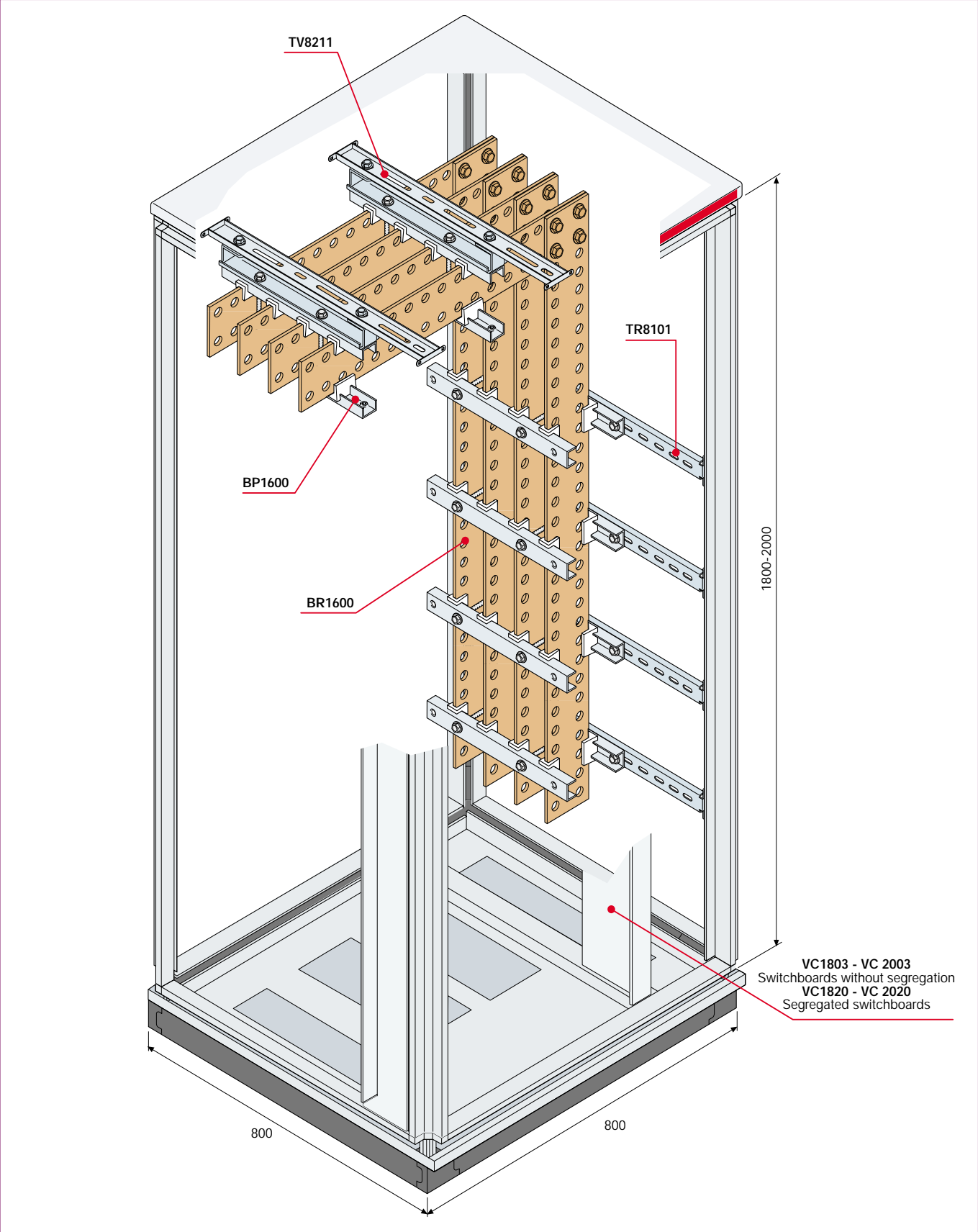
1ST C802115F0201

# In-depth technical information

## Examples of use of flat busbars for currents up to 3200A

### ArTu K

Busbars (BR1600) vertically in the internal cable container and horizontally at the top in the structure with PB1600 busbar holder

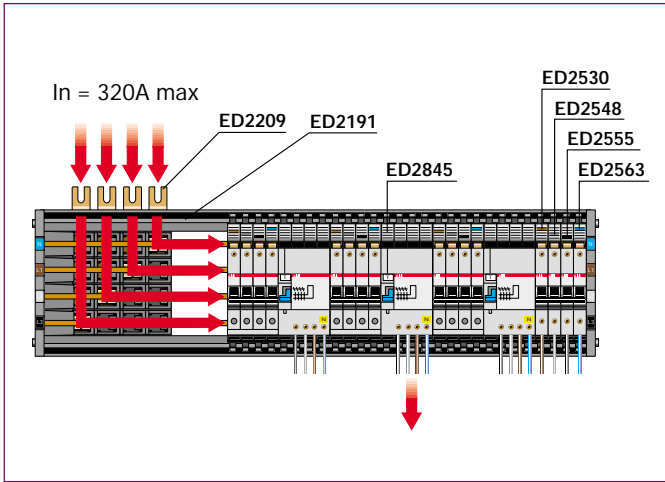


# In-depth technical information

## Examples of connections with Unifix H

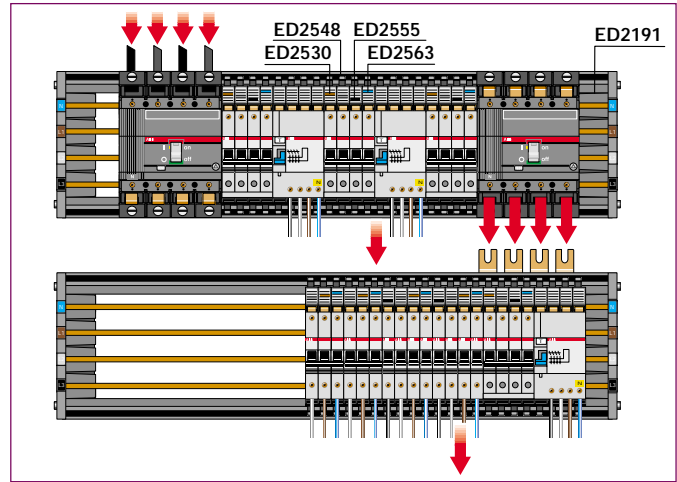
### Unifix H frame with 400A 24 module busbars

Busbar power supply from the top by means of 4P power supply module placed laterally

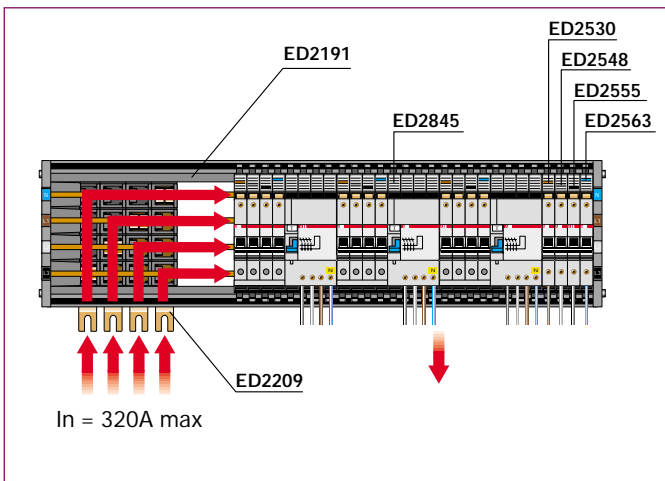


### Unifix H frame with 400A 24 module busbars

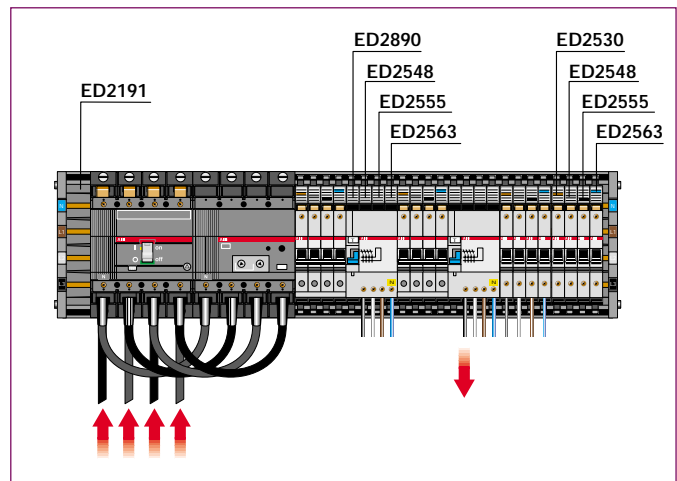
Busbar power supply from the top by means of main row circuit-breaker



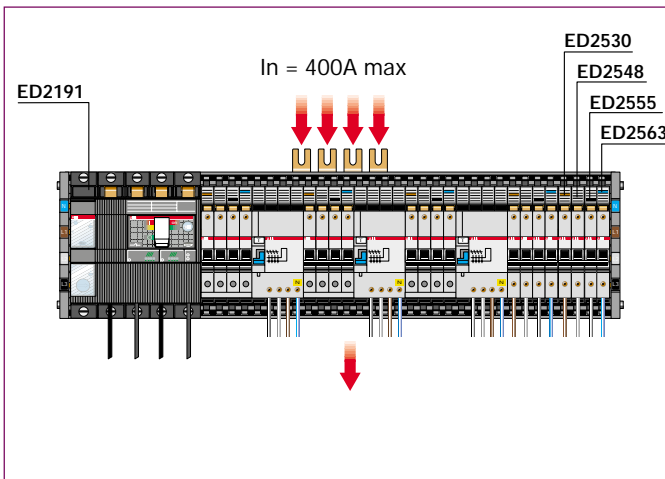
Busbar power supply from the bottom by means of 4P power supply module placed laterally



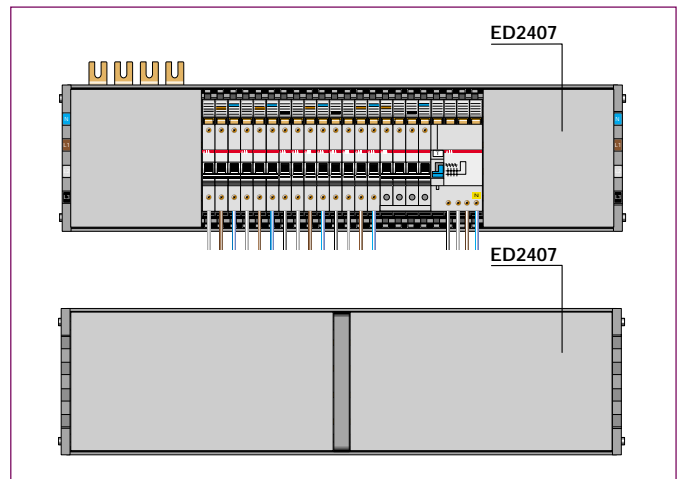
Busbar power supply from the bottom by means of main row circuit-breaker



Busbar power supply from the top by means of 4P power supply module placed centrally



Covers for IP 20 degree of protection



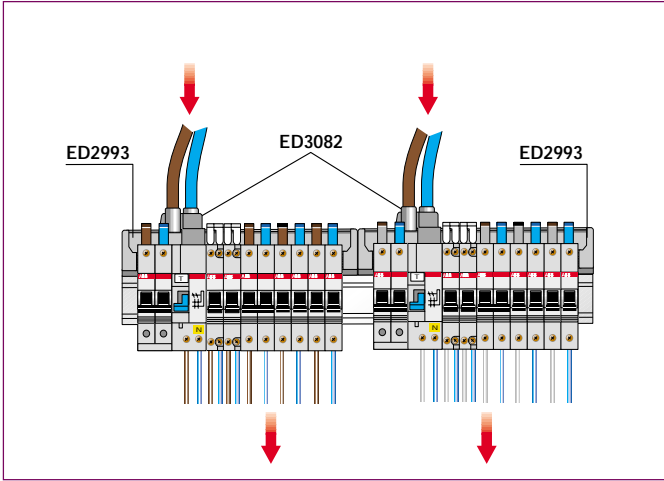
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# In-depth technical information

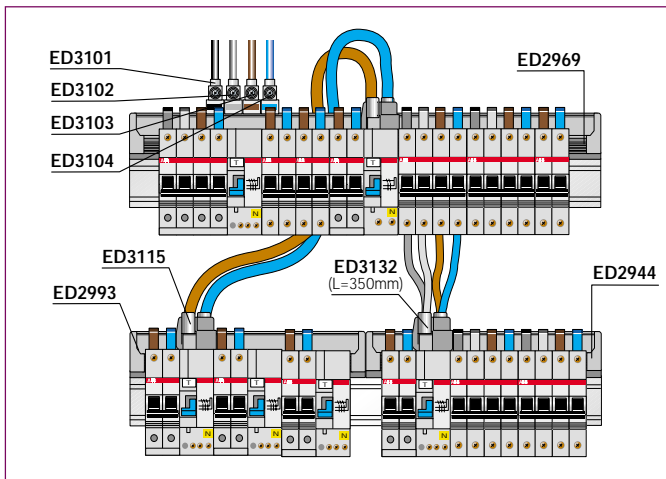
## Examples of connections with Unifix H

### Unifix L frame with 100A 12/18/24 module busbars

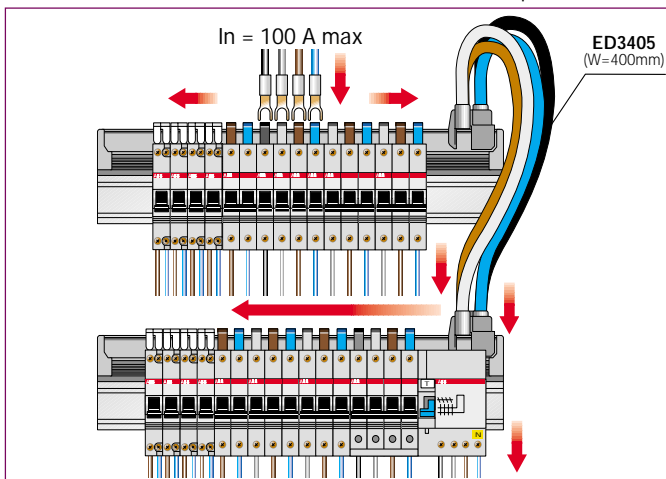
Due different single-phase circuits on a single 24 module DIN rail



Example of main and shunted power supply

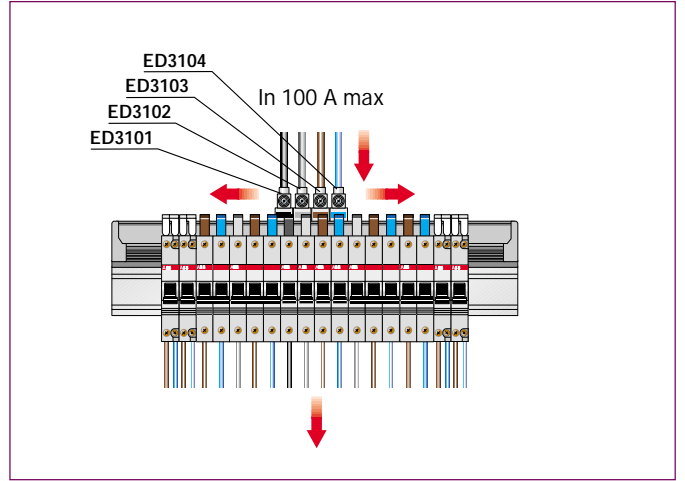


Busbar power supply by means cable terminal placed under the head of the circuit-breaker terminal and branch with parallel module

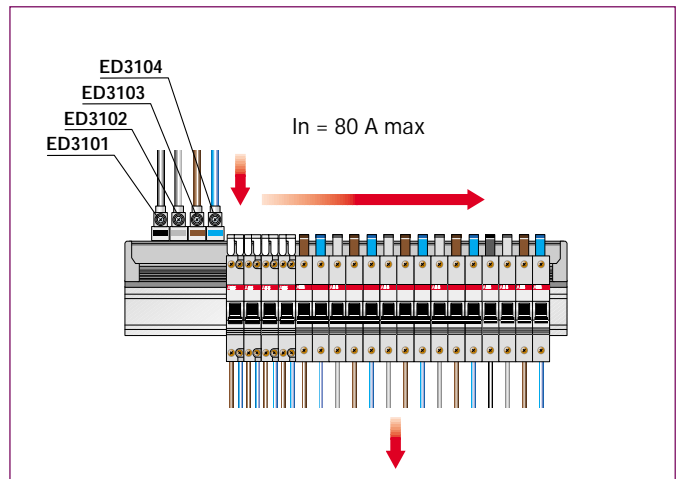


### Unifix L frame with 100A 12/18/24 module busbars

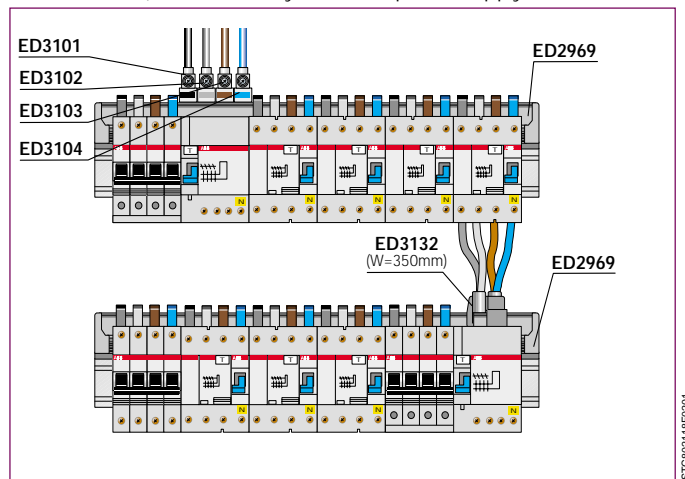
Busbar power supply by means of circuit-breaker fed from the top placed centrally



Busbar power supply by means of main row circuit-breaker fed from the top, placed laterally



Direct busbar power supply by means of power supply module (supplied without cables) and branch by means of power supply module.

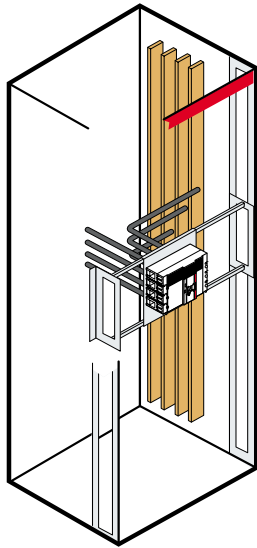


7

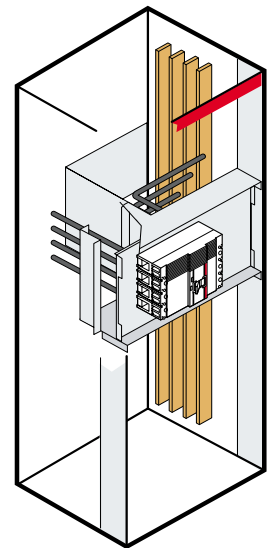
# In-depth technical information

## Examples of ArTu segregation

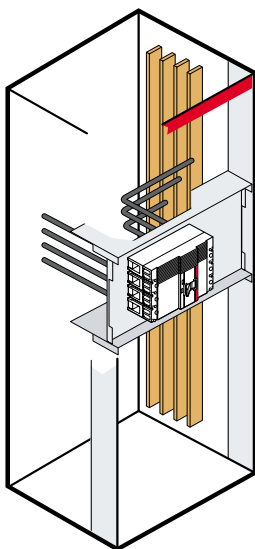
**Form 1**  
(no internal segregation)



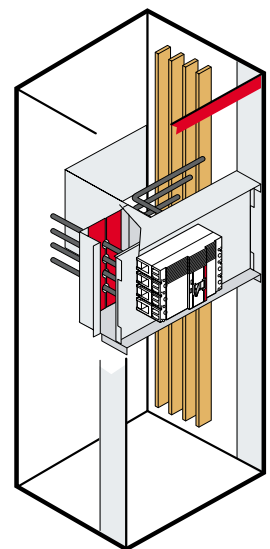
**Form 3**  
(separation of the busbars from the functional units + separation of the functional units from each other)



**Form 2**  
(segregation of the busbars from the functional units)



**Form 4**  
(separation of the busbars from the functional units + separation of the functional units from each other + separation of the terminals from each other)



1STC002119F0201



## Index

Flexible management, services and advice: a complete package .....	8/3
T.C.T. (Technical Collection Tools) .....	8/3
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## Selection and design tools

### Flexible management, services and advice: a complete package

To make selecting its products easier, ABB SACE guarantees 360° support, both before and after purchase, and provides tools for designing and sizing electrical installations which make calculations easier, ensure that installations comply with regulations and reduce the risk of error.

The package consists of software for calculation, design and estimation of costs and manual tools.

For availability of the technical software, please contact the marketing tools support by mail directly from the software and tools area of ABB SACE "Business on line": <http://bol.it.abb.com>, or refer to your local sales support.

### Technical softwares

• **DOCWin** (Design Optimization and Computation) is a system allowing correct sizing of low voltage industrial electrical installations, able to recommend the most suitable design selections regarding cables, busbars and protection devices. By using this tool, designers can develop the project documentation clearly and completely on the basis of the calculation models foreseen under the latest standards;

• **CATs** (Computer Aided Technical Selection) is both an electronic catalogue and a technical aid tool for selection and fitting each single circuit-breaker with accessories. By means of a guided path it is, in fact, possible to select, configure and order the most suitable apparatus for your own installation requirements;



## Selection and design tools

### Immediacy of ordering and flexibility of management

The logic with which the ABB SACE ordering procedures are developed allows efficient and flexible stock management, in the case of the ArTu series of switchboards, too.

In this case, it is possible to generate an order file in the **EDIFACT** standard (Metel or ABB) and transmit it electronically by means of **EDI** (Electronic Data Interchange).

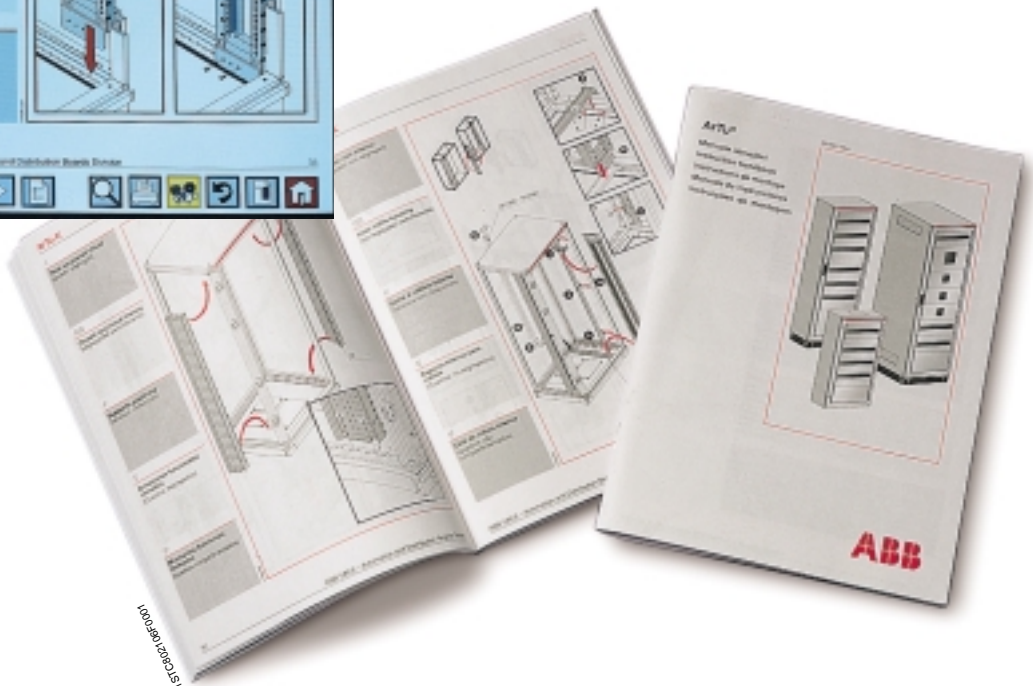
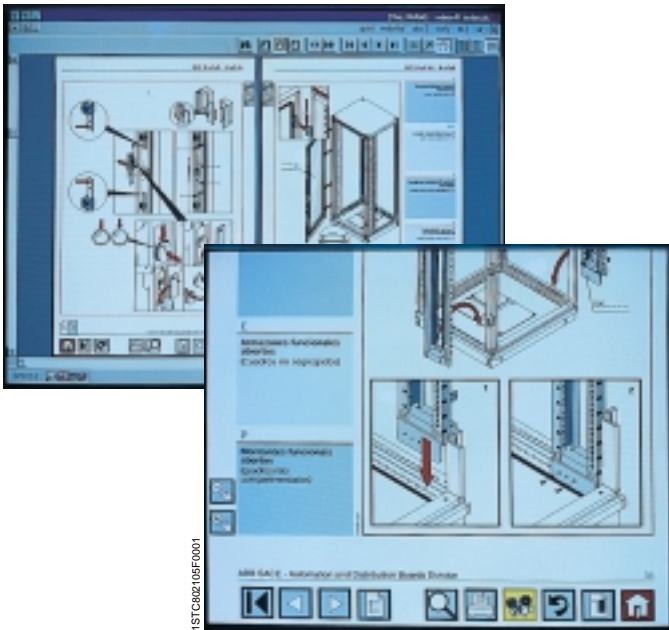
The use of the EDI protocol in sending the order rationalises the logistics chain, reducing crossover times and the risks of errors. The EDI system does, in fact, allow automatic loading of the order at ABB SACE with immediate transmission of the request to production and of the order acknowledgement, shipping note and invoice to the customer.



An order file compatible with the EDIFACT standard (Metel or ABB) can be generated, ready to be translated into EDI format and transmitted electronically.

### Instruction manual

A detailed multi-lingual instruction manual, complete with drawings and films, indicates correct assembly of the switchboard and of the components inside it. By the user following the indications given by the manufacturer, they can construct AS type switchboards correctly selected and assembled and complying with the EN 60439-1 (CEI 17/13-1) Standard, on the basis of what is foreseen by the Low Voltage Directive of the European Community (Directive 73/23/EEC, Law 791/1977).



## Selection and design tools

### Training: an essential tool for professionals

ABB SACE makes the experience it has gained in more than 60 years' of activity available by means of technical training courses, which is an occasion for being brought up to date and comparing notes with professional experts. The aim is to meet all the requirements for information professionals may have, converting the technical-standard and legislative concepts into practical terms which can be applied directly to the different products and installations: in particular, the Tur1 (introductory) and Tur2 (advanced) courses, reserved for switchboard experts, installers and designers, aim at illustrating the procedure for designing and constructing low voltage switchboards on the basis of the CEI Standards and Community Directives in force.

### Business on line

Business on line (<http://bol.it.abb.com>) is the ABB SACE portal: a work tool built up around the needs of the professional. It is divided into various sections:

#### All about our products

Along with the technical information and documentation relative to all ABB SACE products, which can be consulted on line or downloaded in pdf format, the form for requesting catalogues and other printed materials is also available.

#### Configure your products

The tools for working directly on line: the product configurator for estimating costs and possible installation solutions, a kit for motor coordination and protection, the retrofitting kit as well as many others.

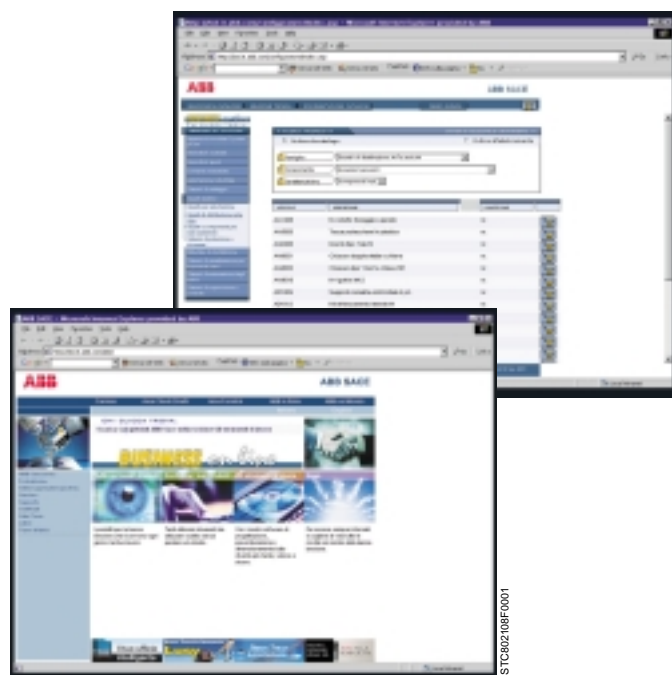
#### Work tools

The CDs with the technical software developed by ABB SACE (DOCWin, CATS) for design and configuration of the installations, as well as the square rules for sizing the electrical installation and the technical guide to installation, can be ordered on line.

#### News

Product novelties, all promotions and company communications, major references and notable projects in progress.

In the *training* section, the list of courses and the calendar complete with the search engine for words are also available. A large section is dedicated to solutions for *specific sectors* (hospitals, building automation), and to in-depth theory and most frequently asked questions (*faq*). Suppliers and direct ABB SACE customers have access to the relative *reserved areas*, from which they interact with the company to optimise order management. Customer *support* and service activities are not missing, nor is information about the *sales network* for ABB SACE products.



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## Overall dimensions

### Index

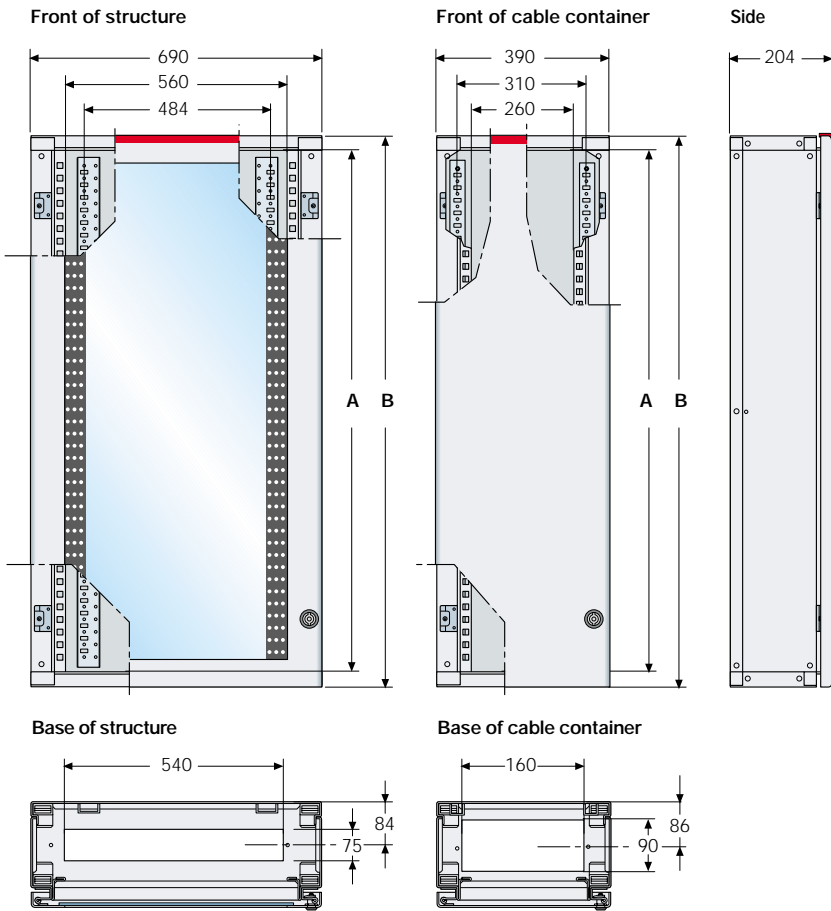
#### Overall dimensions

ArTu L .....	9/2
ArTu M .....	9/6
ArTu K .....	9/10
ArTu L - M - K - Kits for apparatus .....	9/14
ArTu L - M - K - Distribution systems .....	9/16

# ArTu L

## Overall dimensions

### Wall-mounted ArTu L

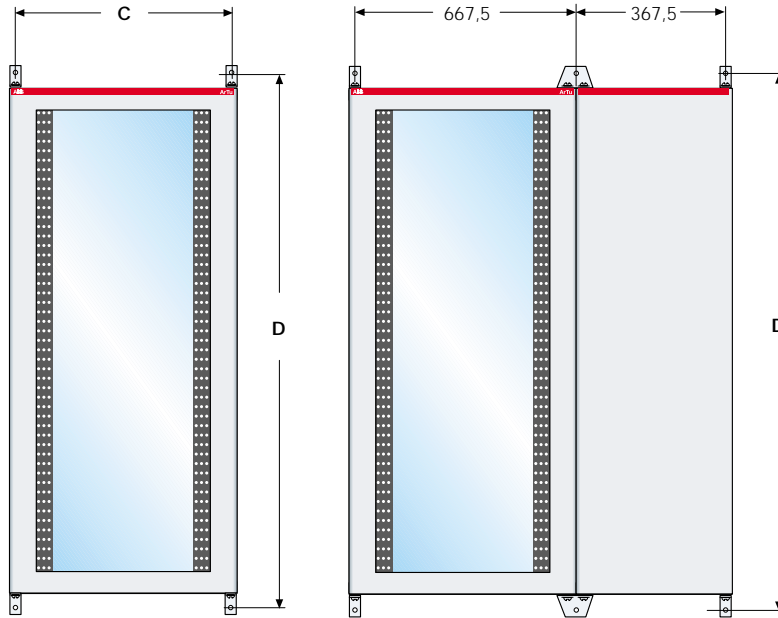


	A	B
<b>Structure</b>		
SL0600	600	650
SL0800	800	850
SL1000	1000	1050
SL1200	1200	1250
<b>Cable container</b>		
VC0600	600	650
VC0800	800	850
VC1000	1000	1050
VC1200	1200	1250

# ArTu L

## Overall dimensions

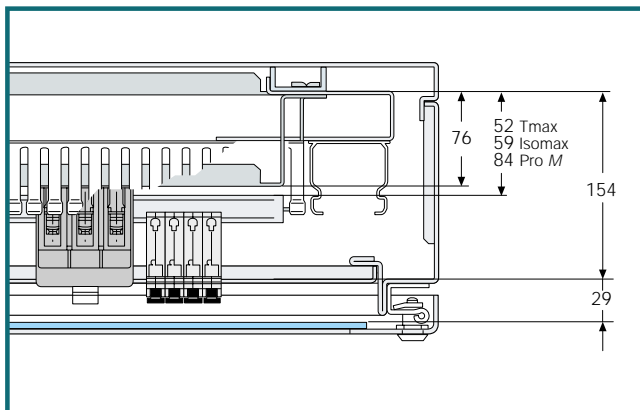
### Wall-mounted ArTu L Fixing to wall



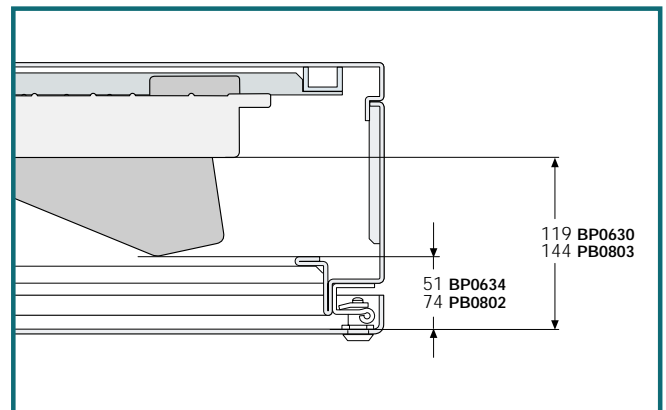
	C	D
<b>Structure</b>		
SL0600	645	700
SL0800	645	900
SL1000	645	1100
SL1200	645	1300
<b>Cable container</b>		
VC0600	345	700
VC0800	345	900
VC1000	345	1100
VC1400	345	1300

### Useful space inside wall-mounted switchboards

Structure



Cable container

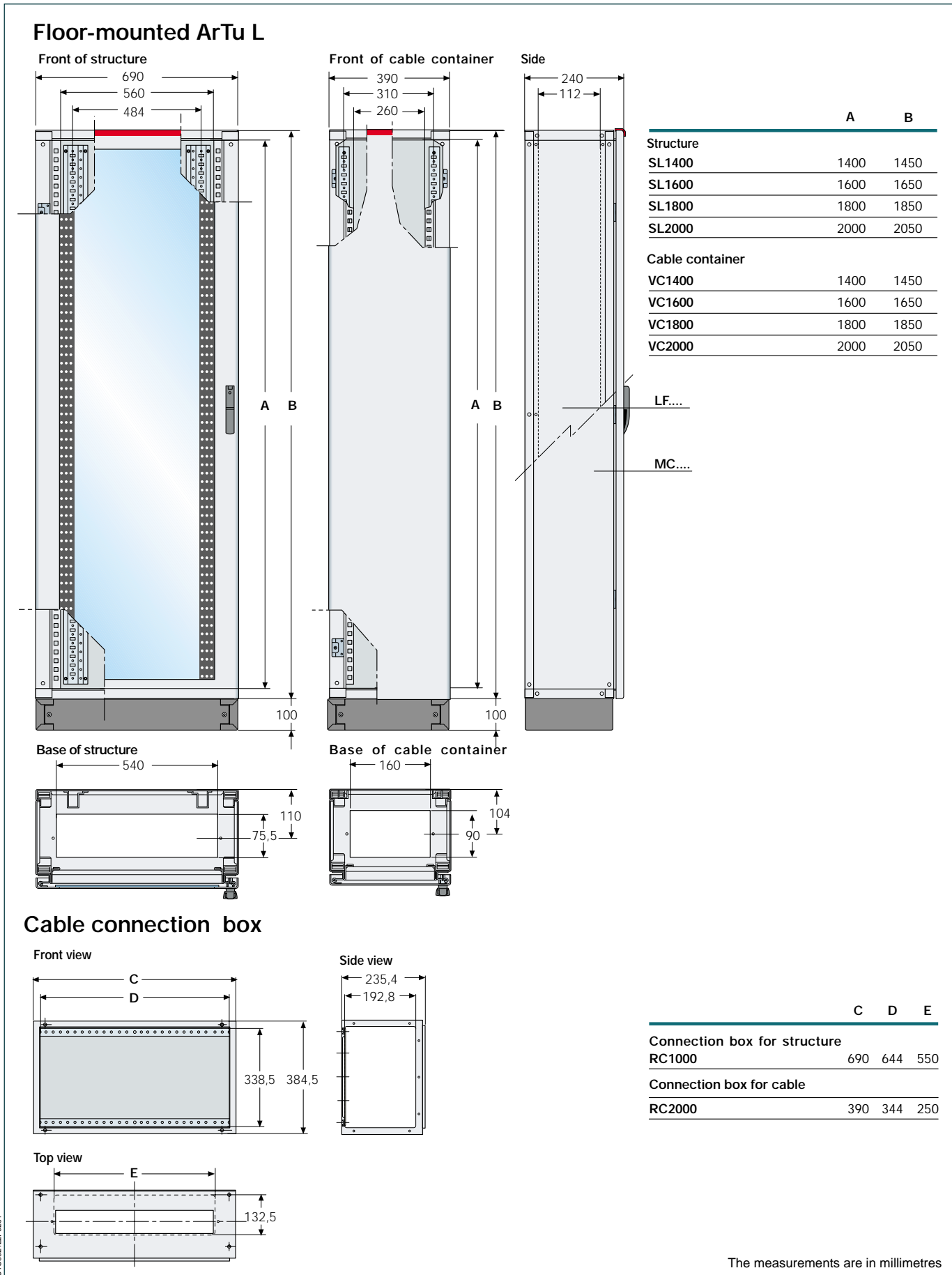


The measurements are in millimetres

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# ArTu L

## Overall dimensions



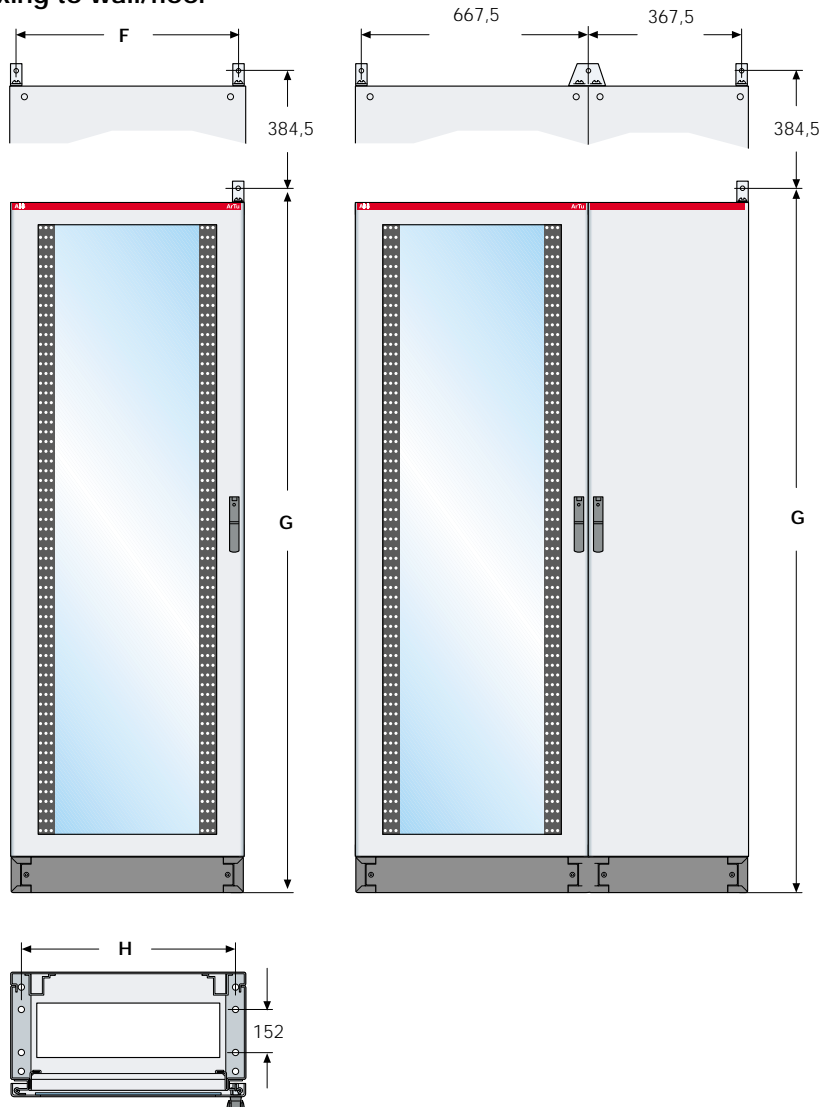
The measurements are in millimetres

# ArTu L

## Overall dimensions

### Floor-mounted ArTu L

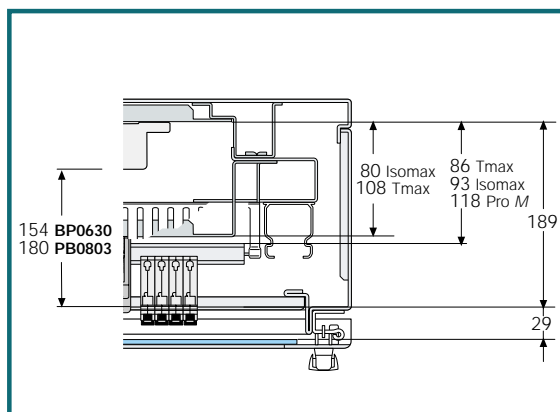
Fixing to wall/floor



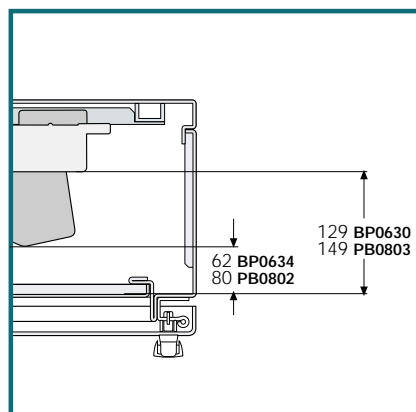
	F	G	H
<b>Structure</b>			
SL1400	645	1575	645
SL1600	645	1775	645
SL1800	645	1975	645
SL2000	645	2175	645
<b>Cable container</b>			
VC1400	345	1575	345
VC1600	345	1775	345
VC1800	345	1975	345
VC2000	345	2175	345

### Useful space inside floor-mounted switchboards

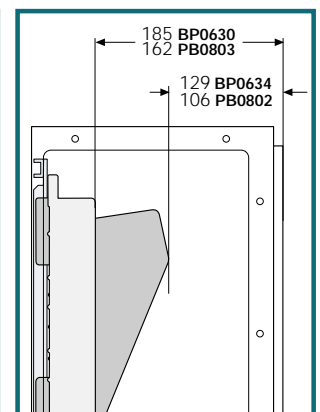
Structure



Cable container



Connection box



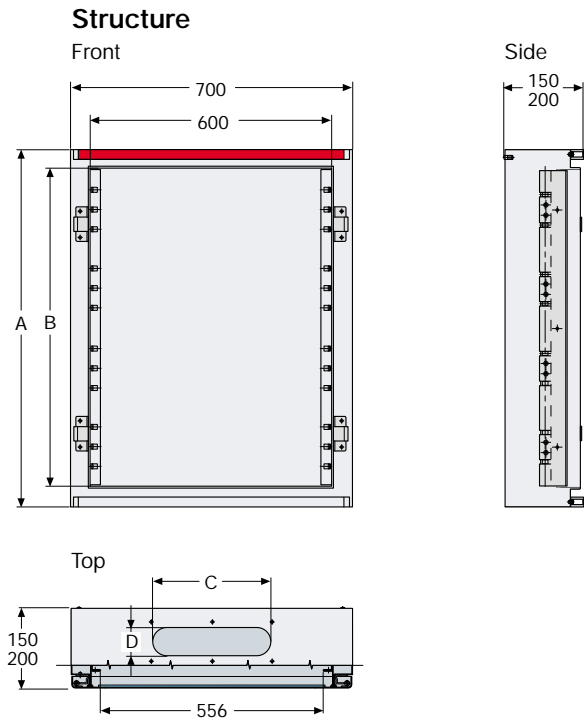
The measurements are in millimetres

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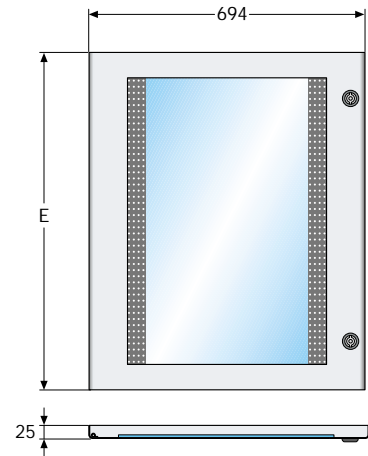
# ArTu M

## Overall dimensions

### Wall-mounted ArTu M

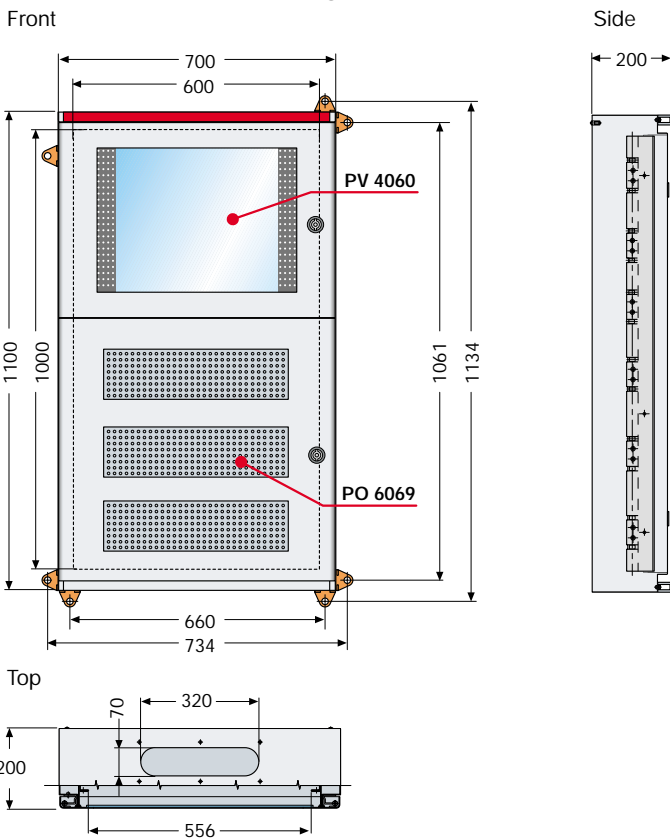


### Blind or transparent front door



	A	B	C	D	E
<b>Depth 150mm</b>					
SM6061	700	600	183	60	640
SM8061	900	800	183	60	840
<b>Depth 200mm</b>					
SM8062	900	800	320	70	840
SM1062	1100	1000	320	70	1040
SM1262	1300	1200	320	70	1240

### Switchboard for operating theatre SM 1069



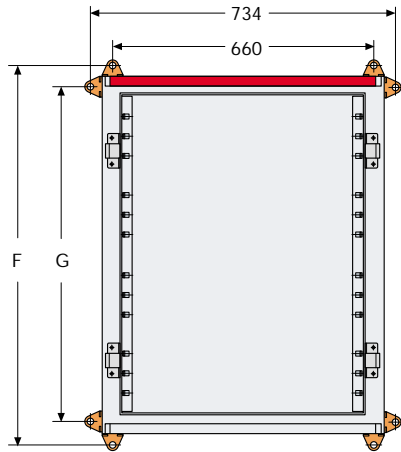
The measurements are in millimetres

# ArTu M

## Overall dimensions

### Wall-mounted ArTu M

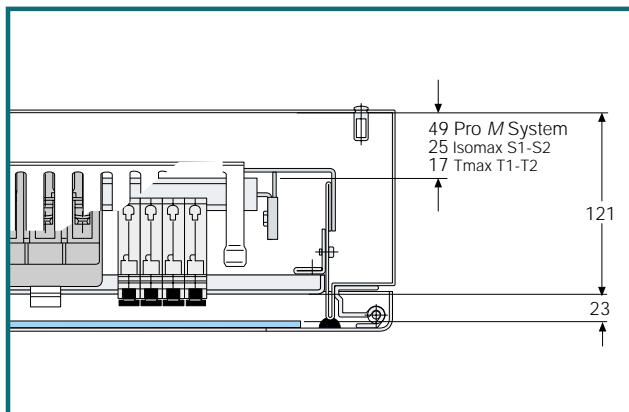
#### Fixing to wall



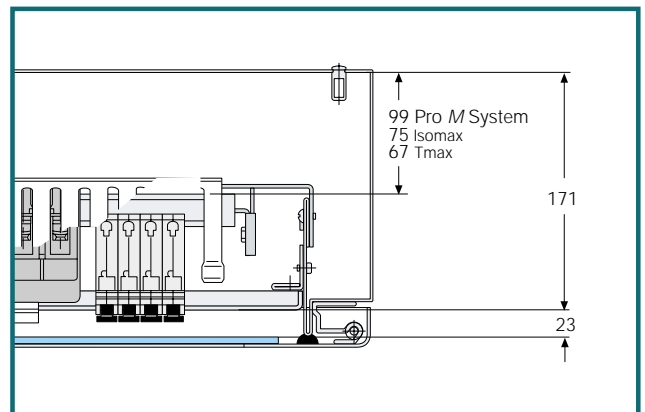
	F	G
<b>Depth 150mm</b>		
SM6061	734	661
SM8061	934	861
<b>Depth 200mm</b>		
SM8062	934	861
SM1062	1134	1061
SM1262	1334	1261

### Useful space inside wall-mounted switchboards

#### Depth 150mm



#### Depth 200mm



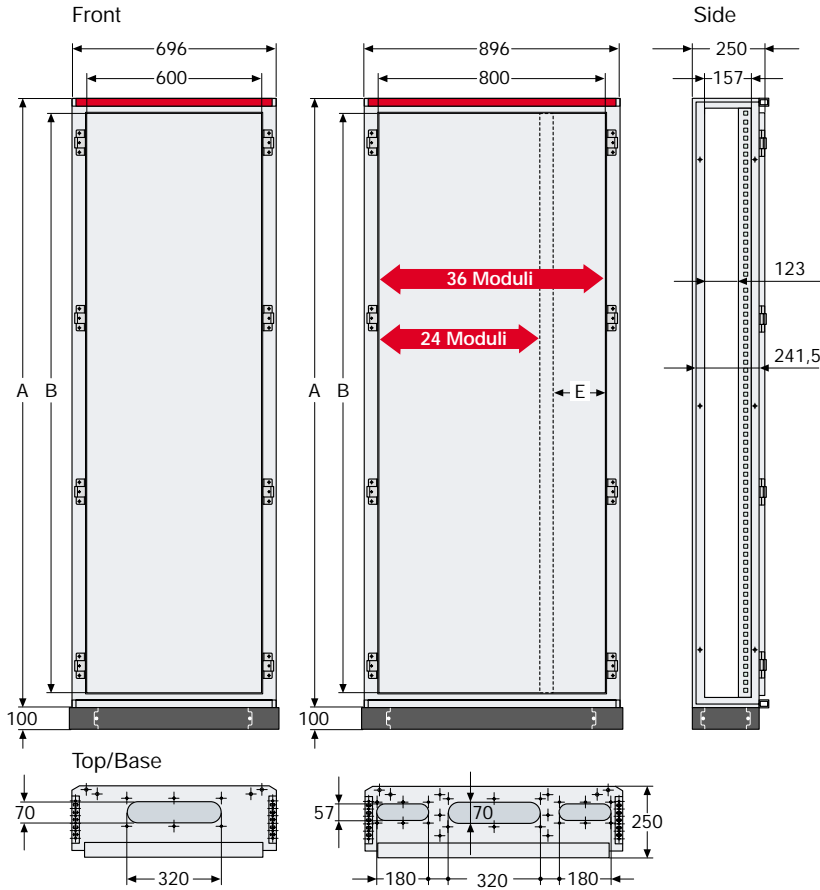
The measurements are in millimetres

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# ArTu M

## Overall dimensions

### Floor-mounted ArTu M



	A	B	C	D	E
<b>Structures without cable container</b>					
SM1462	1496	1400	1490	1436	
SM1662	1696	1600	1690	1636	
SM1862	1896	1800	1890	1836	
SM2062	2096	2000	2090	2036	
<b>Structures with cable container</b>					
SM1682	1696	1600	1690	1636	157
SM1882	1896	1800	1890	1836	157
SM2082	2096	2000	2090	2036	157
<b>Additional cable container</b>					
VC1632	1696	1600			
VC1832	1896	1800			
VC2032	2096	2000			

### Overall dimensions for several structures side by side

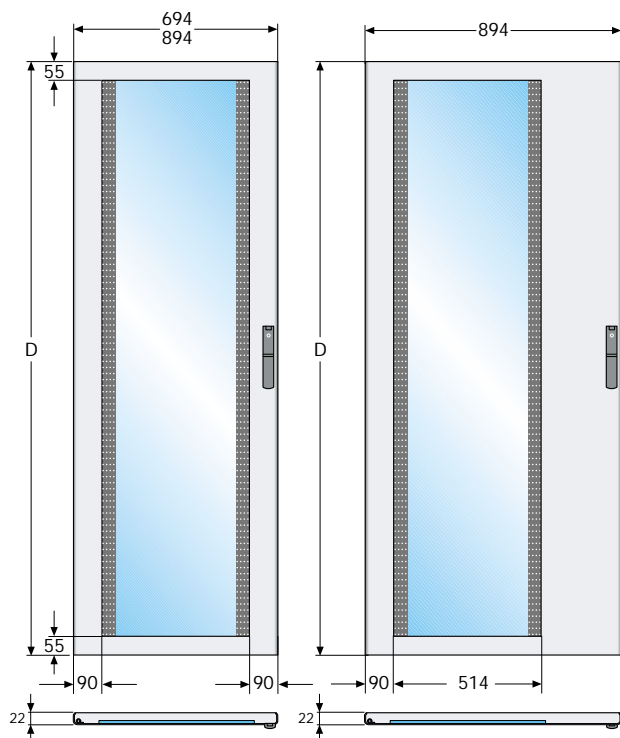
$$L \times N + 28 = X \text{mm}$$

L = Column width

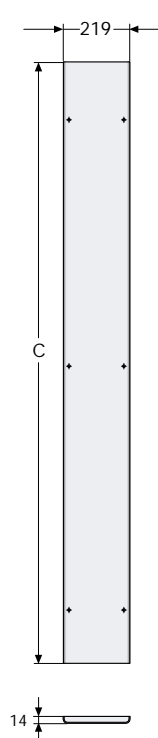
N = Number of columns

28 = Overall dimensions 2 side panels

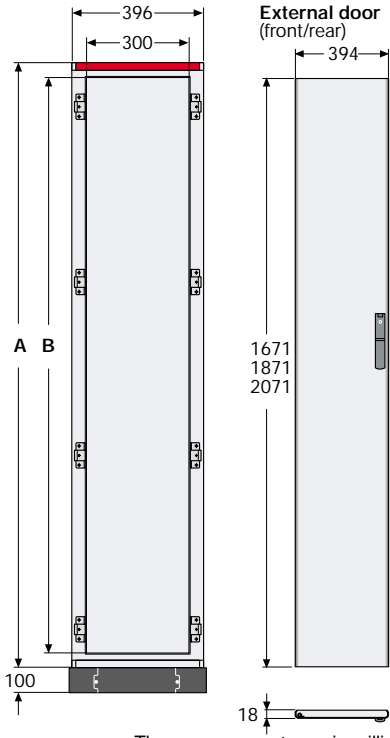
### Blind or transparent front doors



### Side panels



### Additional cable container



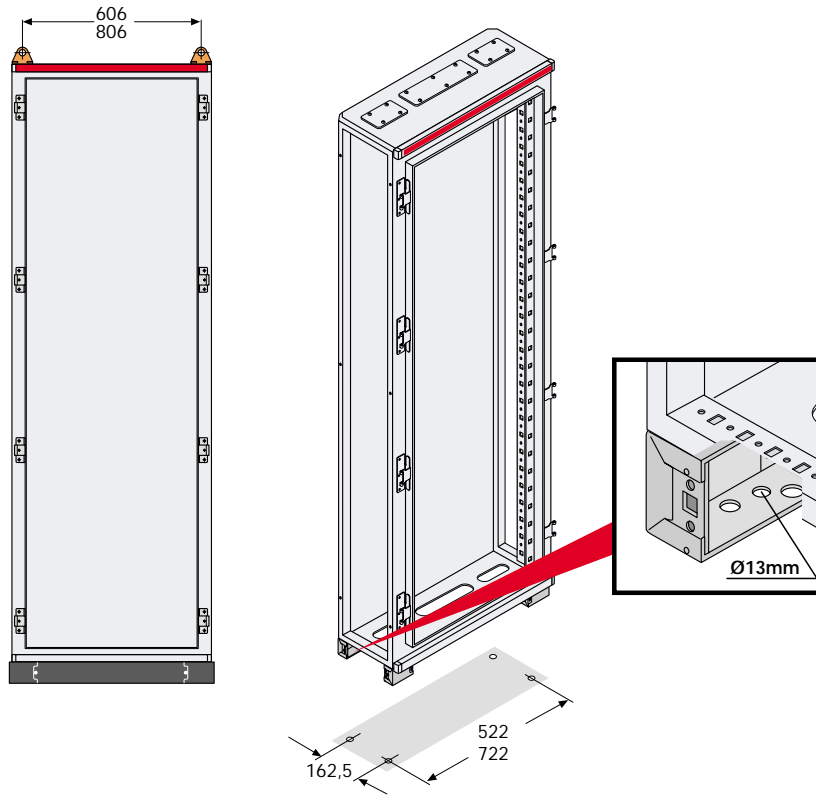
The measurements are in millimetres

# ArTu M

## Overall dimensions

### Floor-mounted ArTu M

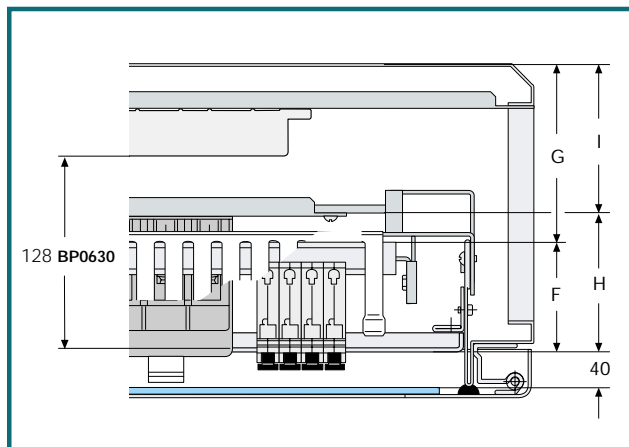
Fixing to wall/floor



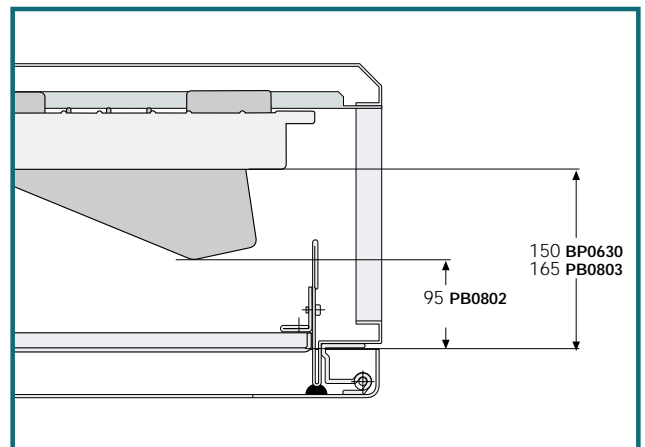
### Useful space inside floor-mounted switchboards

	F	G	H	I
System Pro M	72	129,5	120 max	81
Isomax S1-S2			71	115
Isomax S3-S4-S5-S6			107	79
Tmax T1-T2			78	108

### Structure



### Cable container



The measurements are in millimetres

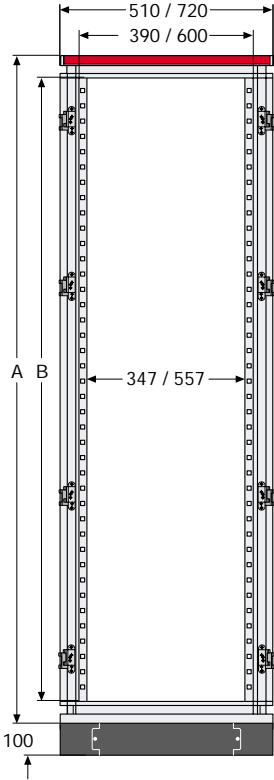
# ArTu K

## Overall dimensions

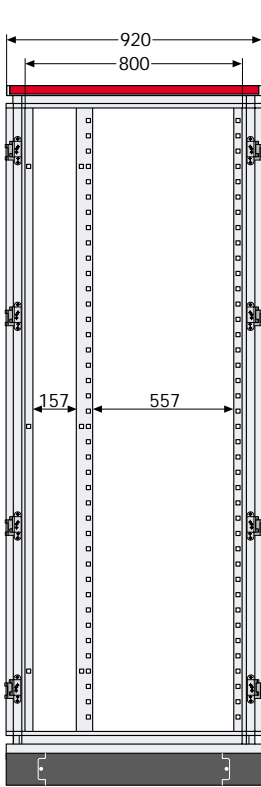
### ArTu K

Structure without cable container

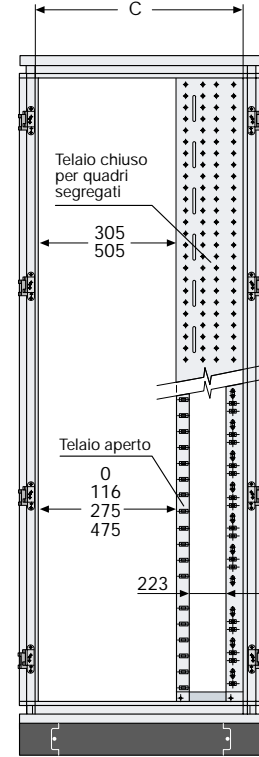
Front



Structure with cable container



Side



Structure height 1600mm

	A	B	C
SK6025/SK8025	1731	1600	150

Structure height 1800mm

	A	B	C
SK4040/SK6040/SK8040	1931	2000	225
SK4060/SK6060/SK8060	1931	2000	500
SK4080/SK6080/SK8080	1931	2000	700

Structure height 2000mm

	A	B	C
SK4040/SK6040/SK8040	2131	2000	225
SK4060/SK6060/SK8060	2131	2000	500
SK4080/SK6080/SK8080	2131	2000	700

Overall dimensions for several structures side by side

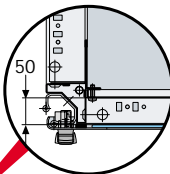
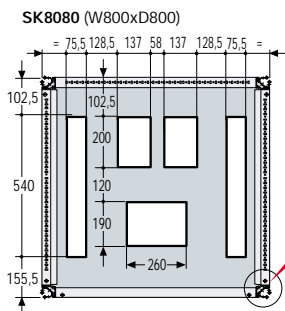
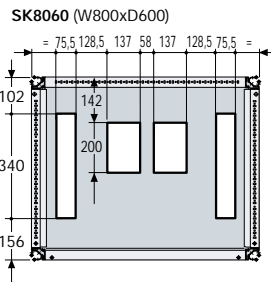
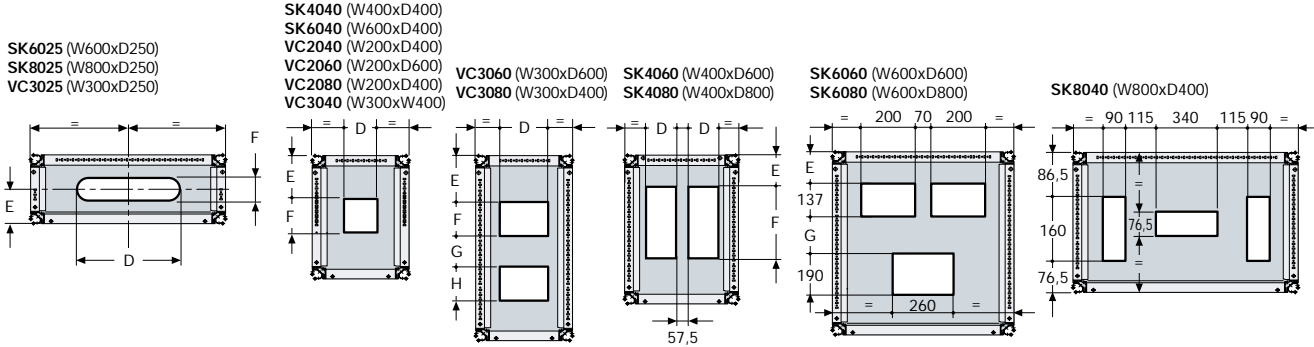
$$L \times N + 28 = Xmm$$

L = Column width

N = Number of columns

28 = Overall dimensions 2 side panels

### Bases



	D	E	F	G	H
SK6025 (W600xD250)	180	140	57		
SK8025 (W800xD250)	320	140	70		
SK4040 (W400xD400)	200	108	137		
SK4060 (W400xD600)	137	108	200		
SK4080 (W400xD800)	137	108	400		
SK6040 (W600xD400)	540	123,5	75,5		
SK6060 (W600xD600)	93	81,5			
SK6080 (W600xD800)	123	161,5			
VC2040 (W200xD400)	118	110	120		
VC2060 (W200xD600)	75,5	127,5	340		
VC2080 (W200xD800)	75,5	127,5	540		
VC3025 (W300xD250)	180	140	57		
VC3040 (W300xD400)	200	103	137		
VC3060 (W300xD600)	200	118,5	137	83	137
VC3080 (W300xD800)	190	99	260	80	260

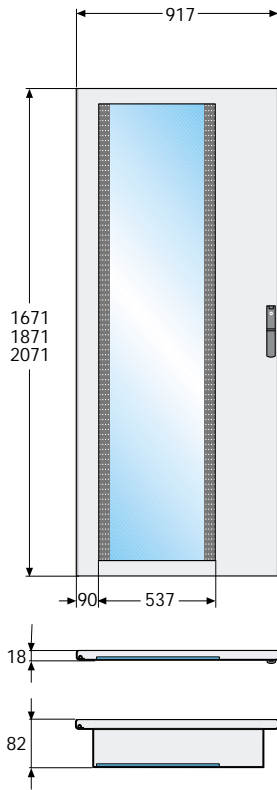
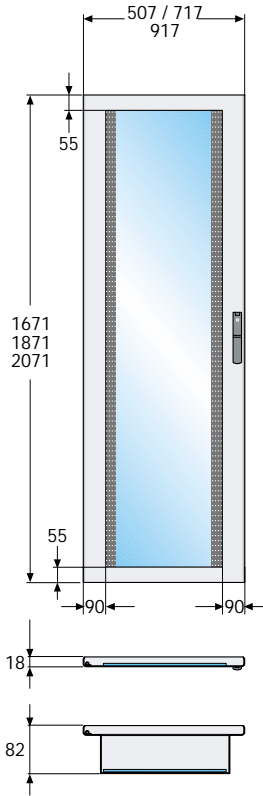
The measurements are in millimetres

# ArTu K

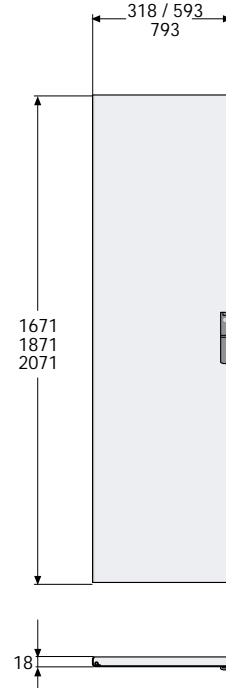
## Overall dimensions

### ArTu K

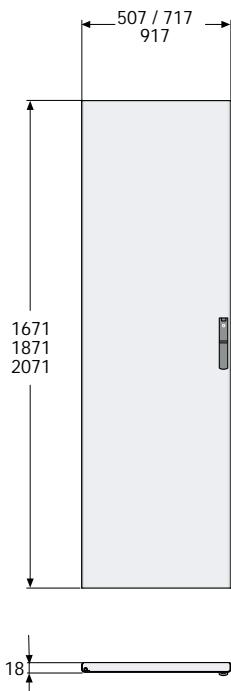
#### Transparent front doors



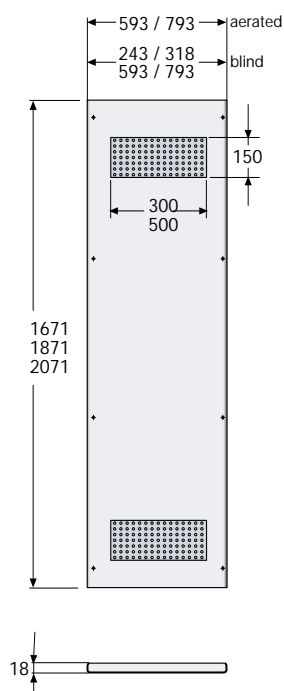
#### Side doors



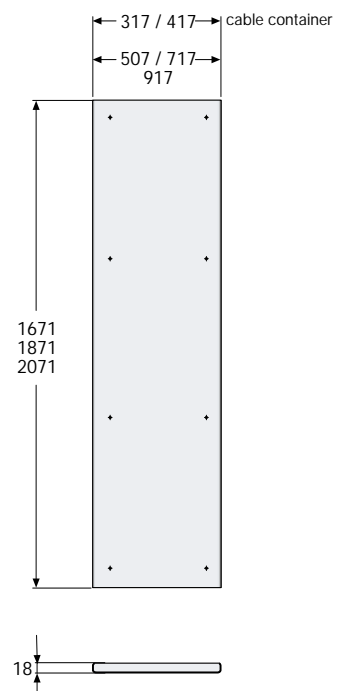
#### Rear and front blind doors



#### Side blind or ventilated panels



#### Rear panels



1ST/CB0212/REF/0201

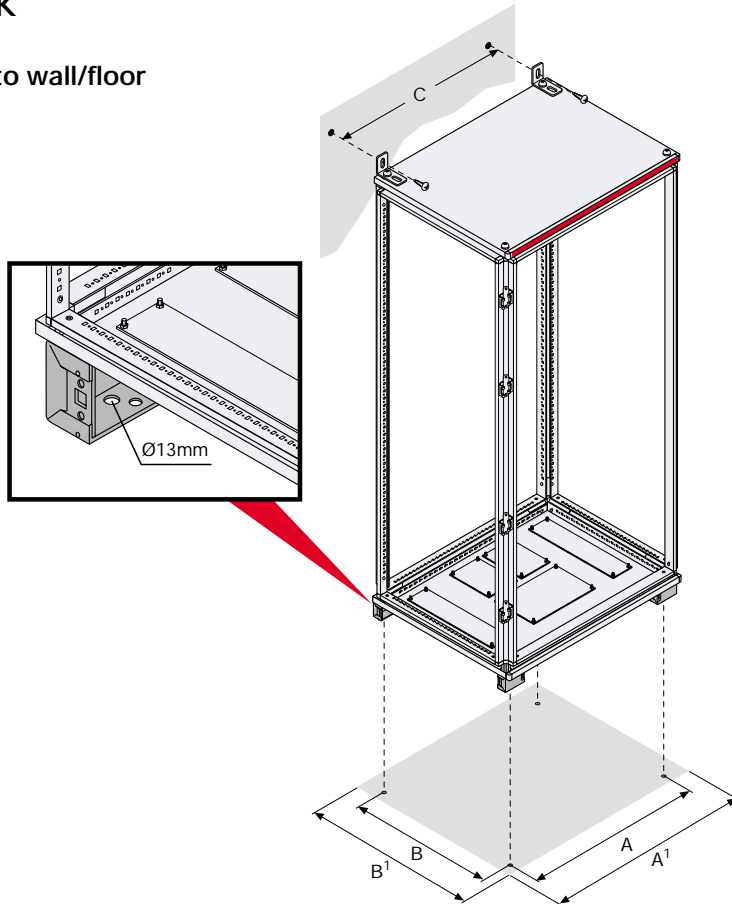
The measurements are in millimetres

# ArTu K

## Overall dimensions

### ArTu K

#### Fixing to wall/floor



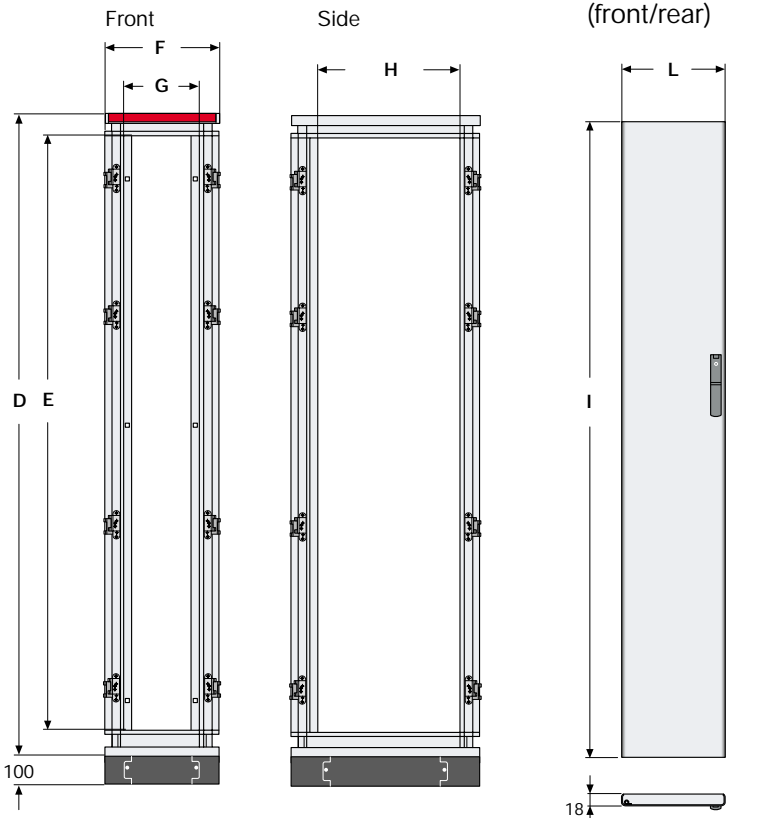
#### Structure

		A	A <sup>1</sup>	B	B <sup>1</sup>	C
W600xD250	<b>SK6025</b>	546	720	189	287	620
W800xD250	<b>SK8025</b>	746	920	189	287	820
W400xD400	<b>SK4040</b>	336	520	264	362	410
W400xD600	<b>SK4060</b>	336	520	539	637	410
W400xD800	<b>SK4080</b>	336	520	739	837	410
W600xD400	<b>SK6040</b>	546	720	264	362	620
W600xD600	<b>SK6060</b>	546	720	539	637	620
W600xD800	<b>SK6080</b>	546	720	739	837	620
W800xD400	<b>SK8040</b>	746	920	264	362	820
W800xD600	<b>SK8060</b>	746	920	539	637	820
W800xD800	<b>SK8080</b>	746	920	739	837	820

#### Additional cable container

		A	A <sup>1</sup>	B	B <sup>1</sup>	C
W200xD400	<b>VC2040</b>	146	320	264	362	220
W200xD600	<b>VC2060</b>	146	320	539	637	220
W200xD800	<b>VC2080</b>	246	320	189	837	220
W300xD250	<b>VC3025</b>	146	420	739	287	320
W300xD400	<b>VC3040</b>	246	420	264	362	320
W300xD800	<b>VC3060</b>	246	420	539	837	320
W300xD800	<b>VC3080</b>	246	420	739	837	320

#### Additional cable container



#### External door (front/rear)

height 1600mm

	D	E	F	G	H	I	L
<b>VC3025</b>	1731	1600	420	300	150	1671	417

height 1800mm

	D	E	F	G	H	I	L
<b>VC2040</b>	1931	1800	320	200	225	1871	317
<b>VC2060</b>	1931	1800	320	200	500	1871	317
<b>VC2080</b>	1931	1800	320	200	700	1871	317
<b>VC3025</b>	1931	1800	420	300	150	1871	417
<b>VC3040</b>	1931	1800	420	300	225	1871	417
<b>VC3060</b>	1931	1800	420	300	500	1871	417
<b>VC3080</b>	1931	1800	420	300	700	1871	417

height 2000mm

	D	E	F	G	H	I	L
<b>VC2040</b>	2131	2000	320	200	225	2071	317
<b>VC2060</b>	2131	2000	320	200	500	2071	317
<b>VC2080</b>	2131	2000	320	200	700	2071	317
<b>VC3025</b>	2131	2000	420	300	150	2071	417
<b>VC3040</b>	2131	2000	420	300	225	2071	417
<b>VC3060</b>	2131	2000	420	300	500	2071	417
<b>VC3080</b>	2131	2000	420	300	700	2071	417

The measurements are in millimetres

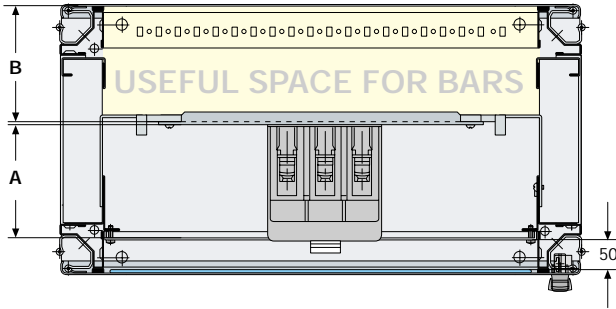
# ArTu K

## Overall dimensions

### ArTu K

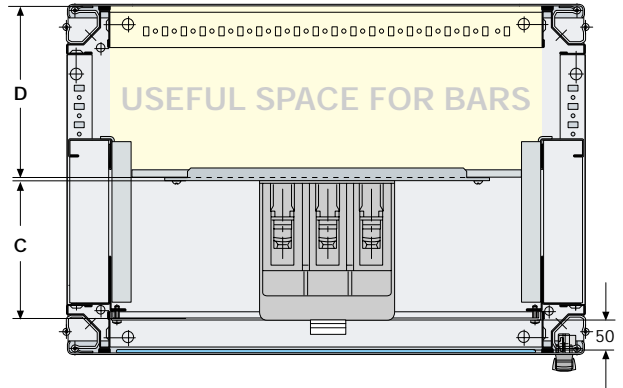
#### Useful space inside the switchboards

Depth 250mm



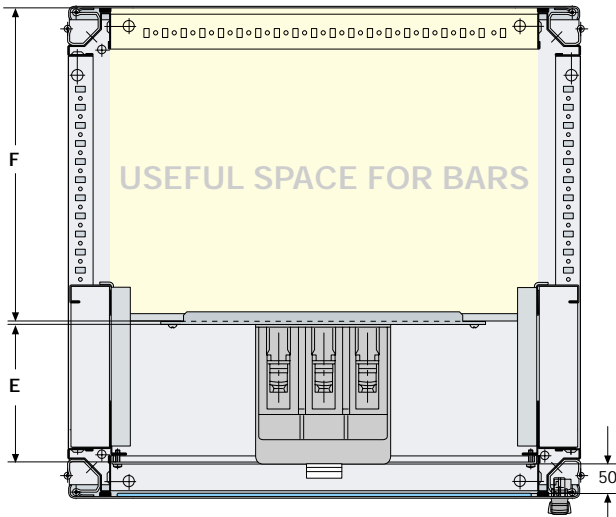
	FIXED		PLUG-IN		WITHDRAWABLE	
	A	B	A	B	A	B
Isomax S1-S2	71	153	-	-	-	-
Isomax S3-S4-S5-S6	107	117	-	-	-	-
Tmax T1-T2	78	146	-	-	-	-

Depth 350mm



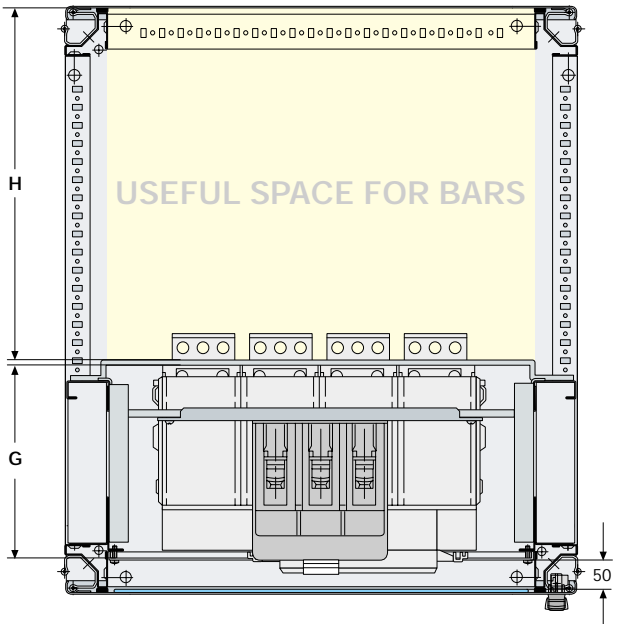
	FIXED		PLUG-IN		WITHDRAWABLE	
	C	D	C	D	C	D
Isomax S1-S2	71	228	124	176	-	-
Isomax S3-S4-S5-S6	107	192	156	144	190	109
Tmax T1-T2	78	221	-	-	-	-

Depth 600mm



	FIXED		PLUG-IN		WITHDRAWABLE	
	E	F	E	F	E	F
Isomax S1-S2	71	503	124	451	-	-
Isomax S3-S4-S5-S6	107	467	156	419	190	384
Isomax S7	146	-	-	-	241	340
Tmax T1-T2	78	146	-	-	-	-

Depth 800mm



	FIXED		PLUG-IN		WITHDRAWABLE	
	G	H	G	H	G	H
Isomax S1-S2	71	703	124	651	-	-
Isomax S3-S4-S5-S6	107	667	156	619	190	584
Isomax S7	146	628	-	-	241	540
Tmax T1-T2	78	696	-	-	-	-
Emax E1-E2-E3	236	538	-	-	378	403

1ST/CM2131FR0201

The measurements are in millimetres

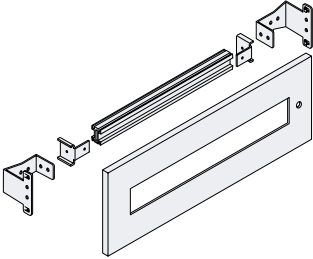
# ArTu L - M - K

## Kits for apparatus

### ArTu L - M - K - Panels for apparatus mounted on DIN rail

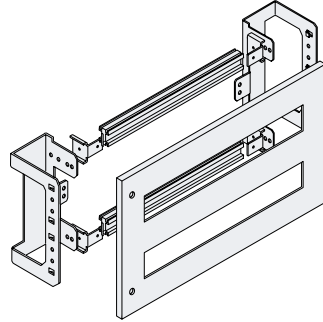
#### 1 DIN row

W=400mm (12 DIN mod.)  
W=600mm (24 DIN mod.)  
W=800mm (36 DIN mod.)



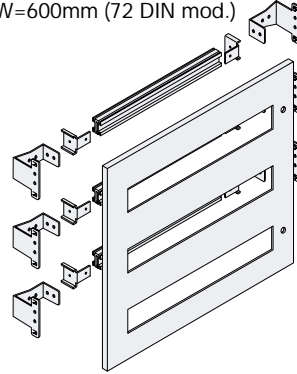
#### 2 DIN rows

W=600mm (48 DIN mod.)  
W=800mm (72 DIN mod.)

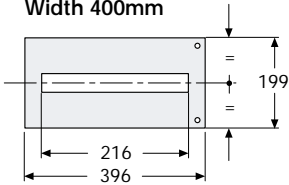


#### 3 DIN rows

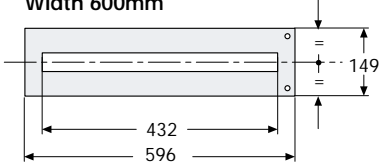
W=600mm (72 DIN mod.)



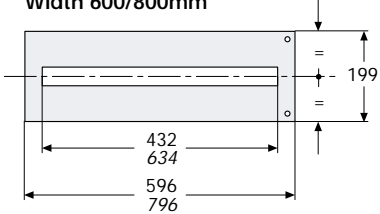
#### Width 400mm



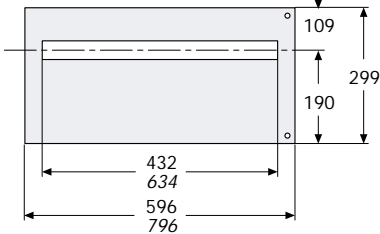
#### Width 600mm



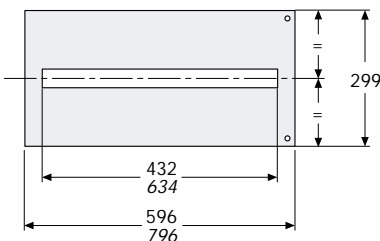
#### Width 600/800mm



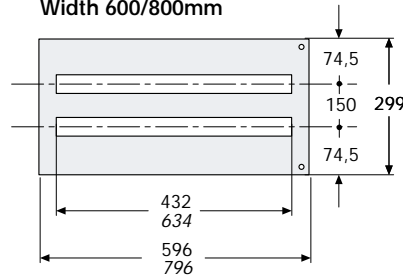
#### Version for Tmax with diff. mod.



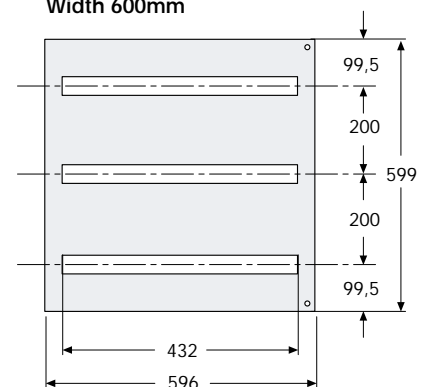
#### Version for Unifix H



#### Width 600/800mm



#### Width 600mm



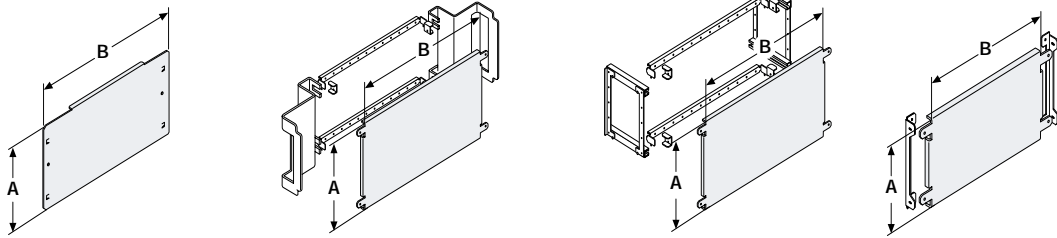
The measurements are in millimetres

# ArTu L - M - K

## Kits for apparatus

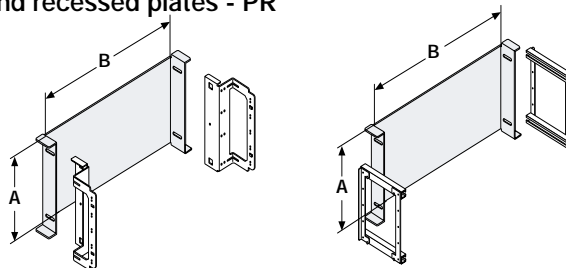
### ArTu L - M - K - Blind flat and blind recessed plates

#### Useful dimensions of blind flat plates - PF



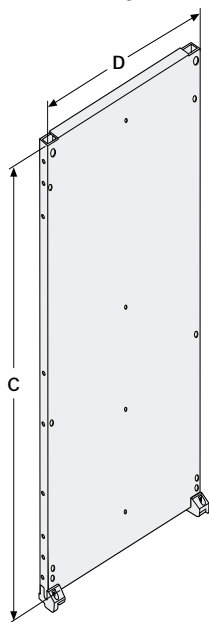
Functional H (mm)	ArTu L W=600mm		ArTu M - K d=250mm W=600mm		ArTu M - K d=250mm W=800mm		ArTu K without segregation W=400mm		ArTu K without segregation W=600mm		ArTu K without segregation W=800mm		ArTu K segregated W=400mm		ArTu K segregated W=600mm	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
200	187	440	184	449	184	649	184	284	184	440	184	640	190	374	190	584
300	287	440	-	-	-	-	234	284	234	450	234	650	290	374	290	584
400	387	440	384	449	384	649	384	284	384	440	384	640	390	374	390	584
600	587	440	-	-	-	-	584	284	584	470	584	670	590	374	590	584
800	787	440	-	-	-	-	-	-	-	-	-	-	790	374	790	584

#### Useful dimensions of blind recessed plates - PR



Functional H (mm)	ArTu L W=600mm		ArTu M - K d=250mm W=600mm		ArTu M - K d=250mm W=800mm		ArTu K without segregation W=400mm		ArTu K without segregation W=600mm		ArTu K without segregation W=800mm		ArTu K segregated W=400mm		ArTu K segregated W=600mm	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
200	-	-	180	526	180	726	-	-	180	526	180	726	-	-	-	-
400	-	-	257	526	257	726	-	-	257	526	257	726	-	-	-	-
600	-	-	-	-	-	-	-	-	400	526	400	726	-	-	-	-

#### ArTu K - Adjustable back plate

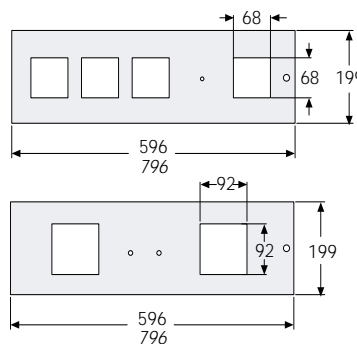


	C	D
PF1806	1776	580
PF1808	1776	780
PF2006	1966	580
PF2008	1966	780

#### ArTu L - M - K - Blind and ventilated panels

Blind H	Ventilated H
99	99
199	199
299	
399	
499	
599	
799	

#### ArTu L - M - K - Panels for instruments



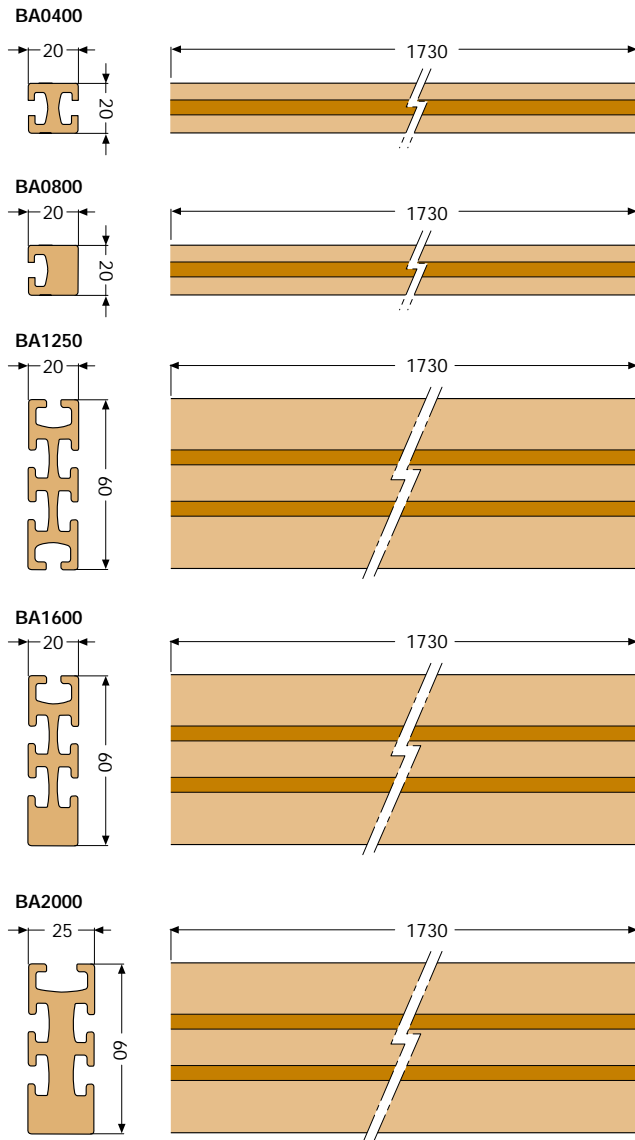
The measurements are in millimetres

# ArTu L - M - K

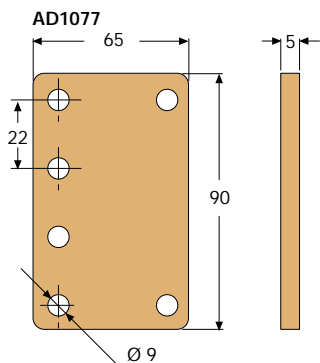
## Distribution systems

### ArTu L - M - K - Busbars with shaped profile

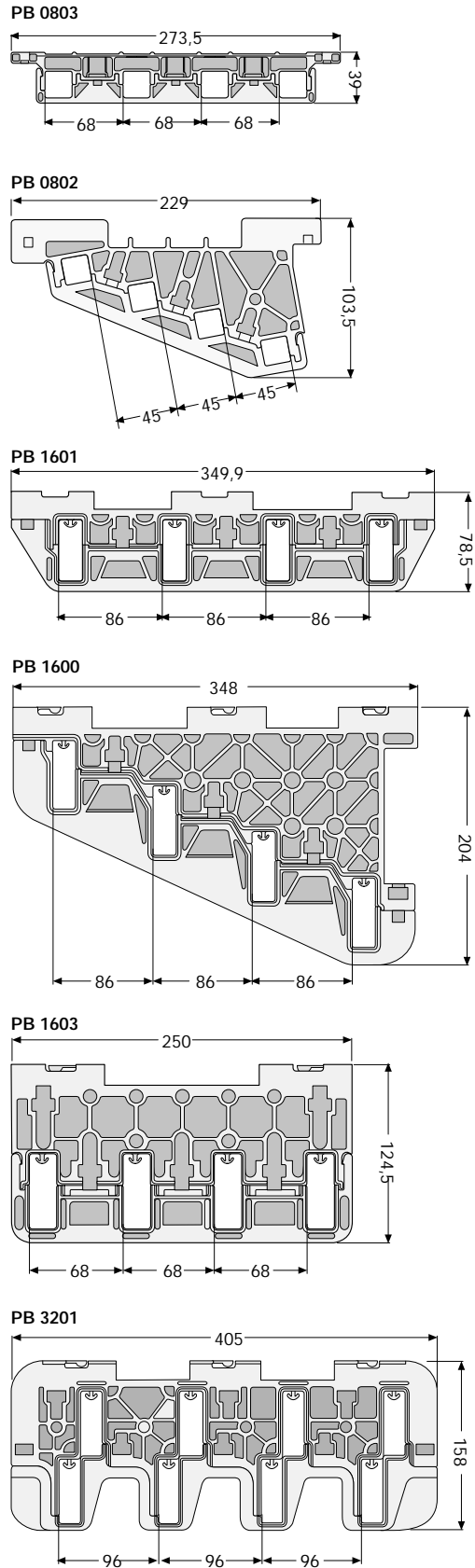
#### Busbars



#### Accessories



#### Insulator



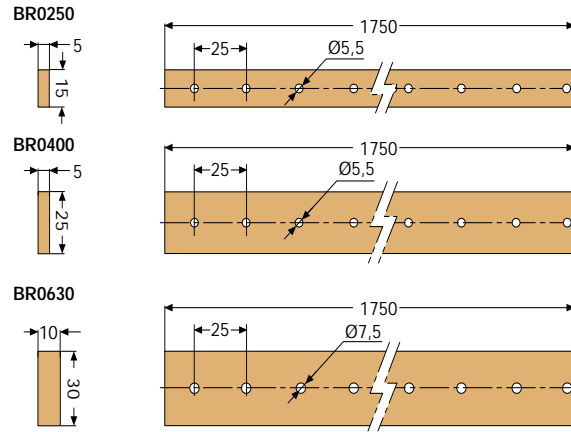
The measurements are in millimetres

# ArTu L - M - K

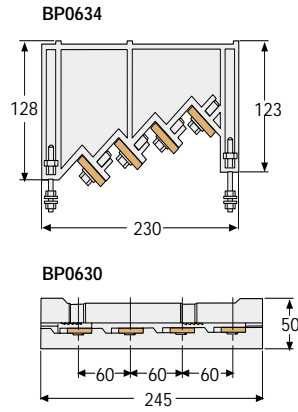
## Distribution systems

### ArTu L - M - K - Flat busbars

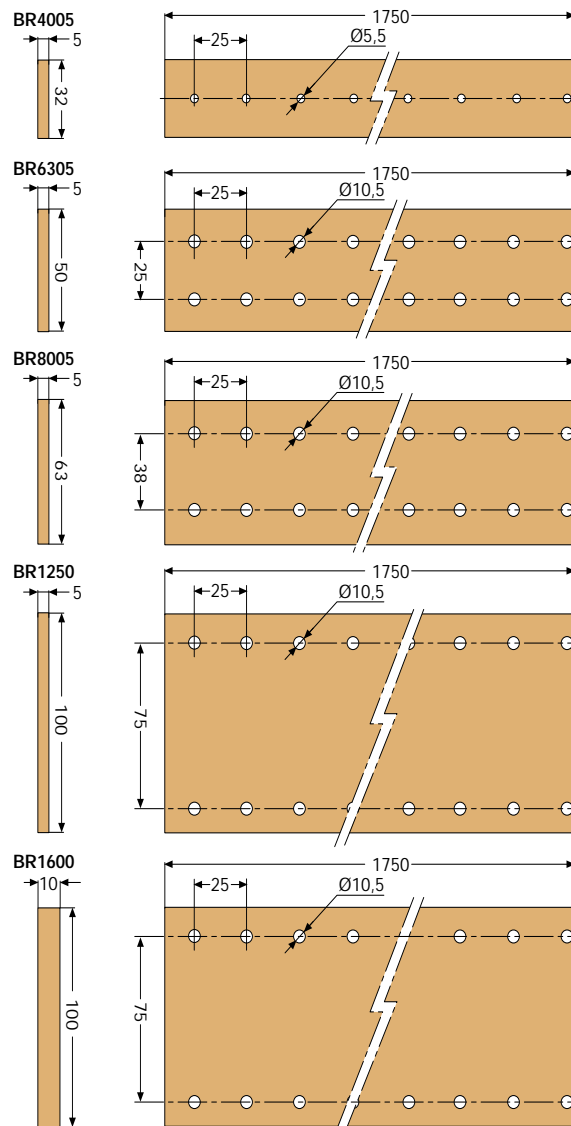
#### Busbars up to 630A



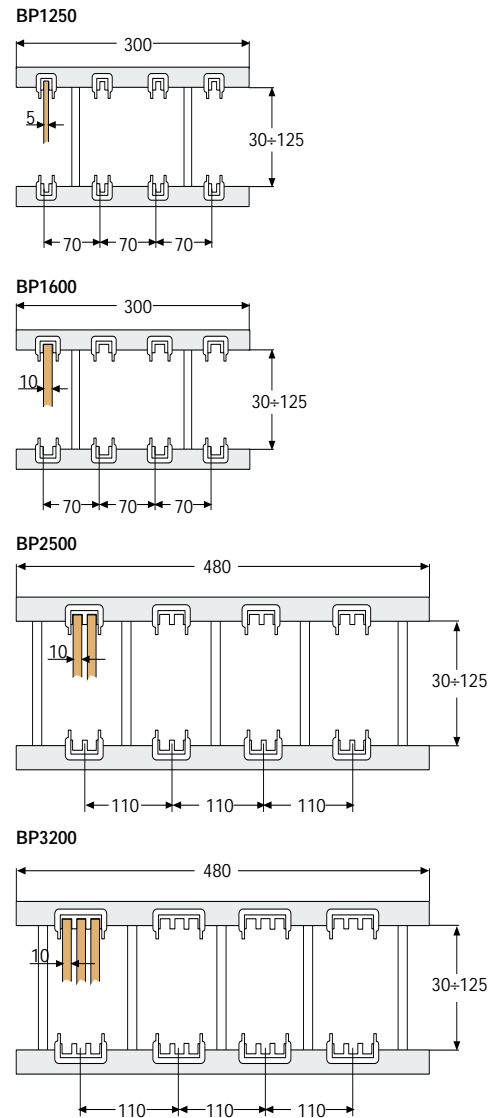
#### Insulators for busbars up to 630A



#### Busbars up to 3200A



#### Insulators for busbars up to 3200A



The measurements are in millimetres

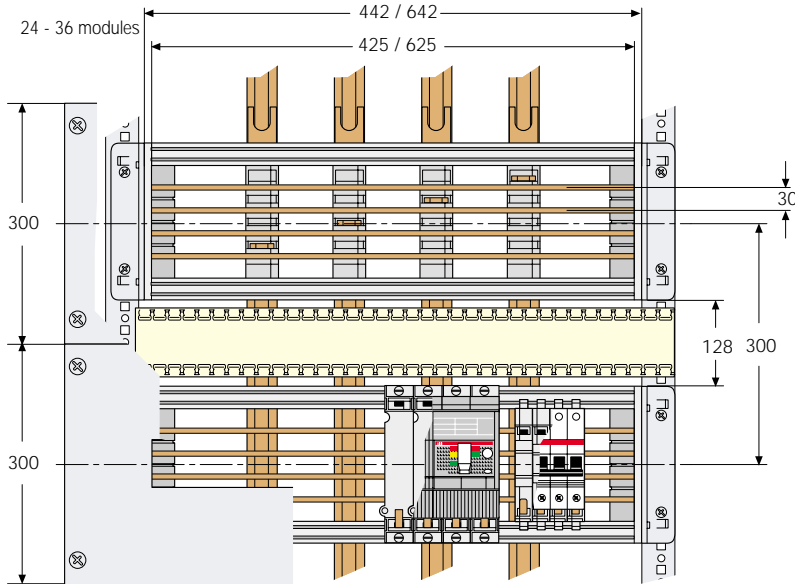
# ArTu L - M - K

## Distribution systems

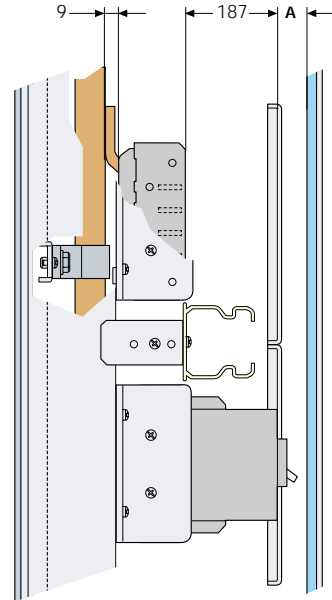
### Unifix cabling system

#### Unifix H

Front view

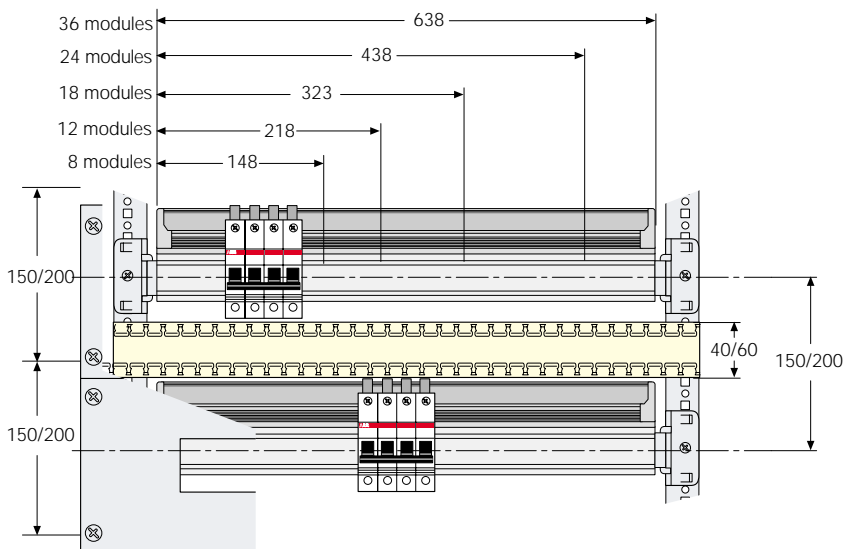


Side view

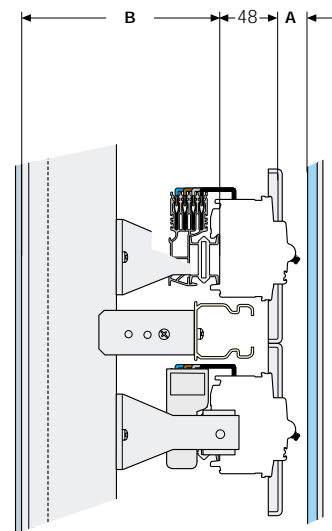


#### Unifix L

Front view



Side view



	A	B
Wall-mounted ArTu L	29	104
Floor-mounted ArTu L	29	140
Wall-mounted ArTu M (D=150)	21	73
Wall-mounted ArTu M (D=200)	21	123
Floor-mounted ArTu M	40	152
ArTu K (D=250)	50	173
ArTu K (D=350)	50	248
ArTu K (D=600)	50	523
ArTu K (D=800)	50	723

The measurements are in millimetres



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### Structures and accessories

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### Kits for installing apparatus

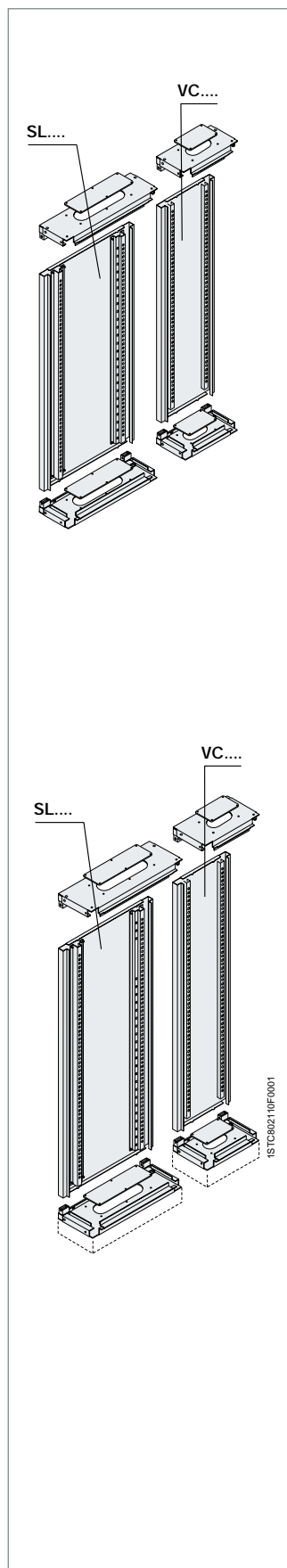
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# ArTu L Structure



Code	Description	Dimensions mm (hwxwd)	Pack/pieces
------	-------------	-----------------------	-------------

## Wall-mounted switchboards

### Wall-mounted switchboard structure

		nominal	external	
<b>SL0600</b>	Back, roof and base for structure	600x600x165	(650x690x204)	1
<b>SL0800</b>	Back, roof and base for structure	800x600x165	(850x690x204)	1
<b>SL1000</b>	Back, roof and base for structure	1000x600x165	(1050x690x204)	1
<b>SL1200</b>	Back, roof and base for structure	1200x600x165	(1250x690x204)	1

### Additional wall-mounted cable container structure

		nominal	external	
<b>VC0600</b>	Back, roof and base for cable container	600x300x165	(650x390x204)	1
<b>VC0800</b>	Back, roof and base for cable container	800x300x165	(850x390x204)	1
<b>VC1000</b>	Back, roof and base for cable container	1000x300x165	(1050x390x204)	1
<b>VC1200</b>	Back, roof and base for cable container	1200x300x165	(1250x390x204)	1

## Floor-mounted switchboards

### Floor-mounted switchboard structure

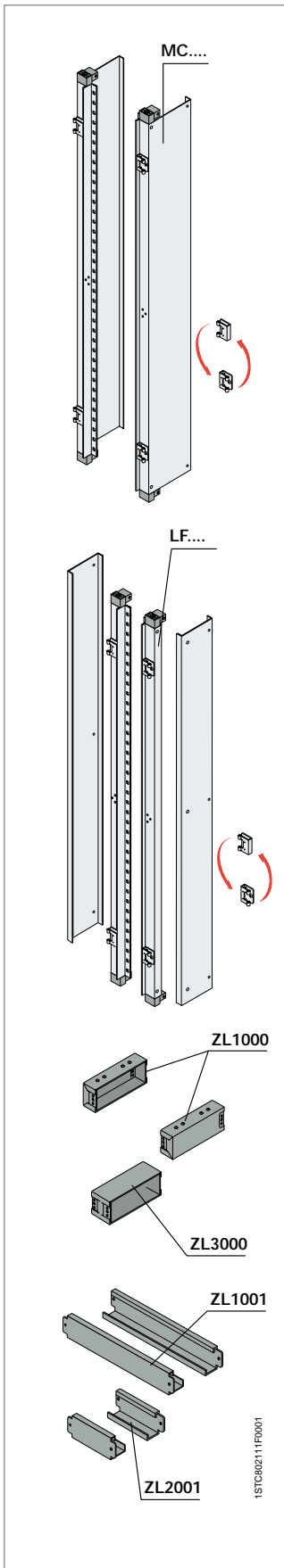
		nominal	external	
<b>SL1400</b>	Back, roof and base for structure	1400x600x195	(1550x690x240)	1
<b>SL1600</b>	Back, roof and base for structure	1600x600x195	(1750x690x240)	1
<b>SL1800</b>	Back, roof and base for structure	1800x600x195	(1950x690x240)	1
<b>SL2000</b>	Back, roof and base for structure	2000x600x195	(2150x690x240)	1

### Additional floor-mounted cable container structure

		nominal	external	
<b>VC1400</b>	Back, roof and base for cable container	1400x300x195	(1550x390x240)	1
<b>VC1600</b>	Back, roof and base for cable container	1600x300x195	(1750x390x240)	1
<b>VC1800</b>	Back, roof and base for cable container	1800x300x195	(1950x390x240)	1
<b>VC2000</b>	Back, roof and base for cable container	2000x300x195	(2150x390x240)	1

Note: the palletisable base strips (ZL1000 or ZL2000) and the flanges (ZL1001 or ZL2001) must be ordered separately.

# ArTu L Structure



Code	Description	Dimensions mm (wxd)	Pack/pieces
------	-------------	---------------------	-------------

## Side closure with blind panel

<b>MC0600</b>	N°2 side closures for wall-mounted structures	600x200	1
<b>MC0800</b>	N°2 side closures for wall-mounted structures	800x200	1
<b>MC1000</b>	N°2 side closures for wall-mounted structures	1000x200	1
<b>MC1200</b>	N°2 side closures for wall-mounted structures	1200x200	1
<b>MC1400</b> <sup>(*)</sup>	N°2 side closures for floor-mounted structures	1400x240	1
<b>MC1600</b> <sup>(*)</sup>	N°2 side closures for floor-mounted structures	1600x240	1
<b>MC1800</b> <sup>(*)</sup>	N°2 side closures for floor-mounted structures	1800x240	1
<b>MC2000</b>	N°2 side closures for floor-mounted structures	2000x240	1

<sup>(\*)</sup> The central hinge, contained in the kit, must be mounted on the right or left panel, according to the direction of door opening.

## Side closure with removable panel

<b>LF1400</b> <sup>(*)</sup>	N°2 side closures for floor-mounted structures	1400x240	1
<b>LF1600</b> <sup>(*)</sup>	N°2 side closures for floor-mounted structures	1600x240	1
<b>LF1800</b> <sup>(*)</sup>	N°2 side closures for floor-mounted structures	1800x240	1
<b>LF2000</b>	N°2 side closures for floor-mounted structures	2000x240	1

<sup>(\*)</sup> The central hinge, contained in the kit, must be mounted on the right or left panel, according to the direction of door opening.

Code	Description	Dimensions mm (h)	Pack/pieces
------	-------------	-------------------	-------------

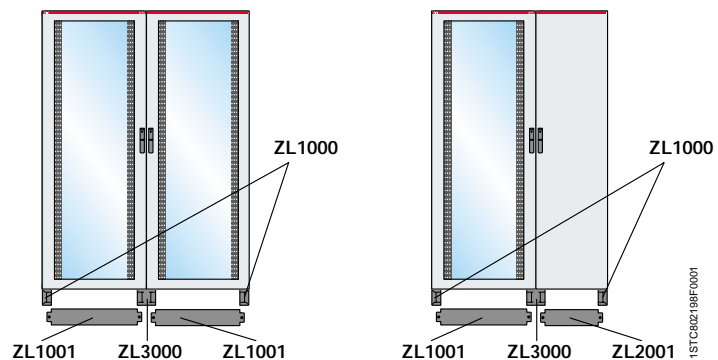
## Base strip

<b>ZL1000</b>	N°2 angles for structure or cable container	100	1
<b>ZL3000</b>	Intermediate angle for side-by-side structures	100	1

Code	Description	Dimensions mm (w)	Pack/pieces
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## Base strip covering flanges

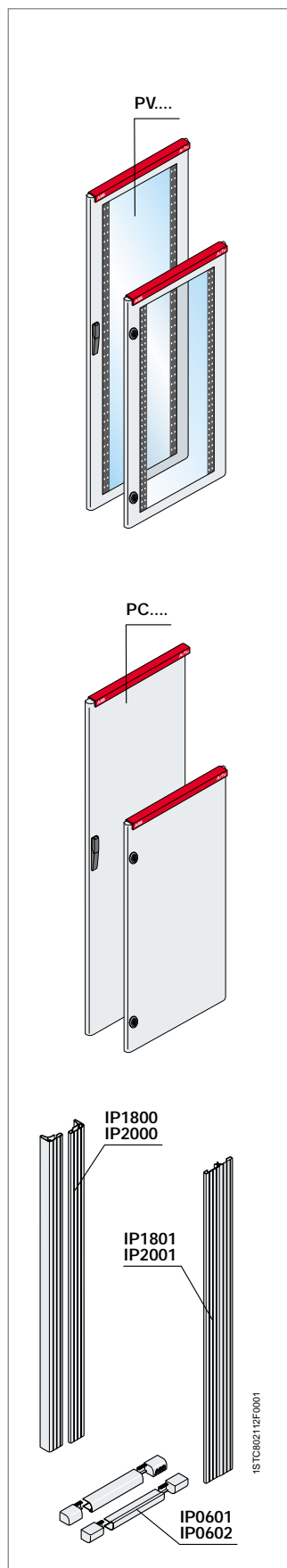
<b>ZL1001</b>	N°2 flanges for structure base strip	600	1
<b>ZL2001</b>	N°2 flanges for cable container base strip	300	1



## Example of base strip composition for side-by-side structures

Type of composition	Angles	Flanges
2 side-by-side structures	1x <b>ZL1000</b> + 1x <b>ZL3000</b>	2x <b>ZL1001</b>
1 structure + 1 cable container	1x <b>ZL1000</b> + 1x <b>ZL3000</b>	1x <b>ZL1001</b> + 1x <b>ZL2001</b>

# ArTu L Structure



Code	Description	Dimensions mm (h x w)	Pack/pieces
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## Glazed doors IP43

PV0600	Glazed door for structure	600x600	1
PV0800	Glazed door for structure	800x600	1
PV1000	Glazed door for structure	1000x600	1
PV1200	Glazed door for structure	1200x600	1
PV1400	Glazed door for structure	1400x600	1
PV1600	Glazed door for structure	1600x600	1
PV1800	Glazed door for structure	1800x600	1
PV2000	Glazed door for structure	2000x600	1

## Blind doors IP43

### For structure

PC0601	Blind door for structure	600x600	1
PC0801	Blind door for structure	800x600	1
PC1001	Blind door for structure	1000x600	1
PC1201	Blind door for structure	1200x600	1
PC1401	Blind door for structure	1400x600	1
PC1601	Blind door for structure	1600x600	1
PC1801	Blind door for structure	1800x600	1
PC2001	Blind door for structure	2000x600	1

### For cable container

PC0602	Blind door for cable container	600x300	1
PC0802	Blind door for cable container	800x300	1
PC1002	Blind door for cable container	1000x300	1
PC1202	Blind door for cable container	1200x300	1
PC1402	Blind door for cable container	1400x300	1
PC1602	Blind door for cable container	1600x300	1
PC1802	Blind door for cable container	2000x300	1

Code	Description	Dimensions mm	Pack/pieces
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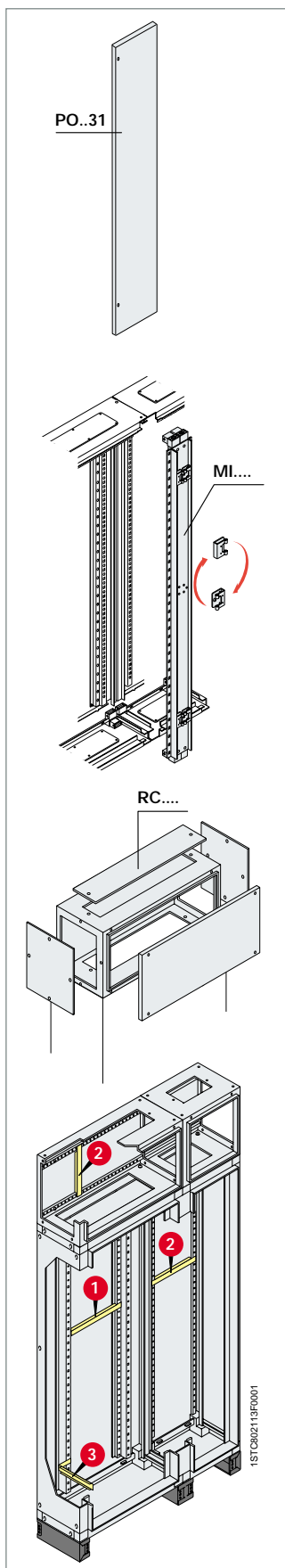
## Finishing profiles IP31

### For structure and cable container

IP1800	N° 2 vertical finishing profile for structure and cable container	H=1800	1
IP2000	N° 2 vertical finishing profile for structure and cable container	H=2000	1
IP0601	N° 2 horizontal finishing profile for structure	L=600	1
IP0602	N° 2 horizontal finishing profile for cable container	L=300	1
IP1801	N° 2 vertical finishing profile for side-by-side structures	H=1800	1
IP2001	N° 2 vertical finishing profile for side-by-side structures	H=2000	1

Finishing profiles for switchboards shorter than 1800mm must be cut according to the needed height.

# ArTu L Structure



Code	Description	Dimensions mm (hxd)	Pack/pieces
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## Internal door for cable container

PO1431	Internal door for cable container	1400x300	1
PO1631	Internal door for cable container	1600x300	1
PO1831	Internal door for cable container	1800x300	1
PO2031	Internal door for cable container	2000x300	1

Code	Description	Dimensions mm (h)	Pack/pieces
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## Intermediate uprights for lateral side-by-side positioning

MI0600	Intermediate upright for placing structures side by side	600	1
MI0800	Intermediate upright for placing structures side by side	800	1
MI1000	Intermediate upright for placing structures side by side	1000	1
MI1200	Intermediate upright for placing structures side by side	1200	1
MI1400 <sup>(*)</sup>	Intermediate upright for placing structures side by side	1400	1
MI1600 <sup>(*)</sup>	Intermediate upright for placing structures side by side	1600	1
MI1800 <sup>(*)</sup>	Intermediate upright for placing structures side by side	1800	1
MI2000	Intermediate upright for placing structures side by side	2000	1

<sup>(\*)</sup> The central hinge, contained in the kit, must be mounted on the right or left panel, according to the direction of door opening.

Code	Description	Dimensions mm (hxd)	Pack/pieces
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## Connection boxes

RC1000	Roof box for floor-mounted structures	400x600x200	1
RC2000	Roof box for floor-mounted cable container	400x300x200	1

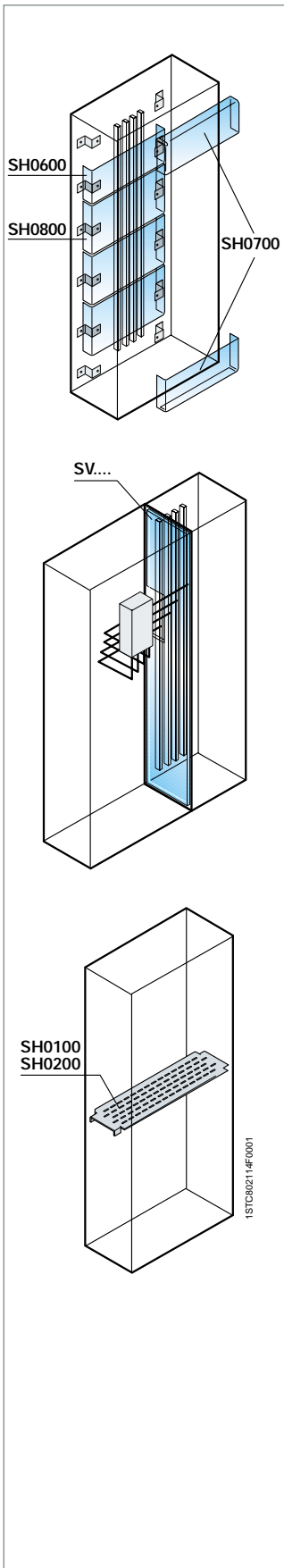
Code	Description	Assembly position	Pack/pieces
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## Crosspieces for accessories

TL1000	N° 2 structures rear crosspieces W=600mm	1	1
TL3000	N° 2 cable container and box rear crosspiece W=300mm	2	1
TL2000	N° 2 fixing crosspieces W=300mm for scaled busbar holder PB0802	2	1

Can be mounted on the structure to anchor cables or to mount accessories; they can be mounted on the side, on the rear or in the cable container of the structure.

# ArTu L Structure



Code	Description	Dimensions mm (h)	Pack/pieces
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## Form 2 segregations

<b>SH0600</b>	Form 2 segregation kit	200	1
<b>SH0800</b>	Form 2 segregation kit	300	1
<b>SH0700</b>	Form 2 segregation kit base/head	200	1

Code	Description	Dimensions mm (w)	Pack/pieces
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## Vertical segregations

<b>SV0600</b>	Vertical segregation kit	600	1
<b>SV0800</b>	Vertical segregation kit	800	1
<b>SV1000</b>	Vertical segregation kit	1000	1
<b>SV1200</b>	Vertical segregation kit	1200	1
<b>SV1400</b>	Vertical segregation kit	1400	1
<b>SV1600</b>	Vertical segregation kit	1600	1
<b>SV1800</b>	Vertical segregation kit	1800	1
<b>SV2000</b>	Vertical segregation kit	2000	1

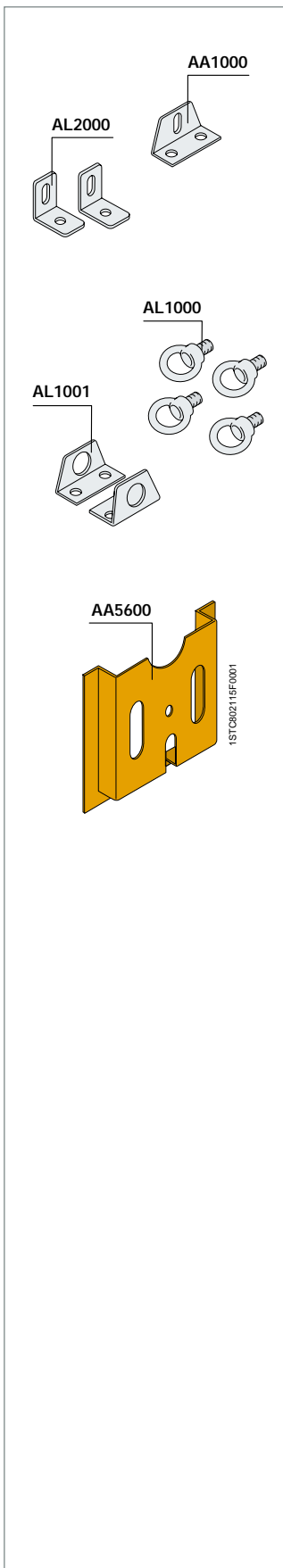
## Horizontal shelves

<b>SH0100</b>	Horizontal shelf for wall-mounted structure	600	1
<b>SH0200</b>	Horizontal shelf for floor-mounted structure	600	1

Horizontal non-supporting shelf - allows divisions to be made inside the ArTu L switchboards.

# ArTu L

## Accessories



Code	Description	Pack/pieces
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### Brackets for wall fixing

<b>AL2000</b>	N°2 brackets for wall fixing	1
<b>AA1000</b>	Bracket for wall fixing of 2 side-by-side structures	1

For the wall-mounted version, order 2 x AL2000.

### Eyebolts and lifting reinforcements

<b>AL1000</b>	N°4 M8 steel eyebolts	1
<b>AL1001</b>	N°2 lifting reinforcements for side-by-side structures	1

### Diagram pocket holder

<b>AA5600</b>	Plastic diagram pocket	1
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The diagram pocket holder (made of RAL 2004 colour plastic, dim. HxL 237x265mm type A4) is applied to the inside of doors/blind panels of suitable size using the adhesive provided.

### Accessories/spare parts

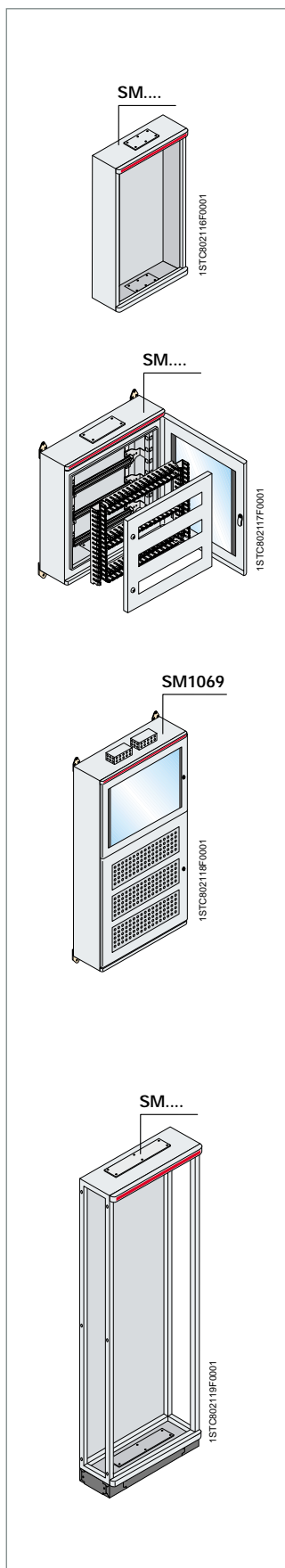
<b>12863</b>	N°30 hole covering shutters 4 DIN mod. RAL 7035 colour	1
<b>AD1058</b>	Zn+Al+Mg alloy key with double tab	1
<b>AA6100</b>	Double tab insert	1
<b>AA6200</b>	ArTu L floor-mounted Yale type insert	1
<b>AA8002</b>	ArTu L wall-mounted Yale type insert	1
<b>AD1036</b>	N°20 cage nuts	1
<b>AD1033</b>	N°50 three-lobed M6 spare screws	1
<b>VB7035</b>	RAL 7035 colour spray paint for touching up (400 ml can)	1

#### ArTu small items

The screws provided with all the ArTu components are of the three-lobed self-threading M6 type: they screw up without the need for a nut and automatically mask the hole. For any spare parts, the code is AD1033.

The cage nuts art. AD1036 allow all the rectangular holes present in the uprights for fixing the various accessories to be used. They are snap-on installed from the front.

# ArTu M Structure



Code	Description	Dimensions mm (hwxwd)	Pack/pieces
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## Wall-mounted ArTu M structures

### Basic version

		nominal	external	
<b>SM6061</b>	Monoblock structure	600x600x150	(700x700x150)	1
<b>SM8061</b>	Monoblock structure	800x600x150	(900x700x150)	1
<b>SM8062</b>	Monoblock structure	800x600x200	(900x700x200)	1
<b>SM1062</b>	Monoblock structure	1000x600x200	(1100x700x200)	1
<b>SM1262</b>	Monoblock structure	1200x600x200	(1300x700x200)	1

### Version with accessories

		nominal	external	
<b>SM6015</b>	Monoblock structure with accessories	600x600x150	(700x700x150)	1
<b>SM8015</b>	Monoblock structure with accessories	800x600x150	(900x700x150)	1
<b>SM8020</b>	Monoblock structure with accessories	800x600x200	(900x700x150)	1
<b>SM1020</b>	Monoblock structure with accessories	1000x600x200	(1100x700x200)	1
<b>SM1220</b>	Monoblock structure with accessories	1200x600x200	(1300x700x200)	1

The wall-mounted ArTu M switchboards are also available in a version fully equipped with accessories which includes the DIN rail kits, both the vertical and horizontal cabling duct 60x60 already cut to size with the relative fixing supports (AD1037), the brackets for wall fixing (AA1206) and the glazed door. Only the panels have to be ordered separately.

### Version for operating theatre

		nominal	external	
<b>SM1069</b>	Monoblock structure for constructing switchboards for operating theatres	1000x600x200	(1100x700x200)	1

The QSO switchboards for operating theatres are complete with brackets (AD1009 n° 4 pieces) for installation of the duct, two DIN rail kits (GD6001 and PM2624 n° 2 pieces) and relative wall fixing brackets (4 pieces).

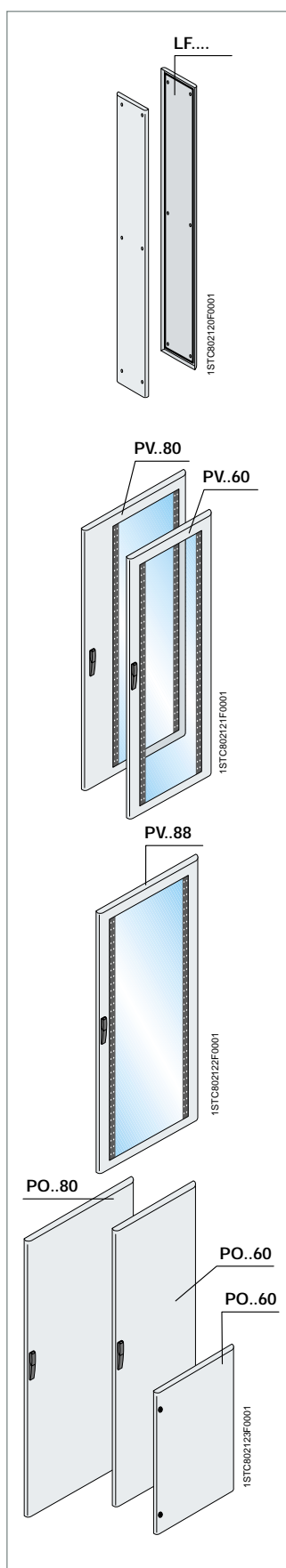
Code	Description	Dimensions mm (hwxwd)	Pack/pieces
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## Floor-mounted ArTu M structures

		nominal	external	
<b>SM1462</b>	Monoblock structure	1400x600x250	(1596x724x250)	1
<b>SM1662</b>	Monoblock structure	1600x600x250	(1796x724x250)	1
<b>SM1682</b>	Monoblock structure	1600x800x250	(1796x924x250)	1
<b>SM1862</b>	Monoblock structure	1800x600x250	(1996x724x250)	1
<b>SM1882</b>	Monoblock structure	1800x800x250	(1996x924x250)	1
<b>SM2062</b>	Monoblock structure	2000x600x250	(2196x724x250)	1
<b>SM2082</b>	Monoblock structure	2000x800x250	(2196x924x250)	1

The overall dimensions of the ArTu M switchboards starting with 1400mm (1596mm) height include the base strip h=100mm and the side panels.

# ArTu M Structure



Code	Description	Dimensions mm (hxxwxd)	Pack/pieces
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## IP65 side panels for structures and additional cable container

### Side panels

LF1425	Floor-mounted ArTu M side panels	1400x250	1
LF1625	Floor-mounted ArTu M side panels	1600x250	1
LF1825	Floor-mounted ArTu M side panels	1800x250	1
LF2025	Floor-mounted ArTu M side panels	2000x250	1

Code	Description	Dimensions mm (hxxwxd)	Pack/pieces
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## IP65 front doors for structures

### Glazed door 24 mod.

PV6060	Wall-mounted ArTu M glazed door	600x600	1
PV8060	Wall-mounted ArTu M glazed door	800x600	1
PV1060	Wall-mounted ArTu M glazed door	1000x600	1
PV1260	Wall-mounted ArTu M glazed door	1200x600	1
PV1460	Floor-mounted ArTu M glazed door	1400x600	1
PV1660	Floor-mounted ArTu M glazed door	1600x600	1
PV1680	Floor-mounted ArTu M glazed door	1600x800	1
PV1860	Floor-mounted ArTu M glazed door	1800x600	1
PV1880	Floor-mounted ArTu M glazed door	1800x800	1
PV2060	Floor-mounted ArTu M glazed door	2000x600	1
PV2080	Floor-mounted ArTu M glazed door	2000x800	1

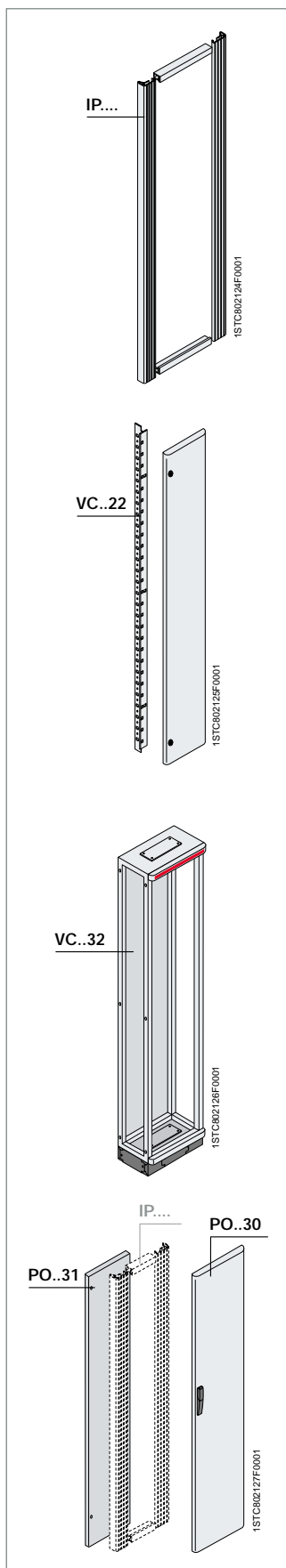
### Glazed door 36 mod.

PV1688	Floor-mounted ArTu M glazed door	1600x800	1
PV1888	Floor-mounted ArTu M glazed door	1800x800	1
PV2088	Floor-mounted ArTu M glazed door	2000x800	1

### Blind door 24/36 mod.

PO6060	Floor-mounted ArTu M glazed door	600x600	1
PO8060	Floor-mounted ArTu M glazed door	800x600	1
PO1060	Floor-mounted ArTu M glazed door	1000x600	1
PO1260	Floor-mounted ArTu M glazed door	1200x600	1
PO1460	Floor-mounted ArTu M blind door	1400x600	1
PO1660	Floor-mounted ArTu M blind door	1600x600	1
PO1680	Floor-mounted ArTu M blind door	1600x800	1
PO1860	Floor-mounted ArTu M blind door	1800x600	1
PO1880	Floor-mounted ArTu M blind door	1800x800	1
PO2060	Floor-mounted ArTu M blind door	2000x600	1
PO2080	Floor-mounted ArTu M blind door	2000x800	1

# ArTu M Structure



Code	Description	Dimensions mm	Pack/pieces
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## IP31 finishing profile

### Horizontal profile

<b>IP3031</b>	N°2 IP31 horizontal finishing profile	L=300	1
<b>IP3061</b>	N°2 IP31 horizontal finishing profile	L=600	1
<b>IP3081</b>	N°2 IP31 horizontal finishing profile	L=800	1

### Vertical profile

<b>IP3140</b>	N°2 IP31 horizontal finishing profile	H=1400	1
<b>IP3142</b>	IP31double vertical finishing profile	H=1400	1
<b>IP3160</b>	N°2 IP31 horizontal finishing profile	H=1600	1
<b>IP3162</b>	IP31double vertical finishing profile	H=1600	1
<b>IP3181</b>	N°2 IP31 horizontal finishing profile	H=1800	1
<b>IP3183</b>	IP31double vertical finishing profile	H=1800	1
<b>IP3201</b>	N°2 IP31 horizontal finishing profile	H=2000	1
<b>IP3203</b>	IP31double vertical finishing profile	H=2000	1

For IP31 version switchboards (without door), use the special finishing kits already sized for the standard heights and widths of the ArTu switchboards. In the case of switchboards side by side, use the special double IP31 kit on the joining uprights.

Code	Description	Dimensions mm	Pack/pieces
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## Internal cable container

<b>VC1622</b>	Internal cable container	1600x200	1
<b>VC1822</b>	Internal cable container	1800x200	1
<b>VC2022</b>	Internal cable container	2000x200	1

Only to be ordered for w=800mm structures.  
Consisting of a functional upright and a blind door complete with two key locks.

Code	Description	Dimensions mm (hxwx d)	Pack/pieces
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## Additional cable container for floor-mounted structures

		nominal	external	
<b>VC1632</b>	Cable container outside structures H=1600mm	1600x300x250	(1796x424x250)	1
<b>VC1832</b>	Cable container outside structures H=1800mm	1800x300x250	(1996x424x250)	1
<b>VC2032</b>	Cable container outside structures H=2000mm	2000x300x250	(2196x424x250)	1

Code	Description	Dimensions mm (hxw)	Pack/pieces
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## Front coverings for additional cable container

### IP31 internal door

<b>PO1631</b>	Internal door for cable container	1600x300	1
<b>PO1831</b>	Internal door for cable container	1800x300	1
<b>PO2031</b>	Internal door for cable container	2000x300	1

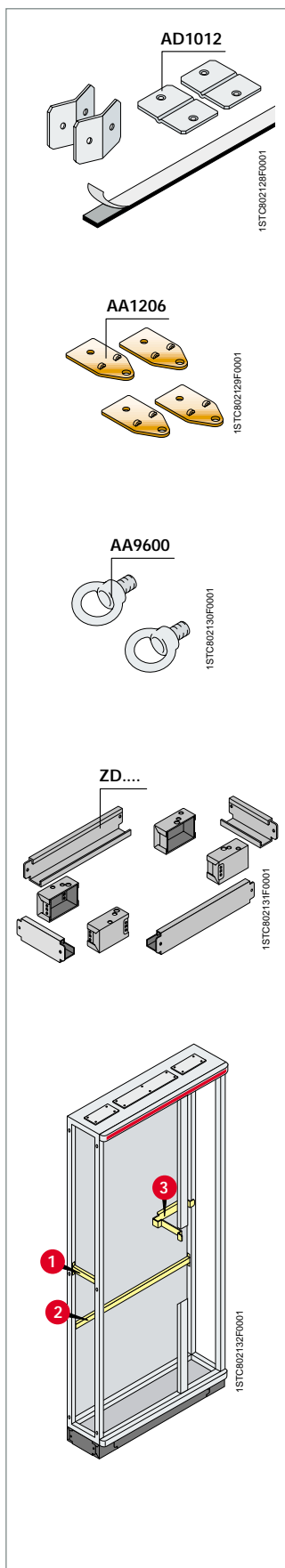
### IP65 external door

<b>PO1630</b>	External door for cable container	1600x300	1
<b>PO1830</b>	External door for cable container	1800x300	1
<b>PO2030</b>	External door for cable container	2000x300	1

The additional cable container can be completed in the following ways:

- IP65 version with external door (internal optional)
- IP31 version with internal door and finishing profile (see above).

# ArTu M Accessories



Code	Description	Pack/pieces
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## Kits for placing structures side by side

<b>AD1012</b>	Kit for laterally placing structures side by side H=1400-1600-1800-2000mm	1
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The ArTu M D=250mm switchboards can be placed side by side laterally. The IP65 side-by-side kit consists of a set of supports and a gasket for keeping the degree of protection. In the IP31 version, in addition to kit AD1012, order the double finishing profile (see table on page 2/9).

## Brackets for wall fixing

<b>AA1206</b>	N° 4 wall fixing brackets	1
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These allow ArTu M switchboards to be fixed to the wall.

## Lifting eyebolts

<b>AA9600</b>	N° 2 steel M12 lifting eyebolts	1
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These allow cabled switchboards to be lifted. They are made of steel treated with white passivated galvanisation.

Code	Description	Dimensions mm (wxd)	Pack/pieces
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## Additional base strip H=100 mm

<b>ZD2325</b>	Base strip consisting of 4 angle pieces and 4 flanges	300x250	1
<b>ZD2625</b>	Base strip consisting of 4 angle pieces and 4 flanges	600x250	1
<b>ZD2825</b>	Base strip consisting of 4 angle pieces and 4 flanges	800x250	1

To construct a base strip 200mm high, order a H=100mm kit, which includes four additional angle pieces and four additional flanges.

Code	Description	Assembly position	Pack/pieces
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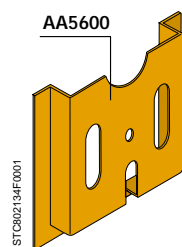
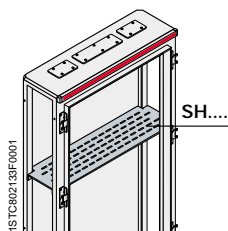
## Crosspieces for accessories

<b>TR2001</b>	N° 2 structure lateral crosspieces D=250mm	1	1
<b>TR3001</b>	N° 2 external cable container rear crosspieces W=300mm	2	1
<b>TV2000</b>	N° 2 internal cable container lateral crosspieces W=200mm	3	1

Can be mounted on the structure to anchor the cables or to mount accessories. The crosspieces for accessories can be mounted on the side, on the rear or in the cable container of the structure.

# ArTu M

## Accessories



Code	Description	Pack/pieces
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### Horizontal shelf

<b>SH6001</b>	Horizontal shelf for structure W=600mm	1
<b>SH8001</b>	Horizontal shelf for structure W=800mm	1

Non-supporting horizontal shelf which allows separations to be made inside the floor-mounted ArTu M switchboards. In structure with W=800 with internal cable container, use SH6001.

### Document pocket

<b>AA5600</b>	Plastic document pocket	1
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The document pocket (made of plastic RAL 2004 colour, dim. HxW 237x265mm type A4) is applied inside the blind doors/panels of suitable dimensions, using the adhesive provided.

Code	Description	Pack/pieces
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### Accessories/spare parts

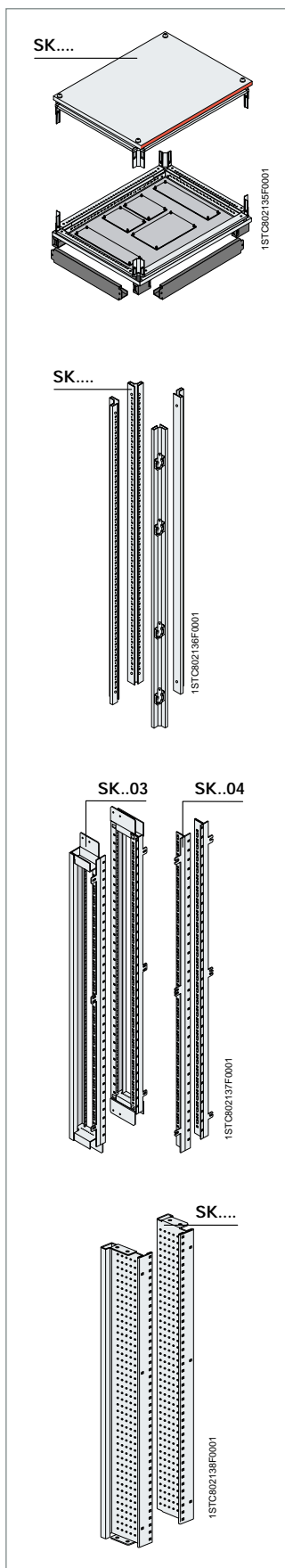
<b>AD1058</b>	Zn+Al+Mg alloy key with double wing	1
<b>AA6100</b>	Double tab insert	1
<b>AA6200</b>	Floor-mounted ArTu M/K Yale type insert	1
<b>AA8005</b>	Ronis type Box (E739) for wall-mounted ArTu M	1
<b>AA8004</b>	Ronis type Box (E739) for floor-mounted ArTu M and ArTu K	1
<b>AA8002</b>	Wall-mounted ArTu M Yale type insert	1
<b>AD1036</b>	N° 20 cage nuts	1
<b>AD1033</b>	N° 50 M6 three-lobed spare screws	1
<b>VB7035</b>	AL 7035 colour spray paint for touching up (400 ml can)	1
<b>AD1057</b>	"ArTu Survival Kit" - Accessories and small items for spare parts	1
<b>PV4060</b>	Glazed door for switchboards for operating theatres	1
<b>PO6069</b>	Blind door for switchboards for operating theatres	1
<b>AZ4000</b>	N°4 base strip angles H=100mm	1

#### Small ArTu items

The screws supplied with all the ArTu components are of the three-lobed self-tapping M6 type: they screw up without the need of a nut and automatically tap the hole. For spare parts, the code is AD1033.

The cage nuts art. AD1036 allow all the rectangular holes in the uprights for fixing various accessories to be used. They are snap-on installed from the front.

# ArTu K Structure



Code	Description	Dimensions mm (wxd)	Pack/pieces
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## Base-Top-Base strip

		nominal	external	
<b>SK4040</b>	Base-Top-Base strip	400x350	(538x362)	1
<b>SK4060</b>	Base-Top-Base strip	400x600	(538x637)	1
<b>SK4080</b>	Base-Top-Base strip	400x800	(538x837)	1
<b>SK6025</b>	Base-Top-Base strip	600x250	(748x287)	1
<b>SK6040</b>	Base-Top-Base strip	600x350	(748x362)	1
<b>SK6060</b>	Base-Top-Base strip	600x600	(748x637)	1
<b>SK6080</b>	Base-Top-Base strip	600x800	(748x837)	1
<b>SK8025</b>	Base-Top-Base strip	800x250	(948x287)	1
<b>SK8040</b>	Base-Top-Base strip	800x350	(948x362)	1
<b>SK8060</b>	Base-Top-Base strip	800x600	(948x637)	1
<b>SK8080</b>	Base-Top-Base strip	800x800	(948x837)	1

Code	Description	Dimensions mm (h)	Pack/pieces
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## Uprights

<b>SK1600</b>	N° 4 uprights	1600	1
<b>SK1800</b>	N° 4 uprights	1800	1
<b>SK2000</b>	N° 4 uprights	2000	1

## Functional frames for switchboards without segregation (open frame)

<b>SK1604</b>	N°2 functional frames for structures d=250mm	1600	1
<b>SK1804</b>	N°2 functional frames for structures d=250mm	1800	1
<b>SK2004</b>	N°2 functional frames for structures d=250mm	2000	1
<b>SK1803</b>	N°2 functional frames	1800	1
<b>SK2003</b>	N°2 functional frames	2000	1

To make structures with internal cable container (switchboards W=800mm), the functional frame is already included in the kit for internal cable container (see table on page 10/17).

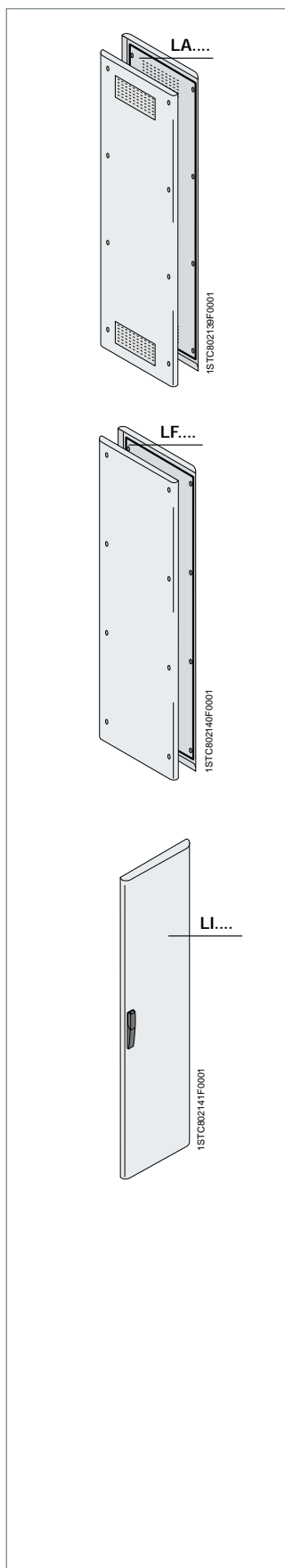
## Functional frames for segregated switchboards (closed frame)

<b>SK1802</b>	N°2 functional frames	1800	1
<b>SK2002</b>	N°2 functional frames	2000	1

To make structures with internal cable container (switchboards W=800mm), the functional frame is already included in the kit for internal cable container (see table on page 10/17).

# ArTu K

## Structure



Code	Description	Dimensions mm (hxd)	Pack/pieces
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### Ventilated side panels IP41

<b>LA1860</b>	N°2 ventilated side panels	1800x600	1
<b>LA1880</b>	N°2 ventilated side panels	1800x800	1
<b>LA2060</b>	N°2 ventilated side panels	2000x600	1
<b>LA2080</b>	N°2 ventilated side panels	2000x800	1

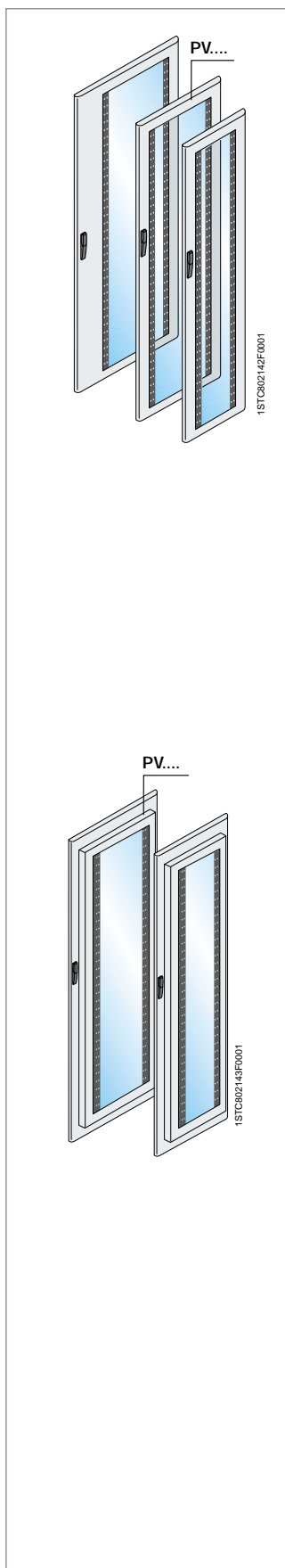
### Side panels IP65

<b>LF1626</b>	N°2 side panels	1600x250	1
<b>LF1826</b>	N°2 side panels	1800x250	1
<b>LF1840</b>	N°2 side panels	1800x350	1
<b>LF1860</b>	N°2 side panels	1800x600	1
<b>LF1880</b>	N°2 side panels	1800x800	1
<b>LF2026</b>	N°2 side panels	2000x250	1
<b>LF2040</b>	N°2 side panels	2000x350	1
<b>LF2060</b>	N°2 side panels	2000x600	1
<b>LF2080</b>	N°2 side panels	2000x800	1

### Blind side doors IP65

<b>LI1840</b>	Side door	1800x350	1
<b>LI1860</b>	Side door	1800x600	1
<b>LI1880</b>	Side door	1800x800	1
<b>LI2040</b>	Side door	2000x350	1
<b>LI2060</b>	Side door	2000x600	1
<b>LI2080</b>	Side door	2000x800	1

# ArTu K Structure



Code	Description	Dimensions mm (h x w)	Pack/pieces
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## Front or rear glazed doors IP65

### 12-module door for W=400 structures

PV1841	External glazed door	1800x400	1
PV2041	External glazed door	2000x400	1

### 24-module door for W=600 structures

PV1661	External glazed door	1600x600	1
PV1861	External glazed door	1800x600	1
PV2061	External glazed door	2000x600	1

### 36-module door for W=800 structures

PV1682	External glazed door	1600x800	1
PV1882	External glazed door	1800x800	1
PV2082	External glazed door	2000x800	1

### 24-module door + internal cable container for structures W=800 structures <sup>(1)</sup>

PV1681	External glazed door	1600x800	1
PV1881	External glazed door	1800x800	1
PV2081	External glazed door	2000x800	1

<sup>(1)</sup> Only to be ordered for W=800mm structures consisting of 24 mod. + internal cable container.

## Front extending glazed doors IP65

### 24-module door for W=600 structures

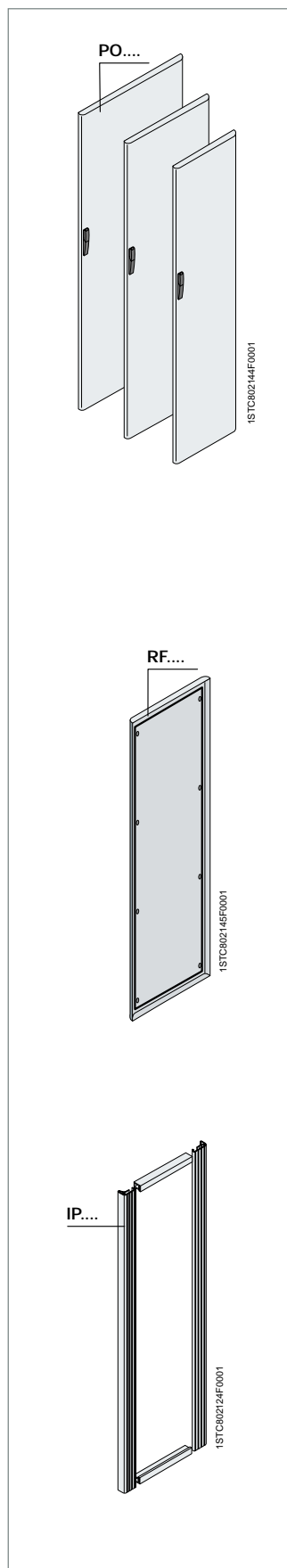
PV1863	External extending glazed door	1800x600	1
PV2063	External extending glazed door	2000x600	1

### 36-module door for W=800 structures

PV1883	External extending glazed door	1800x800	1
PV2083	External extending glazed door	2000x800	1

Door dedicated to assembly of Isomax circuit-breakers with direct rotary handle, use motor-operated and interlocked operating mechanism (see table on page 4/8).

# ArTu K Structure



Code	Description	Dimensions mm (h x w)	Pack/pieces
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## Front or rear glazed doors IP65

### 12-module door for W=400 structures

PO1841	External blind door	1800x400	1
PO2041	External blind door	2000x400	1

### 24-module door for W=600 structures

PO1661	External blind door	1600x600	1
PO1861	External blind door	1800x600	1
PO2061	External blind door	2000x600	1

### 36-module door for W=800 structures

PO1681	External blind door	1600x800	1
PO1881	External blind door	1800x800	1
PO2081	External blind door	2000x800	1

## Rear panels IP65

RF1660	Rear panel	1600x600	1
RF1680	Rear panel	1600x800	1
RF1840	Rear panel	1800x400	1
RF1860	Rear panel	1800x600	1
RF1880	Rear panel	1800x800	1
RF2040	Rear panel	2000x400	1
RF2060	Rear panel	2000x600	1
RF2080	Rear panel	2000x800	1

## Finishing profile IP 31

### Horizontal profile

IP3020	N°2 horizontal finishing profile IP31	W=200mm	1
IP3030	N°2 horizontal finishing profile IP31	W=300mm	1
IP3040	N°2 horizontal finishing profile IP31	W=400mm	1
IP3060	N°2 horizontal finishing profile IP31	W=600mm	1
IP3080	N°2 horizontal finishing profile IP31	W=800mm	1

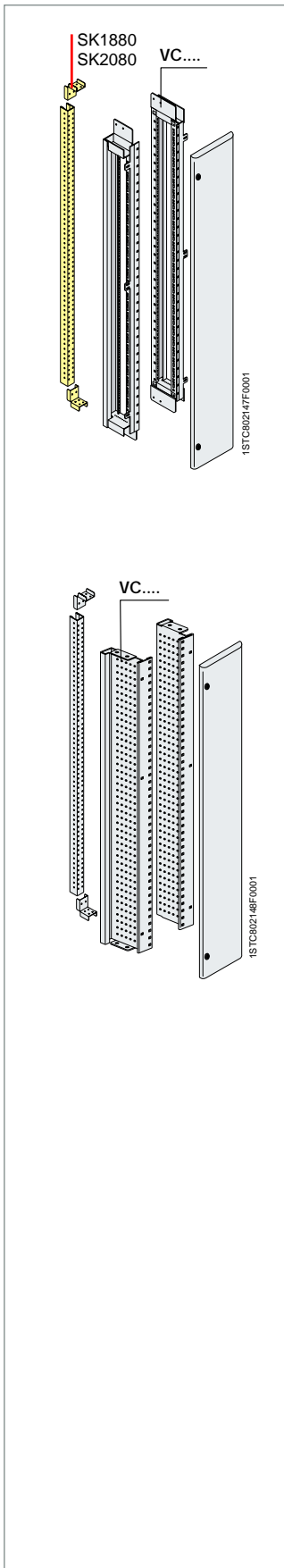
### Vertical profile

IP3161	N°2 horizontal finishing profile IP31	H=1600mm	1
IP3180	N°2 horizontal finishing profile IP31	H=1800mm	1
IP3200	N°2 horizontal finishing profile IP31	H=2000mm	1
IP3163	Double vertical finishing profile IP31	H=1600mm	1
IP3182	Double vertical finishing profile IP31	H=1800mm	1
IP3202	Double vertical finishing profile IP31	H=2000mm	1

For IP31 version switchboards (without door), use the special finishing kits already sized for the standard heights and widths of the ArTu switchboards. In the case of switchboards placed side by side, use the special double IP31 kit on the joining uprights.

# ArTu K

## Structure



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Internal cable container for switchboards without segregation (open frame)

<b>VC1624</b>	Internal cable container for D=250mm	1600x200	1
<b>VC1824</b>	Internal cable container for D=250mm	1800x200	1
<b>VC2024</b>	Internal cable container for D=250mm	2000x200	1
<b>VC1823</b>	Internal cable container	1800x200	1
<b>VC2023</b>	Internal cable container	2000x200	1

Only to be ordered for the W=800mm structures.

Kit consisting of 2 functional frames without segregations and a blind door.

The SK1880 (H=1800mm) and SK2080 (H=2000mm) rear upright in the structures without segregations must be ordered separately if required for fixing onto the back of crosspieces, accessories, busbars, etc.

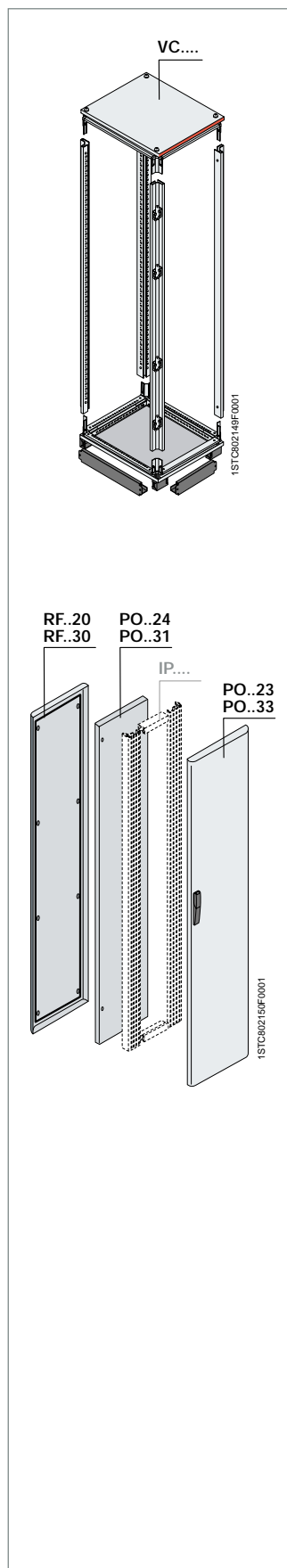
### Internal cable container for segregated switchboards (closed frame)

<b>VC1820</b>	Internal cable container	1800x200	1
<b>VC2020</b>	Internal cable container	2000x200	1

Only to be ordered for the W=800mm structures.

Kit consisting of 2 functional segregated frames, a blind door and a rear upright for fixing onto the back of crosspieces, accessories, busbars, etc.

# ArTu K Structure



Code	Description	Dimensions mm (wxd)	Pack/pieces
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## Additional cable container

### Functional width W=200mm

<b>VC2040</b>	Base, top and base strip	200x350	1
<b>VC2060</b>	Base, top and base strip	200x600	1
<b>VC2080</b>	Base, top and base strip	200x800	1

### Functional width W=300mm

<b>VC3025</b>	Base, top and base strip	300x250	1
<b>VC3040</b>	Base, top and base strip	300x350	1
<b>VC3060</b>	Base, top and base strip	300x600	1
<b>VC3080</b>	Base, top and base strip	300x800	1

The additional cable container, in the same way as the structures, is made up of base, top and base strip and is fixed to the structures using the side-by-side kit (AD1014). It is completed with the uprights, the side panels and the doors (to be ordered separately).

## Front and rear coverings for additional cable container

### Internal door IP31

<b>PO1631</b>	Internal door for cable container	1600x300	1
<b>PO1824</b>	Internal door for cable container	1800x200	1
<b>PO1831</b>	Internal door for cable container	1800x300	1
<b>PO2024</b>	Internal door for cable container	2000x200	1
<b>PO2031</b>	Internal door for cable container	2000x300	1

### External door IP65

<b>PO1633</b>	External door for cable container	1600x300	1
<b>PO1823</b>	External door for cable container	1800x200	1
<b>PO1833</b>	External door for cable container	1800x300	1
<b>PO2023</b>	External door for cable container	2000x200	1
<b>PO2033</b>	External door for cable container	2000x300	1

### Rear panel IP65

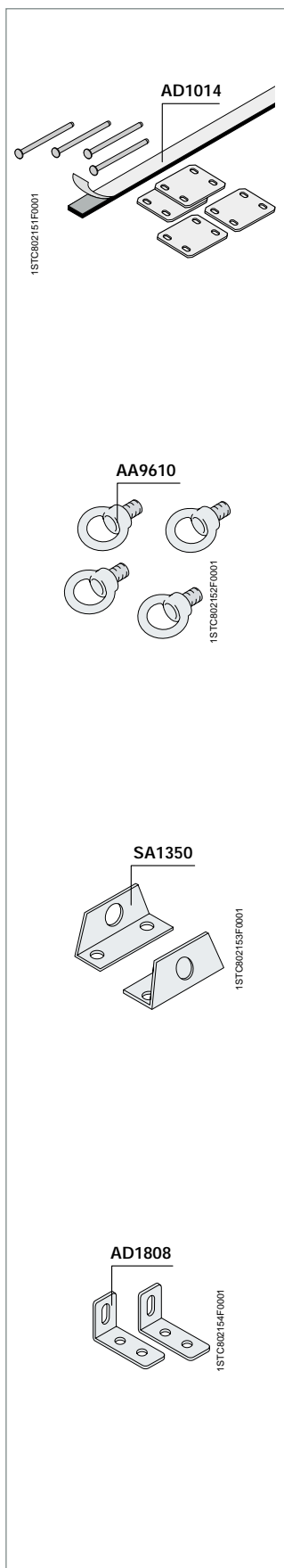
<b>RF1630</b>	Rear panel	1600x300	1
<b>RF1820</b>	Rear panel	1800x200	1
<b>RF1830</b>	Rear panel	1800x300	1
<b>RF2020</b>	Rear panel	2000x200	1
<b>RF2030</b>	Rear panel	2000x300	1

The additional cable container can be completed in the following ways:

- IP65 version with external door (internal optional)
- P31 version with internal door and finishing profile (see table on page 10/16).

# ArTu K

## Accessories



Code	Description	Pack/pieces
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### Structure side-by-side kit

<b>AD1014</b>	Kit for placing structures H=1600-1800-2000mm side by side laterally	1
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The ArTu K switchboards can be placed side by side both laterally and at the rear.  
The IP65 side-by-side kit consists of a set of supports and a gasket for keeping the degree of protection.  
In the IP31 version, in addition to the AD1014 kit, order the double finishing profile (see page 10/16)

### Lifting eyebolts

<b>AA9610</b>	N° 4 steel M12 lifting eyebolts	1
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These allow cabled switchboards to be lifted. They are made of steel treated with white passivated galvanisation.

### Lifting reinforcements

<b>SA1350</b>	N° 2 brackets and small assembly items	1
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These allow handling of several ArTu K switchboards placed side by side.

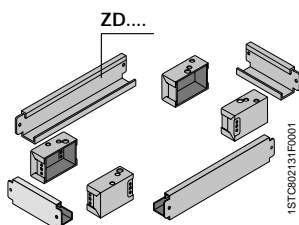
### Brackets for fixing to the wall

<b>AD1808</b>	N° 2 brackets for fixing to the wall	1
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These allow ArTu K switchboards to be fixed to the wall.

# ArTu K

## Accessories



Code	Description	Dimensions mm (wxd)	Pack/pieces
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### Additional base strip H=100mm

ZD2240	Base strip consisting of 4 angle pieces and 4 flanges	200x350	1
ZD2260	Base strip consisting of 4 angle pieces and 4 flanges	200x600	1
ZD2280	Base strip consisting of 4 angle pieces and 4 flanges	200x800	1
ZD2324	Base strip consisting of 4 angle pieces and 4 flanges	300x250	1
ZD2340	Base strip consisting of 4 angle pieces and 4 flanges	300x350	1
ZD2361	Base strip consisting of 4 angle pieces and 4 flanges	300x600	1
ZD2381	Base strip consisting of 4 angle pieces and 4 flanges	300x800	1
ZD2440	Base strip consisting of 4 angle pieces and 4 flanges	400x350	1
ZD2460	Base strip consisting of 4 angle pieces and 4 flanges	400x600	1
ZD2480	Base strip consisting of 4 angle pieces and 4 flanges	400x800	1
ZD2624	Base strip consisting of 4 angle pieces and 4 flanges	600x250	1
ZD2640	Base strip consisting of 4 angle pieces and 4 flanges	600x350	1
ZD2660	Base strip consisting of 4 angle pieces and 4 flanges	600x600	1
ZD2680	Base strip consisting of 4 angle pieces and 4 flanges	600x800	1
ZD2824	Base strip consisting of 4 angle pieces and 4 flanges	800x250	1
ZD2840	Base strip consisting of 4 angle pieces and 4 flanges	800x350	1
ZD2860	Base strip consisting of 4 angle pieces and 4 flanges	800x600	1
ZD2880	Base strip consisting of 4 angle pieces and 4 flanges	800x800	1

To make a 200mm high base strip, order a H=100mm kit, which includes four additional angle pieces and four additional flanges.

Code	Description	Assembly position	Pack/pi
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### Crosspieces for accessories

#### Switchboards without segregation

TR6001	N°2 side crosspieces D=600mm	1	1
TR8001	N°2 side crosspieces D=800mm	1	1
TR4101	N°2 side crosspieces D=350mm	2	1
TR6101	N°2 side crosspieces D=600mm	2	1
TR8101	N°2 side crosspieces D=800mm	2	1
TR7005	N°2 side crosspieces W=600mm	3	1
TR8000	N°2 side crosspieces W=800mm	3	1

#### Segregated switchboards

TR6005	N°2 side crosspieces D=600mm	1	1
TR8005	N°2 side crosspieces D=800mm	1	1
TR7005	N°2 side crosspieces W=600mm	3	1
TR8000	N°2 side crosspieces W=800mm	3	1

Can be mounted on the structure to anchor cables or to assemble accessories. The crosspieces for accessories can be mounted on the side, on the rear or in the cable container of the structure.

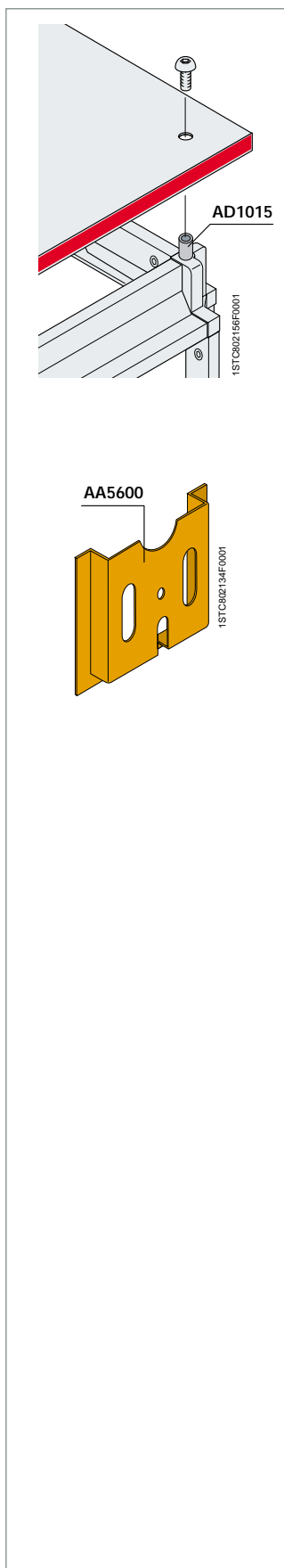
### Reinforcement crosspieces

TR8400	N°2 reinforcement crosspieces for structures D=350mm	4	1
TR8600	N°2 reinforcement crosspieces for structures D=600mm	4	1
TR8800	N°2 reinforcement crosspieces for structures D=800mm	4	1

Recommended for installation of fuse bases or transformers.

# ArTu K

## Accessories



Code	Description	Pack/pieces
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### Roof ventilation kit

<b>AD1015</b>	Roof ventilation kit	1
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Allows the roof of the cabinet to be raised thereby increasing ventilation and therefore the power which can be dissipated. The degree of protection is IP20. The ventilation kit must not be mounted if the cabinet has to be lifted using the eyebolts. In this case, the kit must be mounted when installation has been completed.

### Document pocket

<b>AA5600</b>	Plastic document pocket	1
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The document pocket (made of plastic RAL 2004 colour, dim. HxW 237x265mm type A4) is applied, using the adhesive provided, inside the blind doors/panels of suitable dimensions.

### Accessories/spare parts

<b>AD1058</b>	Zn+Al+Mg alloy key with double tab	1
<b>AA8004</b>	Ronis type Box (E739) for floor-mounted ArTu M and ArTu K	1
<b>AA6100</b>	Double tab insert	1
<b>AA6200</b>	Floor-mounted ArTu M/K Yale type insert	1
<b>AD1001</b>	Internal finishing tape for IP31 RAL 7035 colour	1
<b>AD1036</b>	N°20 cage nuts	
<b>AD1033</b>	N°50 M6 three-lobed spare screws	1
<b>VB7035</b>	RAL 7035 colour spray paint for touching up (400 ml can)	1
<b>AD1047</b>	N°2 DIN rail fixing brackets for open frame (switchboard without segregation)	1
<b>AD1048</b>	N°2 DIN rail fixing brackets for closed frame (segregated switchboard)	1
<b>SK1880</b>	Internal cable container rear upright ArTu K H=1800	1
<b>SK2080</b>	Internal cable container rear upright ArTu K H=2000	1
<b>AD1057</b>	"ArTu Survival Kit" - Accessories and small items for spare parts	1
<b>AD1070</b>	N° 10 ArTu handle covers	1
<b>AZ4000</b>	N°4 base strip angles H=100mm	1

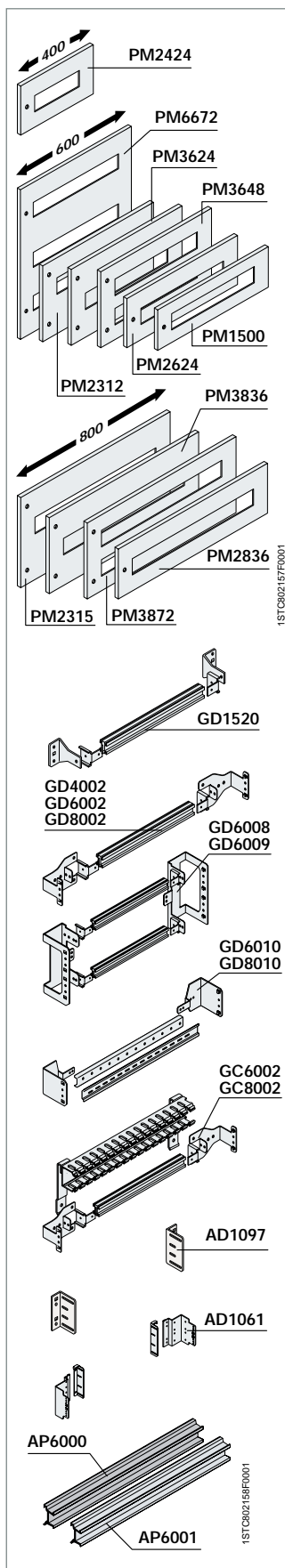
#### Small ArTu items

The screws supplied with all the ArTu components are of the three-lobed self-tapping M6 type: they screw up without the need of a nut and automatically tap the hole. For spare parts, the code is AD1033.

The cage nuts art. AD1036 allow all the rectangular holes in the uprights for fixing various accessories to be used. They are snap-on installed from the front.

# ArTu L - M - K

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Modular panels

#### 12 DIN modules W=400mm

PM2424	Modular panel 1 DIN row - ArTu K	200x400	1
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#### 24 DIN modules W=600mm

PM1500	Modular panel 1 DIN row - ArTu L	150x600	1
PM2624	Modular panel 1 DIN row - ArTu L - ArTu L-M-K	200x600	1
PM2312	Modular panel 1 DIN row - Tmax diff. - ArTu L - M - K	300x600	1
PM3624	Modular panel 1 DIN row only for Unifix H - ArTu L - M - K	300x600	1
PM3648	Modular panel 2 DIN rows - ArTu L - M - K	300x600	1
PM6672	Modular panel 3 DIN rows - ArTu L - M - K	600x600	1

#### 36 DIN modules W=800mm

PM2836	Modular panel 1 DIN row - ArTu L - M - K	200x800	1
PM3836	Modular panel 1 DIN row only for Unifix H - ArTu L - M - K	300x800	1
PM2315	Modular panel 1 DIN row Tmax diff. - ArTu L - M - K	300x800	1
PM3872	Modular panel 2 DIN rows - ArTu L - M - K	300x800	1

Code	Description	Dimensions mm (w)	Pack/pieces
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### DIN rail kits for System Pro-M, Isomax S1-S2, Tmax T1-T2-T3 modular apparatus and supports for Unifix H

#### 12 DIN modules W=400mm

GD4002	DIN rail kit (aluminium) ArTu K	400	1
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#### 24 DIN modules W=600mm

GD1520	DIN rail kit (aluminium) - ArTu L	600	1
GD6002	DIN rail kit (aluminium) - ArTu M-K	600	1
GD6008	DIN rail kit centre dist. 150mm (2 DIN rows) - ArTu M - K	600	1
GC6002	DIN rail kit with accessories <sup>(1)</sup> - ArTu M - K	600	1
GD6004	DIN rail kit reinforced - ArTu M - K	600	1
GD6010	DIN rail kit reinforced for Tmax diff. - ArTu M - K	600	1
GD6005	DIN rail kit (sheet) - ArTu M - K	600	1

#### 36 DIN modules W=800mm

GD8002	DIN rail kit (aluminium) - ArTu M - K	800	1
GD6009	DIN rail kit centre dist. 150mm (2 DIN rows) - ArTu M - K	800	1
GC8002	DIN rail kit with accessories <sup>(1)</sup> - ArTu M - K	800	1
GD8004	DIN rail kit reinforced - ArTu M - K	800	1
GD8010	DIN rail kit reinforced for Tmax diff. - ArTu M - K	800	1
GD8005	DIN rail kit (sheet) - ArTu M - K	800	1

#### Supports for Unifix H

AD1097	Fixing supports for Unifix H series for panel H=300mm - ArTu L	600	1
AD1061	Fixing supports for Unifix H series for panel H=300mm - ArTu M - K	600/800	1

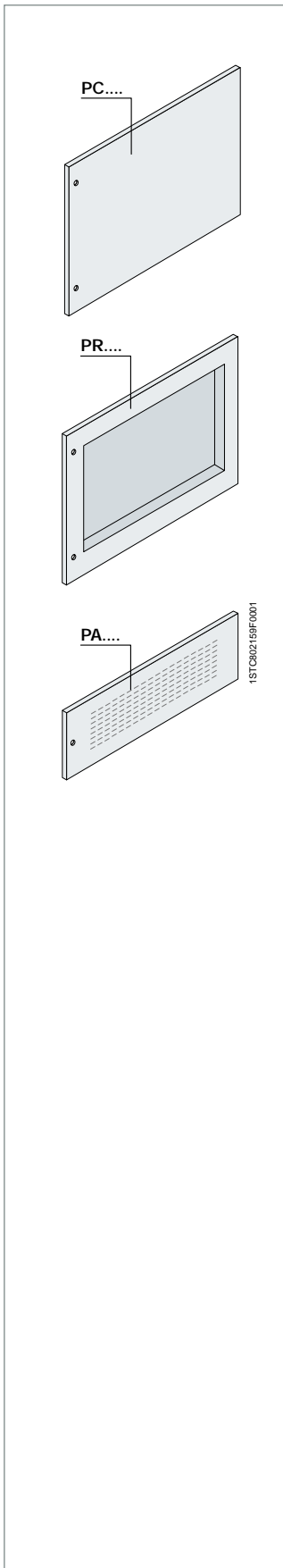
#### Depth adapters

AP6000	N°1 depth adapter for Isomax S1-S2	600	1
AP6001	N°1 depth adapter for Tmax T1-T2-T3	600	1

<sup>(1)</sup> The DIN rail kit fitted with accessories includes the 60x80 cabling duct and relative fixing supports AD1037.

# ArTu L - M - K

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Standard blind, recessed and ventilated panels for OESA/OETL and general apparatus

#### W=300mm

<b>PC1403</b>	Blind panel for ArTu L cable container	100x300	1
<b>PC2401</b>	Blind panel for ArTu L cable container	200x300	1
<b>PC3401</b>	Blind panel for ArTu L cable container	300x300	1
<b>PC4401</b>	Blind panel for ArTu L cable container	400x300	1
<b>PC6401</b>	Blind panel for ArTu L cable container	600x300	1
<b>PC8401</b>	Blind panel for ArTu L cable container	800x300	1

#### 12 DIN modules W=400mm

<b>PC1400</b>	Blind panel for ArTu K	100x400	1
<b>PC2400</b>	Blind panel for ArTu K	200x400	1
<b>PC3400</b>	Blind panel for ArTu K	300x400	1
<b>PC4400</b>	Blind panel for ArTu K	400x400	1
<b>PC6400</b>	Blind panel for ArTu K	600x400	1
<b>PC1840</b>	Blind panel for ArTu K	1800x400	1
<b>PC2040</b>	Blind panel for ArTu K	2000x400	1

#### 24 DIN modules W=600mm

<b>PC1050</b>	Blind panel for ArTu L	50x600	1
<b>PC1150</b>	Blind panel for ArTu L	150x600	1
<b>PC1600</b>	Blind panel for ArTu L-M-K	100x600	1
<b>PC2600</b>	Blind panel for ArTu L-M-K	200x600	1
<b>PC3600</b>	Blind panel for ArTu L-M-K	300x600	1
<b>PC4600</b>	Blind panel for ArTu L-M-K	400x600	1
<b>PC6600</b>	Blind panel for ArTu L-M-K	600x600	1
<b>PC8600</b>	Blind panel for ArTu L-M-K	800x600	1
<b>PC1660</b>	Blind panel for ArTu L-M-K	1600x600	1
<b>PC1860</b>	Blind panel for ArTu L-M-K	1800x600	1
<b>PC2060</b>	Blind panel for ArTu L-M-K	2000x600	1

<b>PR2600</b>	Blind recessed panel for ArTu L-M-K	200x600	1
<b>PR4600</b>	Blind recessed panel for ArTu L-M-K	400x600	1
<b>PR6600</b>	Blind recessed panel for ArTu L-M-K	600x600	1

<b>PA1600</b>	Ventilated panel ArTu L-M-K	100x600	1
<b>PA2600</b>	Ventilated panel ArTu L-M-K	200x600	1

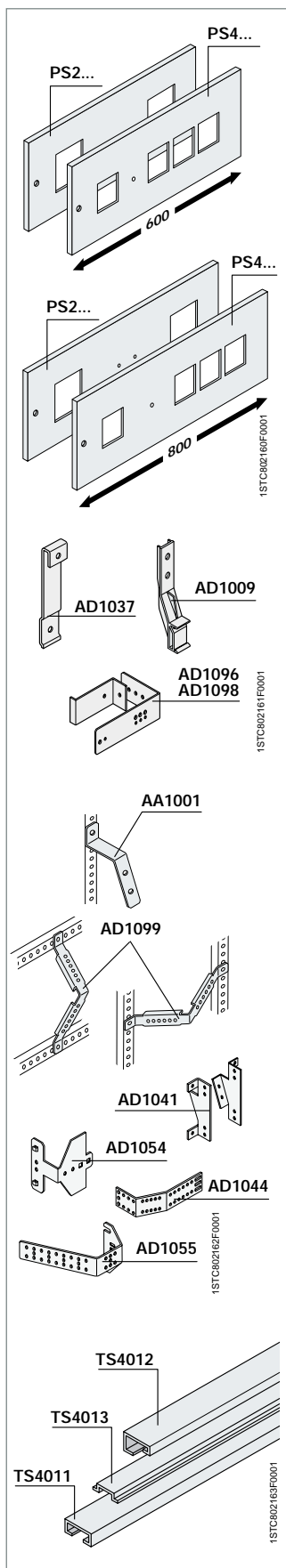
#### 36 DIN modules W=800mm

<b>PC1800</b>	Blind panel for ArTu M-K	100x800	1
<b>PC2800</b>	Blind panel for ArTu M-K	200x800	1
<b>PC3800</b>	Blind panel for ArTu M-K	300x800	1
<b>PC4800</b>	Blind panel for ArTu M-K	400x800	1
<b>PC6800</b>	Blind panel for ArTu M-K	600x800	1
<b>PC1680</b>	Blind panel for ArTu M-K	1600x800	1
<b>PC1880</b>	Blind panel for ArTu M-K	1800x800	1
<b>PC2080</b>	Blind panel for ArTu M-K	2000x800	1

<b>PR2800</b>	Blind recessed panel for ArTu M-K	200x800	1
<b>PR4800</b>	Blind recessed panel for ArTu M-K	400x800	1
<b>PR6800</b>	Blind recessed panel for ArTu M-K	600x800	1

# ArTu L - M - K

## Kit for switchboards without segregation



Code	Description	Dimensions mm (hwxw)	Pack/pieces
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### Panels for square measuring instruments

#### 24 DIN modules W=600mm

PS2720	Panel for 2 instruments 72x72mm - ArTu M-K	200x600	1
PS2960	Panel for 2 instruments 96x96mm - ArTu M-K	200x600	1
PS4720	Panel for 4 instruments 72x72mm - ArTu M-K	200x600	1
PS4960	Panel for 4 instruments 96x96mm - ArTu M-K	200x600	1

#### 36 DIN modules W=800mm

PS2728	Panel for 2 instruments 72x72mm - ArTu M-K	200x800	1
PS2968	Panel for 2 instruments 96x96mm - ArTu M-K	200x800	1
PS4728	Panel for 4 instruments 72x72mm - ArTu M-K	200x800	1
PS4968	Panel for 4 instruments 96x96mm - ArTu M-K	200x800	1

Code	Description	Pack/pieces
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### Supports for duct

AD1009	N°4 plastic supports for horizontal duct for ArTu L - M - K	1
AD1037	N°4 metal supports for horizontal duct for ArTu M - K	1
AD1096	N°4 metal supports for horizontal/vertical duct for wall-mounted ArTu L	1
AD1098	N°4 metal supports for horizontal/vertical duct for floor-mounted ArTu L	1

### Supports for terminal boxes

#### Structure

AA1001	N° 2 supports for horizontal 45° angled terminal box for ArTu L	1
AD1041	N° 2 supports for horizontal 45° angled terminal box for ArTu M - K	1
AD1054	N° 2 supports for horizontal terminal box for ArTu M - K	1

#### Internal cable container

AD1044	N° 4 Supports for vertical terminal box in ArTu M	1
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#### Additional internal cable container

AD1099	N° 2 Supports for vertical terminal box in cable container, horizontal in the ArTu L box	1
AD1055	N° 4 Supports for vertical terminal box in internal/additional ArTu M-K cable container	1

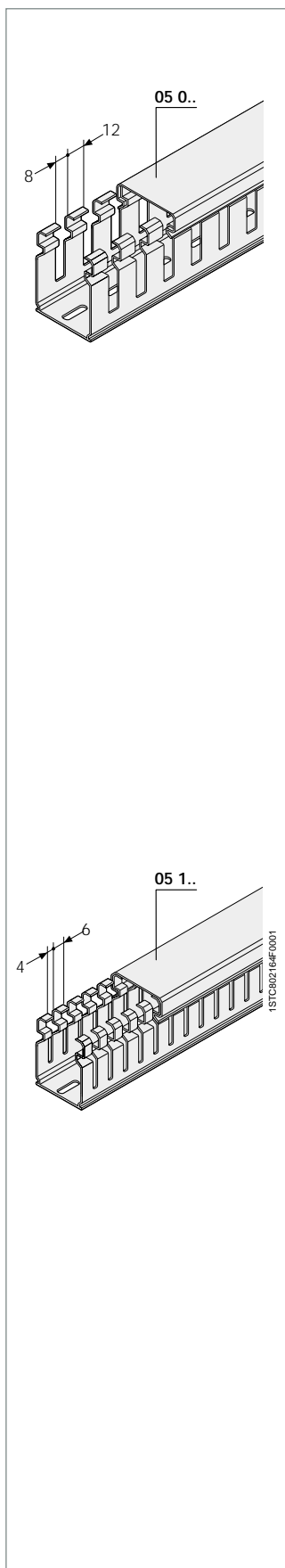
Code	Description	Dimensions mm (hwxw)	Pack/pieces
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### Profile for accessories

TS4011	N° 2 EN50024 C30 profile	2000	1
TS4012	N° 2 EN50035 G32 profile	2000	1
TS4013	N° 2 DIN EN50022 profile	2000	1

# ArTu L - M - K

## Cabling wiring ducts



Article	Description	Dimensions mm (bxh)
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### Wiring ducts with 8-12mm slots grey RAL 7030 colour

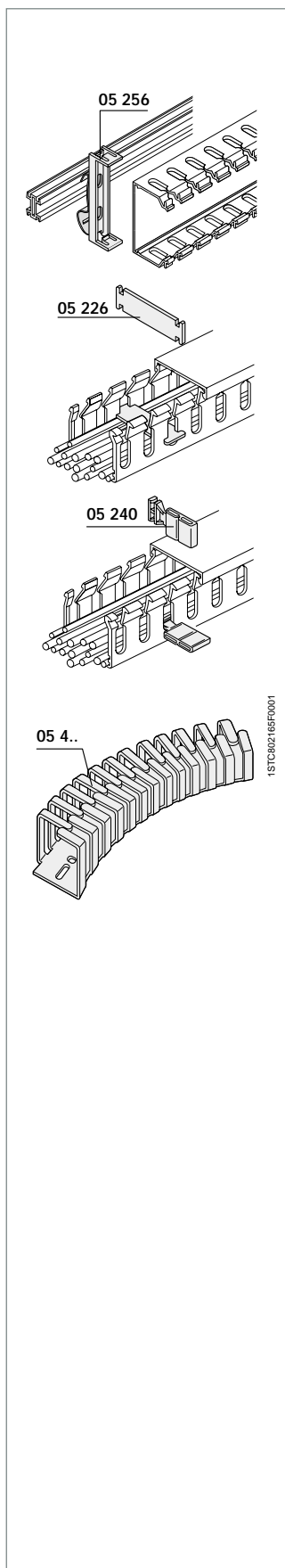
05 019	15x17	92
05 033	25x30	116
05 035	40x30	80
05 037	60x30	52
05 043	25x40	96
05 045	40x40	60
05 047	60x40	40
05 049	80x40	32
05 051	100x40	24
05 053	120x40	20
05 063	25x60	68
05 065	40x60	44
05 067	60x60	32
05 069	80x60	24
05 071	100x60	20
05 073	120x60	14
05 083	25x80	56
05 085	40x80	36
05 087	60x80	24
05 089	80x80	16
05 091	100x80	16
05 093	120x80	12
05 094	25x100	40
05 095	40x100	28
05 096	60x100	20
05 097	80x100	14
05 098	100x100	8
05 099	150x100	8

### Wiring ducts with 4-6mm slots grey RAL 7030 colour

05 119	15x17	92
05 133	25x30	116
05 135	40x30	80
05 137	60x30	52
05 143	25x40	96
05 145	40x40	60
05 147	60x40	40
05 149	80x40	32
05 151	100x40	24
05 153	120x40	20
05 163	25x60	68
05 165	40x60	44
05 167	60x60	32
05 169	80x60	24
05 171	100x60	20
05 173	120x60	14
05 183	25x80	56
05 185	40x80	36
05 187	60x80	24
05 189	80x80	16
05 191	100x80	16
05 193	120x80	12
05 194	25x100	40
05 195	40x100	28
05 196	60x100	20
05 197	80x100	14
05 198	100x100	8
05 199	150x100	8

# ArTu L - M - K

## Cabling wiring ducts



Article	Description	Pack
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### Accessories for wiring ducts

05 214	N°100 Ø4mm rivets	1
05 216	N°100 Ø6mm rivets	1
05 224	N°100 Cable retainer for 40mm base wiring ducts	1
05 226	N°100 Cable retainer for 60mm base wiring ducts	1
05 228	N°100 Cable retainer for 80mm base wiring ducts	1
05 230	N°100 Cable retainer for 100mm base wiring ducts	1
05 240	N°100 Plastic label tag	1
05 250	N°20 Clip for duct with 25mm base horizontally on DIN rail	1
05 252	N°20 Clip for duct with 40mm base horizontally on DIN rail	1
05 254	N°20 Clip for duct with 60mm base horizontally on DIN rail	1
05 256	N°20 Clip for duct with 80mm base horizontally on DIN rail	1
05 258	N°20 Clip for duct with 100mm base horizontally on DIN rail	1
05 260	N°20 Clip for duct with 120mm base horizontally on DIN rail	1
05 262	N°20 Clip for duct with 150mm base horizontally on DIN rail	1
05 265	Shears for wiring ducts	1
05 266	Rivet fastener	1

Article	Dimensions mm (bxh)	Pack/N° metres
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### Flexible wiring ducts W=500mm grey RAL 7040 colour

05 400	12,5x12,5	112
05 402	16x16	84
05 405	20x20	112
05 410	25x25	70
05 415	30x30	50
05 420	40x40	50
05 425	50x50	32

#### Wiring ducts

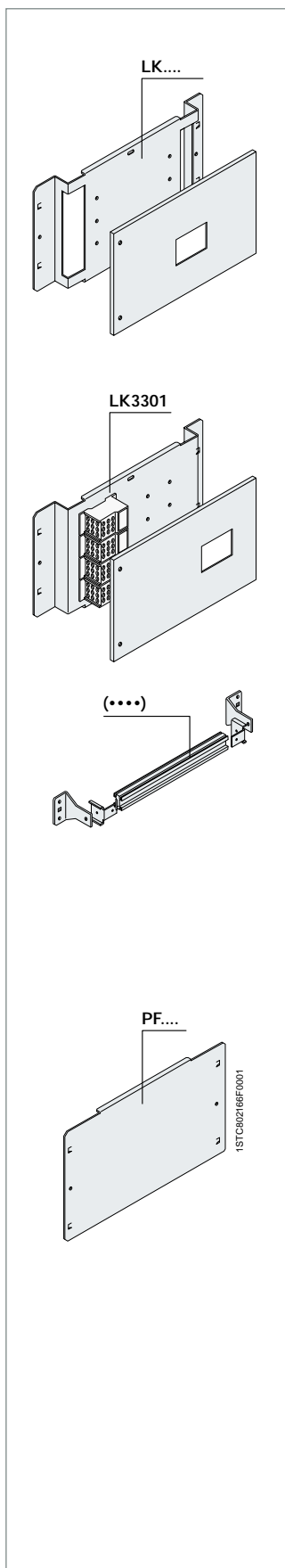
The wiring ducts with laminas are made of self-extinguishing thermoplastic material conforming with the UL 94V0 Standard, resistant to abnormal heat and fire up to 960°C (glow wire test) according to the IEC 695-2-1 Standard. Dimensional stability is guaranteed from -20°C to +60°C. The standard length of the wiring ducts is 2 metres and the colour is grey RAL 7030. Products with the IMQ mark, UL and CSA approvals, and RINA approval.

#### Flexible wiring ducts

The wiring ducts are made of thermoplastic material resistant to permanent temperature of 80°C and with peaks up to 110°C, according to the IEC 216 Standard. The self-extinguishing capacity conforms with the UL 94V2 Standard. The standard length is 500mm and the colour is light RAL 7040 grey.

# ArTu L (w=600mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Kit for installing Tmax and Isomax circuit-breakers

#### Horizontal installation

<b>LK1000</b>	Kit for Tmax T1 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK1004</b>	Kit for Tmax T1 diff. - 4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK2000</b>	Kit for Tmax T2 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK2004</b>	Kit for Tmax T2 diff. - 4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK3000</b>	Kit for Tmax T3 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK3004</b>	Kit for Tmax T3 diff. - 4 poles, fixed - wall/floor-mounted	300x600	1
<b>LK4000</b>	Kit for Isomax S3-S4 - 3/4 poles, fixed - floor-mounted	200x600	1
<b>LK5000</b>	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	300x600	1
<b>LK3301</b>	Kit for Tmax T3 - 3/4 poles, with distribution frame - floor-mounted	200x600	1

#### Vertical installation

<b>LK1001</b>	Kit for Tmax T1 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK2001</b>	Kit for Tmax T2 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
<b>LK3001</b>	Kit for Tmax T3 - 3/4 poles, fixed - wall/floor-mounted	300x600	1
<b>LK3005</b>	Kit for Isomax S3-S4 - 3/4 poles, fixed - floor-mounted	300x600	1
<b>LK4001</b>	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	400x600	1
<b>LK5001</b>	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	500x600	1
<b>LK3200</b>	Kit for placing n°3 Tmax T2 - 3/4 poles, floor-mounted side by side	200x600	1
<b>LK3300</b>	Kit for placing n°3 Tmax T3 - 3/4 poles, floor-mounted side by side	300x600	1
<b>LK4100</b>	Kit for placing n°4 Tmax T1 - 3/4 poles, floor-mounted side by side	200x600	1
<b>(....)</b>	Kit on DIN rail for S1-S2, T1-T2-T3 3-4 poles, fixed/diff.	200/300x600	

#### Vertical installation in the cable container

<b>LK3003</b>	Kit for Tmax T3 - 3/4 poles, fixed - wall-mounted	300x300	1
<b>LK3002</b>	Kit for Tmax T3 - 3/4 poles, fixed - floor-mounted	300x300	1
<b>LK4002</b>	Kit for Isomax S3-S4 - 3/4 poles, fixed - floor-mounted	400x300	1
<b>LK5002</b>	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	500x300	1

The panels are included in the kits.

**(....)** To select the installation kits, see table on page 5/4.

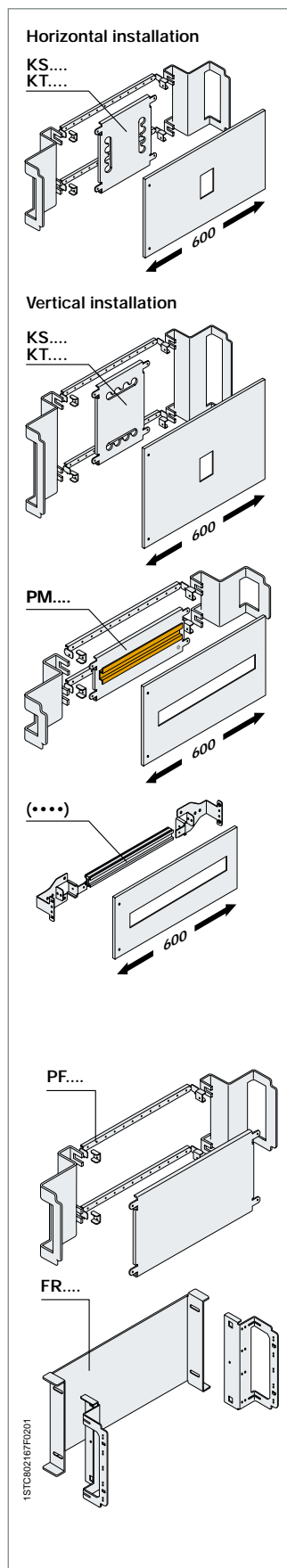
### Blind back plates for OESA/OETL and general apparatus

<b>PF1002</b>	Blind back plate	200x600	1
<b>PF1003</b>	Blind back plate	300x600	1
<b>PF1004</b>	Blind back plate	400x600	1
<b>PF1006</b>	Blind back plate	600x600	1
<b>PF1008</b>	Blind back plate	800x600	1
<b>PC0600</b>	Blind back plate for structure connection box	300x600	1
<b>PC0300</b>	Blind back plate for structure cable container connection box	300x300	1

The panels must be ordered seapartly (see page 5/4).

# ArTu M - K d=250mm (w=600mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (hwxw)	Installation	Pack/pieces
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### Kit for installing Isomax and Tmax circuit-breakers

#### 24 DIN modules W=600mm

##### Isomax S1 (front terminals)

KS1117	Kit for S1 4 poles fixed	200x600	horizontal	1
KS1112	Kit for S1 3 poles fixed	200x600	horizontal	1
KS1102	Kit for S1 4 poles fixed + diff. mod.	200x600	horizontal	1
(•••)	Kit on DIN rail for S1 3-4 poles fixed/diff.	200x600	vertical	

##### Isomax S2 (front terminals)

KS2117	Kit for S2 4 poles fixed	200x600	horizontal	1
KS2112	Kit for S2 3 poles fixed	200x600	horizontal	1
KS2102	Kit for S2 4 poles fixed + diff. mod.	200x600	horizontal	1
(•••)	Kit on DIN rail for S2 3-4 poles fixed/diff.	200x600	vertical	

##### Isomax S3 (front terminals)

KS3118	Kit for S3 3-4 poles fixed <sup>(1)</sup>	200x600	horizontal	1
KS3112	Kit for S3 3-4 poles fixed	200x600	horizontal	1
KS3102	Kit for S3 3-4 poles fixed + diff. mod.	300x600	horizontal	1
PM2212	Kit on plate with rail for S3 3-4 poles fixed/diff.	400x600	vertical	1
KS3212	Kit for S3 3-4 poles fixed	400x600	vertical	1

##### Isomax S4 (front terminals)

KS4112	Kit for S4 3-4 poles fixed	300x600	horizontal	1
PM2212	Kit on plate with rail for S4 3-4 poles fixed/diff.	400x600	vertical	1
KS4212	Kit for S4 3-4 poles fixed	400x600	vertical	1

##### Isomax S5 (front terminals)

KS5112	Kit for S5 (630A) 3-4 poles fixed	300x600	horizontal	1
PM2212	Kit on plate with rail for S5 3-4 poles fixed/diff.	400x600	vertical	1
KS5212	Kit for S5 (630A) 3-4 poles fixed	400x600	vertical	1

##### Isomax S6 (front terminals)

KS6112	Kit for S6 (400A) 3-4 poles fixed	500x600	horizontal	1
KS6212	Kit for S6 3-4 poles fixed	500x600	vertical	1

##### Tmax T1 (front terminals)

KT1117	Kit for T1 3-4 poles fixed	200x600	horizontal	1
KT1102	Kit for T1 4 poles fixed + diff. mod.	200x600	horizontal	1
(•••)	Kit on DIN rail for T1 3-4 poles fixed/diff.	200/300x600	vertical	

##### Tmax T2 (front terminals)

KT2117	Kit for T2 3-4 poles fixed	200x600	horizontal	1
KT2102	Kit for T2 4 poles fixed + diff. mod.	200x600	horizontal	1
(•••)	Kit on DIN rail for T2 3-4 poles fixed/diff.	200/300x600	vertical	

##### Tmax T3 (front terminals)

KT3112	Kit for T3 3-4 poles fixed	200x600	horizontal	1
KT3102	Kit for T3 4 poles fixed + diff. mod.	300x600	horizontal	1
KT3212	Kit for T3 3-4 poles fixed	400x600	vertical	1
(•••)	Kit on DIN rail for T3 3-4 poles fixed/diff.	200/300x600	vertical	

<sup>(1)</sup> Can also be installed in wall-mounted ArTu M switchboards with  $\geq 200$ mm depth .

(•••) For selection of the installation kits, see the table on page 5/7.

### Blind back plates for OESA/OETL and general apparatus

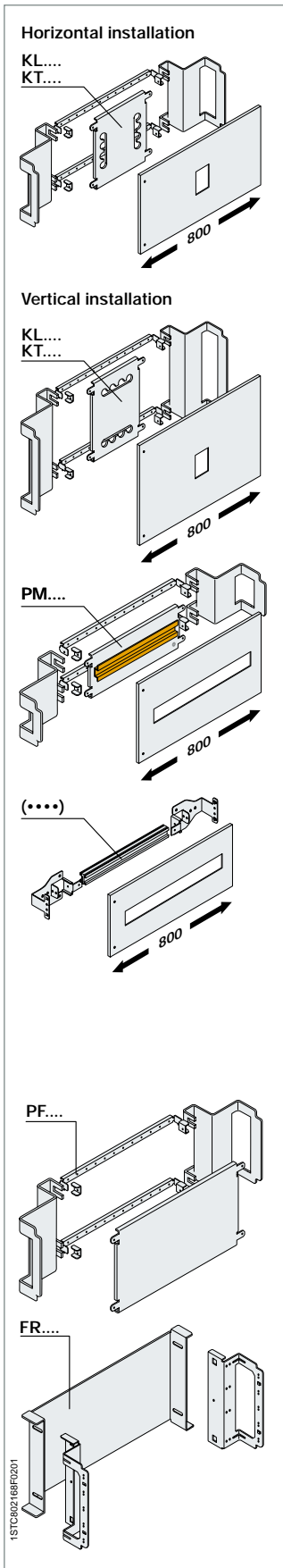
#### 24 DIN modules W=600mm

PF2610	Blind back plate <sup>(1)</sup>	200x600		1
PF4610	Blind back plate	400x600		1
FR2601	Blind recessed back plate	200x600		1
FR4601	Blind recessed back plate	400x600		1

<sup>(1)</sup> Also for wall-mounted ArTu M

# ArTu M - K d=250mm (w=800mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Installation	Pack/pieces
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### Kit for installing Isomax and Tmax circuit-breakers

#### 36 DIN modules W=800mm

##### Isomax S1 (front terminals)

(••••)	Kit on DIN rail for S1 3-4 poles fixed/diff.	200x800	vertical	
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##### Isomax S2 (front terminals)

<b>KL2102</b>	Kit for S2 4 poles fixed + diff. mod.	200x800	horizontal	1
(••••)	Kit on DIN rail for S2 3-4 poles fixed/diff.	200x800	vertical	

##### Isomax S3 (front terminals)

<b>KL3112</b>	Kit for S3 3-4 poles fixed	200x800	horizontal	1
<b>KL3102</b>	Kit for S3 3-4 poles fixed + diff. mod.	300x800	horizontal	1
<b>PM2214</b>	Kit on plate with rail for S3 3-4 poles fixed/diff.	400x800	vertical	1

##### Isomax S4 (front terminals)

<b>KL4112</b>	Kit for S4 3-4 poles fixed	200x800	horizontal	1
<b>PM2214</b>	Kit on plate with rail for S4 3-4 poles fixed/diff.	400x800	vertical	1

##### Isomax S5 (front terminals)

<b>KL5112</b>	Kit for S5 (630A) 3-4 poles fixed	300x800	horizontal	1
<b>PM2214</b>	Kit on plate with rail for S5 3-4 poles fixed/diff.	400x800	vertical	1

##### Isomax S6 (front terminals)

<b>KL6112</b>	Kit for S6 3-4 poles fixed	500x800	horizontal	1
<b>KL6212</b>	Kit for S6 3-4 poles fixed	500x800	vertical	1

##### Tmax T1 (front terminals)

(••••)	Kit on DIN rail for T1 3-4 poles fixed/diff.	200/300x800	vertical	
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##### Tmax T2 (front terminals)

<b>KL2103</b>	Kit for T2 4 poles fixed + diff. mod.	200x800	horizontal	1
(••••)	Kit on DIN rail for T2 4 poles fixed/diff.	200/300x800	vertical	

##### Tmax T3 (front terminals)

<b>KL3113</b>	Kit for T3 3-4 poles fixed	200x800	horizontal	1
<b>KL3103</b>	Kit for T3 4 poles fixed + diff. mod.	300x800	horizontal	1
(••••)	Kit on DIN rail for T3 3-4 poles fixed/diff.	200/300x800	vertical	

(••••) For selection of the installation kits, see the table on page 5/7.

### Blind back plates for OESA/OETL and general apparatus

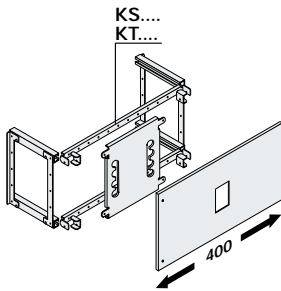
#### 36 DIN modules W=800mm

<b>PF2810</b>	Blind back plate	200x800	1
<b>PF4810</b>	Blind back plate	400x800	1
<b>FR2801</b>	Blind recessed back plate	200x800	1
<b>FR4801</b>	Blind recessed back plate	400x800	1

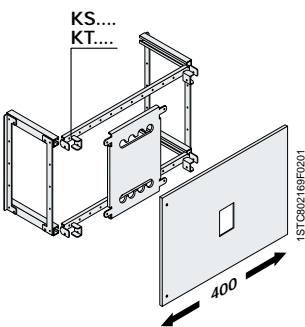
# ArTu K (w=400mm)

## Kit for switchboards without segregation

Horizontal installation



Vertical installation



Code	Description	Dimensions mm (hwxw)	Installation	Pack.
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### Kit for installing Isomax and Tmax circuit-breakers

#### 12 DIN modules W=400mm

##### Isomax S1 (front or rear terminals)

KS1411	Kit for S1 4 poles fixed	200x400	horizontal	1
KS1416	Kit for S1 3 poles fixed	200x400	horizontal	1
KS1421	Kit for S1 4 poles plug-in	200x400	horizontal	1
KS1426	Kit for S1 3 poles plug-in	200x400	horizontal	1
(••••)	Kit on DIN rail for S1 3-4 poles fixed/diff.	200x400	vertical	1

##### Isomax S2 (front or rear terminals)

KS2411	Kit for S2 4 poles fixed	200x400	horizontal	1
KS2416	Kit for S2 3 poles fixed	200x400	horizontal	1
KS2421	Kit for S2 4 poles plug-in	200x400	horizontal	1
KS2426	Kit for S2 3 poles plug-in	200x400	horizontal	1
(••••)	Kit on DIN rail for S2 3-4 poles fixed/diff.	200x400	vertical	1

##### Isomax S3 (front or rear terminals)

KS3419	Kit for S3 3-4 poles fixed (only front terminals)	200x400	horizontal	1
KS3411	Kit for S3 3-4 poles plug-in	300x400	horizontal	1
KS3416	Kit for S3 3-4 poles fixed	400x400	vertical	1
KS3426	Kit for S3 3-4 poles plug-in	400x400	vertical	1
KS3421	Kit for S3 3-4 poles plug-in	300x400	horizontal	1
KS3431	Kit for S3 3-4 poles withdrawable	300x400	horizontal	1
KS3436	Kit for S3 3-4 poles withdrawable	400x400	vertical	1

##### Isomax S4 (front or rear terminals)

KS4411	Kit for S4 3-4 poles fixed	400x400	vertical	1
KS4421	Kit for S4 3-4 poles plug-in	400x400	vertical	1
KS4431	Kit for S4 3-4 poles withdrawable	400x400	vertical	1

##### Isomax S5 (front or rear terminals)

KS5411	Kit for S5 (630A) 3-4 poles fixed	500x400	vertical	1
KS5421	Kit for S5 (400A) 3-4 poles plug-in	500x400	vertical	1
KS5431	Kit for S5 (400A) 3-4 poles withdrawable	500x400	vertical	1

##### Tmax T1 (front or rear terminals)

KT1411	Kit for T1 3-4 poles fixed (only front terminals)	200x400	horizontal	1
KT1401 <sup>(1)</sup>	Kit for T1 4 poles fixed + diff. mod.	200x400	horizontal	1
(••••)	Kit on DIN rail for T1 3-4 poles fixed	200x400	vertical	1

##### Tmax T2 (front or rear terminals)

KT2411	Kit for T2 3-4 poles fixed	200x400	horizontal	1
KT2401 <sup>(1)</sup>	Kit for T2 4 poles fixed + diff. mod.	200x400	horizontal	1
KT2421	Kit for T2 3-4 poles plug-in	200x400	horizontal	1
(••••)	Kit on DIN rail for T2 3-4 poles fixed	200x400	vertical	1

##### Tmax T3 (front or rear terminals)

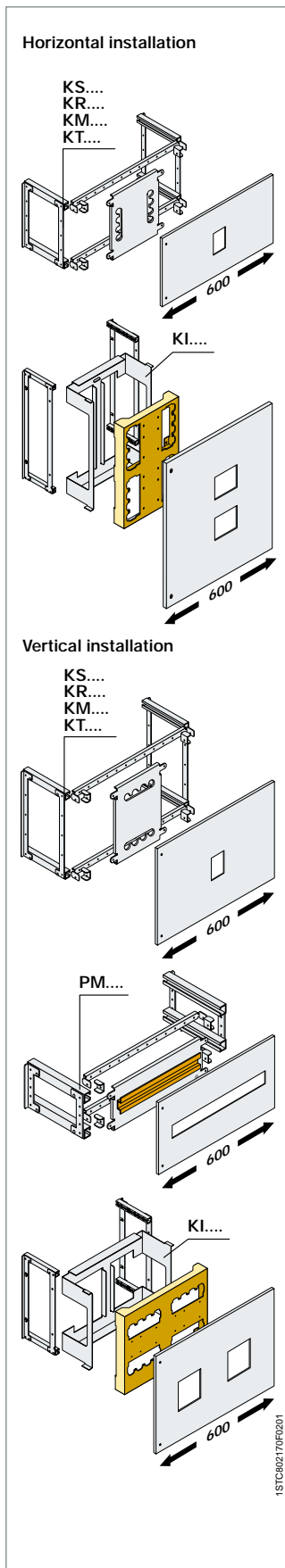
KT3419	Kit for T3 3-4 poles fixed (only front terminals)	200x400	horizontal	1
KT3411	Kit for T3 4 poles fixed	300x400	horizontal	1
KT3401	Kit for T3 4 poles fixed + diff. mod.(only front terminals)	200x400	horizontal	1
KT3421	Kit for T3 3-4 poles plug-in	300x400	horizontal	1
KT3416	Kit for T3 3-4 poles fixed	300x400	vertical	1
KT3426	Kit for T3 3-4 poles plug-in	300x400	vertical	1
(••••)	Kit on DIN rail for T3 3-4 poles fixed	200x400	vertical	1

(••••) For selection of the installation kits, see the table on page 4/4.

<sup>(1)</sup> Only front terminals

# ArTu K (w=600mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Installation	Pack.
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### Kit for installing Isomax, Tmax and Emax circuit-breakers

#### 24 DIN modules W=600mm

##### Isomax S1 (front or rear terminals)

KS1111	Kit for S1 4 poles fixed	200x600	horizontal	1
KS1116	Kit for S1 3 poles fixed	200x600	horizontal	1
KS1101	Kit for S1 4 poles fixed + diff. mod.	200x600	horizontal	1
KS1121	Kit for S1 4 poles plug-in	200x600	horizontal	1
KS1126	Kit for S1 3 poles plug-in	200x600	horizontal	1
KR1111	Kit for S1 4 poles fixed transmitted rotary handle	200x600	horizontal	1
(••••)	Kit on DIN rail for S1 3-4 poles fixed/diff.	200x600	vertical	1

##### Isomax S2 (front or rear terminals)

KS2111	Kit for S2 4 poles fixed	200x600	horizontal	1
KS2116	Kit for S2 3 poles fixed	200x600	horizontal	1
KS2101	Kit for S2 4 poles fixed + diff. mod.	200x600	horizontal	1
KS2121	Kit for S2 4 poles plug-in	200x600	horizontal	1
KS2126	Kit for S2 3 poles plug-in	200x400	horizontal	1
KR2111	Kit for S2 4 poles fixed transmitted rotary handle	200x600	horizontal	1
(••••)	Kit on DIN rail for S2 3-4 poles fixed/diff.	200x600	vertical	1

##### Isomax S3 (front or rear terminals)

KS3119	Kit for S3 3-4 poles fixed (only front terminals)	200x600	horizontal	1
KS3111	Kit for S3 3-4 poles fixed + accessories	300x600	horizontal	1
KS3101	Kit for S3 4 poles fixed + diff. mod.	300x600	horizontal	1
KS3121	Kit for S3 3-4 poles plug-in + accessories	300x600	horizontal	1
KS3131	Kit for S3 3-4 poles withdrawable + accessories	300x600	horizontal	1
KM3121	Kit for S3 3-4 poles plug-in motor operator	300x600	horizontal	1
PM2211	Kit on plate with rail for S3 3-4 poles fixed/diff.	400x600	vertical	1
KS3211	Kit for S3 3-4 poles fixed	400/600	vertical	1
KS3221	Kit for S3 3-4 poles plug-in	400x600	vertical	1
KS3231	Kit for S3 3-4 poles withdrawable	400x600	vertical	1
KI3111	Kit for S3 4 poles fixed/plug-in interlocked + accessories	400x600	vertical	1
KI3131	Kit for S3 4 poles withdraw. interlocked + accessories	400x600	vertical	1

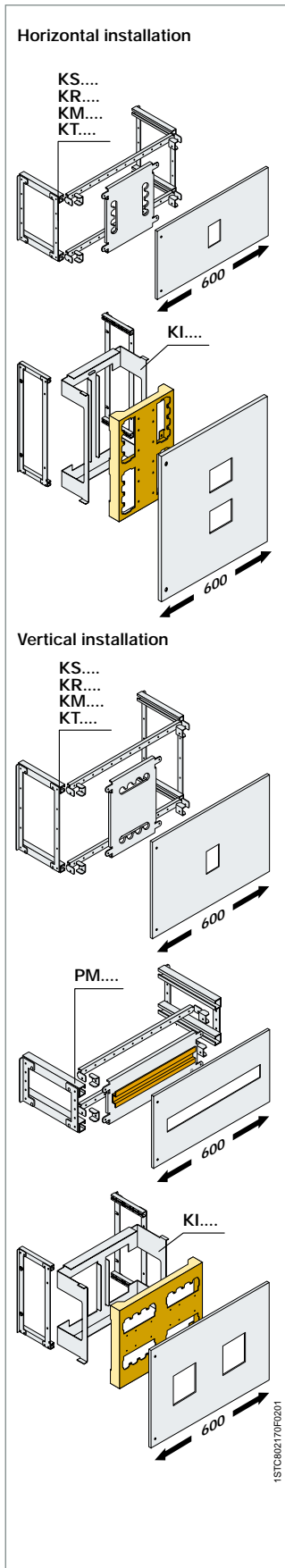
##### Isomax S4 (front or rear terminals)

KS4119	Kit for S4 3-4 poles fixed (only front terminals)	200x600	horizontal	1
KS4111	Kit for S4 3-4 poles fixed + accessories	300x600	horizontal	1
KS4121	Kit for S4 3-4 poles plug-in + accessories	300x600	horizontal	1
KS4131	Kit for S4 3-4 poles withdrawable + accessories	300x600	horizontal	1
KM4121	Kit for S4 3-4 poles plug-in motor operator	300x600	horizontal	1
PM2211	Kit on plate with rail for S4 3-4 poles fixed/diff.	400x600	vertical	1
KS4211	Kit for S4 3-4 poles fixed	400x600	vertical	1
KS4221	Kit for S4 3-4 poles plug-in	400x600	vertical	1
KS4231	Kit for S4 3-4 poles withdrawable	400x600	vertical	1
KI4111	Kit for S4 4 poles fixed/plug-in interlocked + accessories	500x600	vertical	1
KI4131	Kit for S4 4 poles withdraw. interlocked + accessories	500x600	vertical	1

(••••) For selection of the installation kits, see the table on page 5/7.

# ArTu K (w=600mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (hwxw)	Installation	Pack/pieces
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### Kit for installing Isomax, Tmax and Emax circuit-breakers

#### 24 DIN modules W=600mm

##### Isomax S5 (front or rear terminals)

<b>KS5111</b>	Kit for S5 3-4 poles fixed + accessories	300x600	horizontal	1
<b>KS5121</b>	Kit for S5 3-4 poles plug-in + accessories	300x600	horizontal	1
<b>KS5131</b>	Kit for S5 3-4 poles withdrawable + accessories	300x600	horizontal	1
<b>KM5121</b>	Kit for S5 3-4 poles plug-in motor operator	300x600	horizontal	1
<b>PM2211</b>	Kit on plate with rail for S5 3-4 poles fixed/diff.	400x600	vertical	1
<b>KS5211</b>	Kit for S5 3-4 poles fixed + accessories	500x600	vertical	1
<b>KS5221</b>	Kit for S5 3-4 poles plug-in + accessories	500x600	vertical	1
<b>KM5221</b>	Kit for S5 3-4 poles plug-in motor operator	500x600	vertical	1
<b>KS5231</b>	Kit for S5 3-4 poles withdrawable + accessories	500x600	vertical	1
<b>KI5111</b>	Kit for S5 3-4 poles fixed interlocked + accessories	500x600	vertical	1
<b>KI5131</b>	Kit for S5 3-4 poles withdrawable inter. + accessories	500x600	vertical	1

##### Isomax S6 (front or rear terminals)

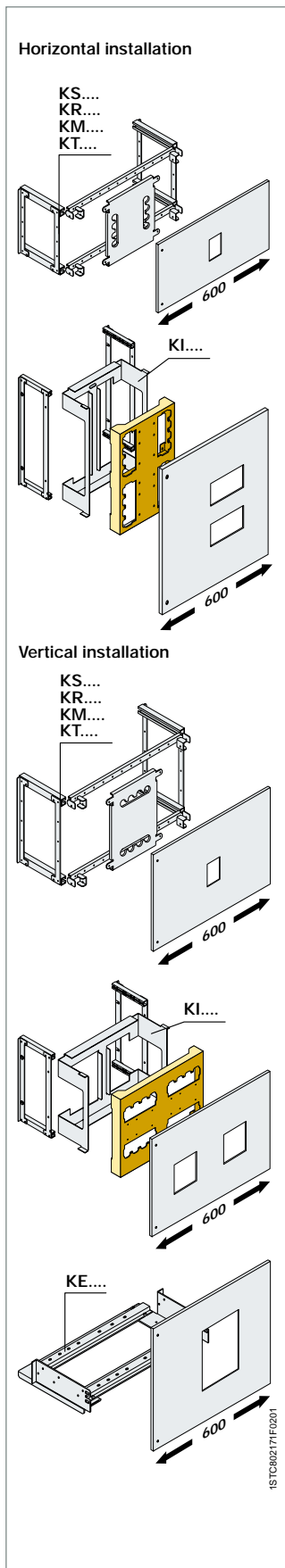
<b>KS6111</b>	Kit for S6 3-4 poles fixed	500x600	horizontal	1
<b>KS6131</b>	Kit for S6 3-4 poles withdrawable + accessories	500x600	horizontal	1
<b>KR6111</b>	Kit for S6 3-4 poles fixed direct rotary handle	500x600	horizontal	1
<b>KM6111</b>	Kit for S6 3-4 poles fixed motor operator	500x600	horizontal	1
<b>KM6131</b>	Kit for S6 3-4 poles withdrawable motor operator	500x600	horizontal	1
<b>KI6211</b>	Kit for S6 4 poles fixed interlocked	800x600	horizontal	1
<b>KI6213</b>	Kit for S6 4 poles fixed interlocked + accessories	800x600	horizontal	1
<b>KI6231</b>	Kit for S6 3-4 poles withdrawable interlocked	800x600	horizontal	1
<b>KI6233</b>	Kit for S6 3-4 poles withdrawable inter. + accessories	800x600	horizontal	1
<b>KS6211</b>	Kit for S6 3-4 poles fixed	500x600	vertical	1
<b>KS6231</b>	Kit for S6 3-4 poles withdrawable + accessories	500x600	vertical	1
<b>KR6211</b>	Kit for S6 3-4 poles fixed direct rotary handle	500x600	vertical	1
<b>KM6211</b>	Kit for S6 3-4 poles fixed motor operator	500x600	vertical	1
<b>KM6231</b>	Kit for S6 3-4 poles withdrawable motor operator	500x600	vertical	1

##### Isomax S7 (front or rear terminals)

<b>KS7111</b>	Kit for S7 3-4 poles fixed (only rear terminals)	600x600	horizontal	1
<b>KR7111</b>	Kit for S7 3-4 poles fixed dir. rot. handle (only rear terminals)	600x600	horizontal	1
<b>KM7111</b>	Kit for S7 3-4 poles fixed mot. operator (only rear terminals)	600x600	horizontal	1
<b>KI7211</b>	Kit for S7 4 poles fixed interlocked	800x600	horizontal	1
<b>KI7213</b>	Kit for S7 4 poles fixed/withdraw. inter. + accessories	800x600	horizontal	1
<b>KI7231</b>	Kit for S7 4 poles withdrawable interlocked	800x600	horizontal	1
<b>KS7211</b>	Kit for S7 3-4 poles fixed	700x600	vertical	1
<b>KS7231</b>	Kit for S7 3-4 poles withdrawable + accessories	700x600	vertical	1
<b>KR7211</b>	Kit for S7 3-4 poles fixed direct rotary handle	700x600	vertical	1
<b>KM7211</b>	Kit for S7 3-4 poles fixed motor operator	700x600	vertical	1

# ArTu K (w=600mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h <sub>x</sub> w)	Installation	Pack/pieces
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### Kit for installing Isomax, Tmax and Emax circuit-breakers

#### 24 DIN modules W=600mm

##### Tmax T1 (front or rear terminals)

<b>KT1111</b>	Kit for T1 3-4 poles fixed	200x600	horizontal	1
<b>KT1101<sup>(1)</sup></b>	Kit for T1 4 poles fixed + diff. mod.	200x600	horizontal	1
<b>KT1112</b>	Kit for T1 3-4 poles fixed direct rotary handle	200x600	horizontal	1
<b>(••••)</b>	Kit on DIN rail for T1 3-4 poles fixed/diff.	200/300x400	vertical	1

##### Tmax T2 (front or rear terminals)

<b>KT2111</b>	Kit for T2 3-4 poles fixed	200x600	horizontal	1
<b>KT2101<sup>(1)</sup></b>	Kit for T2 4 poles fixed + diff. mod	200x600	horizontal	1
<b>KT2121</b>	Kit for T2 3-4 poles plug-in	200x600	horizontal	1
<b>KT2112</b>	Kit for T2 3-4 poles fixed direct rotary handle	200x600	horizontal	1
<b>(••••)</b>	Kit on DIN rail for T2 3-4 poles fixed/diff.	200/300x600	vertical	1

##### Tmax T3 (front or rear terminals)

<b>KT3119</b>	Kit for T3 3-4 poles fixed	200x600	horizontal	1
<b>KT3111</b>	Kit for T3 3-4 poles fixed	300x600	horizontal	1
<b>KT3101<sup>(1)</sup></b>	Kit for T3 4 poles fixed + diff. mod.	200x600	horizontal	1
<b>KT3114</b>	Kit for T3 3-4 poles fixed direct rotary handle	300x600	horizontal	1
<b>KT3121</b>	Kit for T3 3-4 poles plug-in	300x600	horizontal	1
<b>KT3116</b>	Kit for T3 3-4 poles plug-in direct rotary handle	300x600	horizontal	1
<b>KT3211</b>	Kit for T3 3-4 poles fixed	300x600	vertical	1
<b>KT3221</b>	Kit for T3 3-4 poles plug-in	300x600	vertical	1
<b>(••••)</b>	Kit on DIN rail for T3 3-4 poles fixed/diff.	200/300x600	vertical	1

##### Emax E1-E2-E3

<b>KE3215</b>	Kit for E1-E2-E3 3-4 poles fixed	600x600	vertical	1
<b>KE3235</b>	Kit for E1-E2-E3 3-4 poles withdrawable	600x600	vertical	1

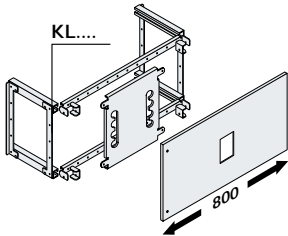
(••••)For selection of the installation kits, see the table on page 5/7.

<sup>(1)</sup> Only front terminals

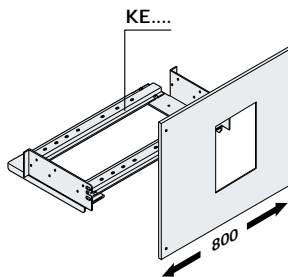
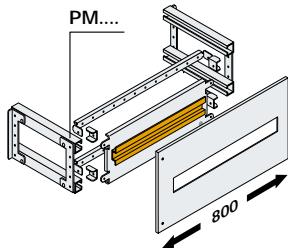
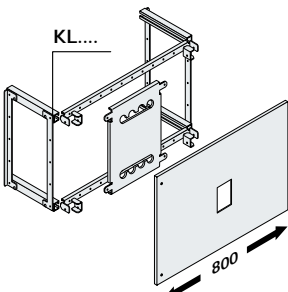
# ArTu K (w=800mm)

## Kit for switchboards without segregation

### Horizontal installation



### Vertical installation



Code	Description	Dimensions mm (hwxw)	Installation	Pack/pieces
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### Kit for installing Isomax, Tmax and Emax circuit-breakers

#### 36 DIN modules W=800mm

#### Isomax S1 (front or rear terminals)

<b>KL1101</b>	Kit for S1 4 poles fixed + diff. mod.	200x800	horizontal	1
(••••)	Kit on DIN rail for S1 3-4 poles fixed/diff.	200x600	vertical	

#### Isomax S2 (front or rear terminals)

<b>KL2101</b>	Kit for S2 4 poles fixed + diff. mod.	200x800	horizontal	1
(••••)	Kit on DIN rail for S2 3-4 poles fixed/diff.	200x400	vertical	1

#### Isomax S3 (front or rear terminals)

<b>KL3111</b>	Kit for S3 3-4 poles fixed	300x800	horizontal	1
<b>KL3101</b>	Kit for S3 4 poles fixed + diff. mod.	300x800	horizontal	1
<b>KL3211</b>	Kit for S3 3-4 poles fixed	400x800	vertical	1
<b>PM2213</b>	Kit on plate with rail for S3 3-4 poles fixed/diff.	400x800	vertical	1

#### Isomax S4 (front or rear terminals)

<b>KL4111</b>	Kit for S4 3-4 poles fixed	300x800	horizontal	1
<b>KL4211</b>	Kit for S4 3-4 poles fixed	400x800	vertical	1
<b>PM2213</b>	Kit on plate with rail for S4 3-4 poles fixed/diff.	400x800	vertical	1

#### Isomax S5 (front or rear terminals)

<b>KL5111</b>	Kit for S5 (630A) 3-4 poles fixed	300x800	horizontal	1
<b>KL5211</b>	Kit for S5 (630A) 3-4 poles fixed	500x800	vertical	1
<b>PM2213</b>	Kit on plate with rail for S5 3-4 poles fixed/diff.	400x800	vertical	1

#### Isomax S6 (front or rear terminals)

<b>KL6211</b>	Kit for S6 3-4 poles fixed	500x800	vertical	1
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#### Isomax S7 (front or rear terminals)

<b>KL7211</b>	Kit for S7 3-4 poles fixed	700x800	vertical	1
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#### Tmax T1 (front or rear terminals)

<b>KL1102<sup>(*)</sup></b>	Kit for T1 4 poles fixed + diff. mod.	200x800	horizontal	1
(••••)	Kit on DIN rail for T1 3-4 poles fixed/diff.	200/300x800	vertical	

#### Tmax T2 (front or rear terminals)

<b>KL2104<sup>(*)</sup></b>	Kit for T2 4 poles fixed + diff. mod.	200x800	horizontal	1
(••••)	Kit on DIN rail for T2 3-4 poles fixed/diff.	200/300x800	vertical	1

#### Tmax T3 (front or rear terminals)

<b>KL3114</b>	Kit for T3 3-4 poles fixed	300x800	horizontal	1
<b>KL3104<sup>(*)</sup></b>	Kit for T3 3-4 poles fixed + diff. mod.	300x800	horizontal	1
<b>KL3212</b>	Kit for T3 3-4 poles fixed	300x800	vertical	1
(••••)	Kit on DIN rail for T3 3-4 poles fixed/diff.	200/300x800	vertical	1

#### Emax E3

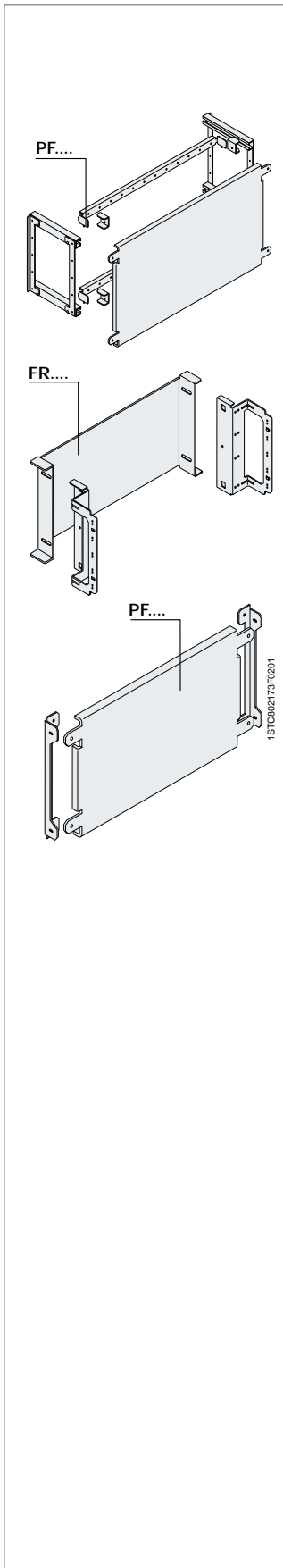
<b>KE4215</b>	Kit for E3 3-4 poles fixed interlocked	600x800	vertical	1
<b>KE4235</b>	Kit for E3 3-4 poles withdrawable interlocked	600x800	vertical	1

(••••) For selection of the installation kits, see the table on page 5/7.

<sup>(\*)</sup> Only front terminals

# ArTu K (w=400/600/800mm)

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Blind back plates for OESA/OETL and general apparatus

#### 12 DIN modules W=400mm

PF2401	Blind back plate	200x400	1
PF3403	Blind back plate	300x400	1
PF4401	Blind back plate	400x400	1
PF6401	Blind back plate	600x400	1

#### 24 DIN modules W=600mm

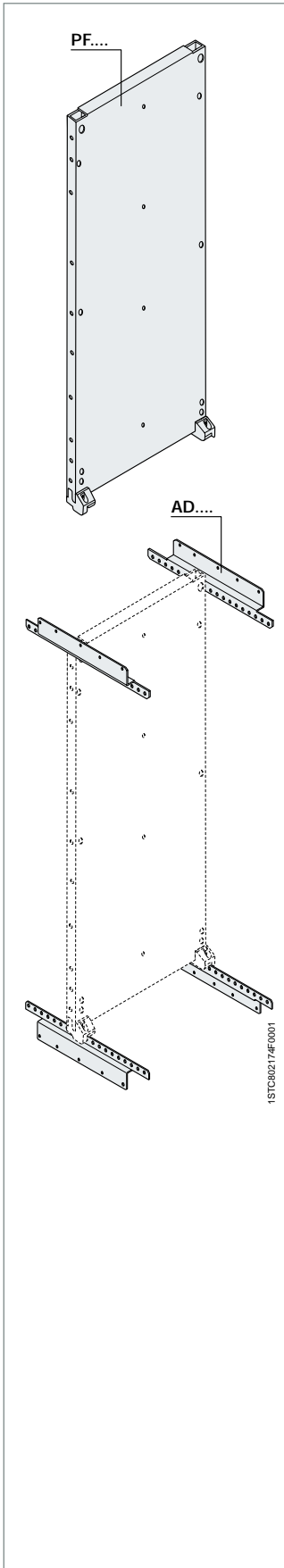
PF2601	Blind back plate	200x600	1
PF3601	Blind back plate	300x600	1
PF4601	Blind back plate	400x600	1
PF6601	Blind back plate	600x600	1
FR2600	Blind recessed back plate	200x600	1
FR4600	Blind recessed back plate	400x600	1
FR6600	Blind recessed back plate	600x600	1

#### 36 DIN modules W=800mm

PF2801	Blind back plate	200x800	1
PF3801	Blind back plate	300x800	1
PF4801	Blind back plate	400x800	1
PF6801	Blind back plate	600x800	1
FR2800	Blind recessed back plate	200x800	1
FR4800	Blind recessed back plate	400x800	1
FR6800	Blind recessed back plate	600x800	1

# ArTu K

## Kit for switchboards without segregation



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Back plates

#### 24 DIN modules W=600mm

PF1806	Galvanised sheet back plate	1800x600	1
PF2006	Galvanised sheet back plate	2000x600	1

#### 36 DIN modules W=800mm

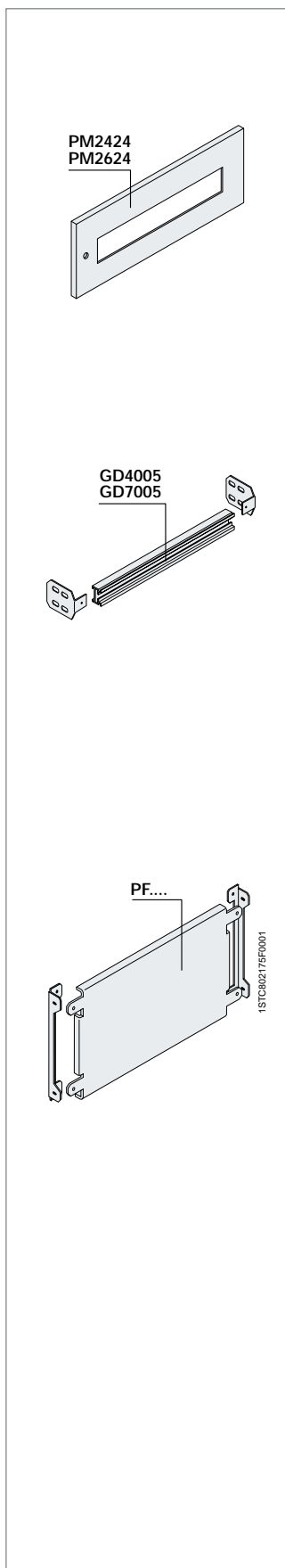
PF1808	Galvanised sheet back plate	1800x800	1
PF2008	Galvanised sheet back plate	2000x800	1

#### Tracks for back plate

AD1049	Pair of tracks + crosspieces for structures D=350mm		1
AD1050	Pair of tracks + crosspieces for structures D=600mm		1
AD1051	Pair of tracks + crosspieces for structures D=800mm		1

# ArTu K

## Kit for segregated switchboards



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Modular panel

#### 12 DIN modules W=400mm

PM2424	Modular panel 1 DIN row - ArTu K	200x400	1
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#### 24 DIN modules W=600mm

PM2624	Modular panel 1 DIN row - ArTu L-M-K	200x600	1
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Code	Description	Dimensions mm (h x w)	Pack/pieces
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### DIN rail kits for System Pro-M, Isomax S1-S2, Tmax T1-T2-T3 modular apparatus

#### 12 DIN modules W=400mm

GD4005	DIN rail kit (aluminium)	400	1
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#### 24 DIN modules W=600mm

GD7005	DIN rail kit (aluminium)	600	1
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Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Blind back plates for OESA/OETL and general apparatus

#### 12 DIN modules W=400mm

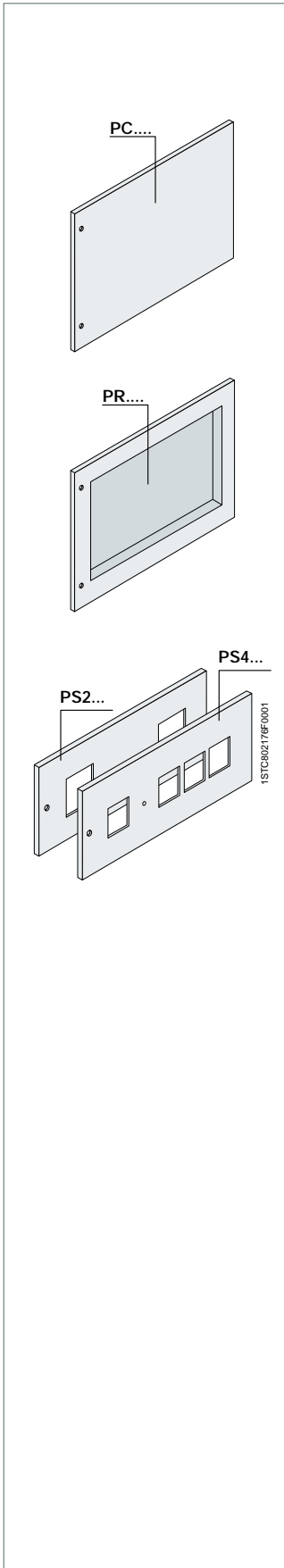
PF2405	Blind back plate	200x400	1
PF3405	Blind back plate	300x400	1
PF4405	Blind back plate	400x400	1
PF6405	Blind back plate	600x400	1

#### 24 DIN modules W=600mm

PF2005	Blind back plate	200x600	1
PF3005	Blind back plate	300x600	1
PF4005	Blind back plate	400x600	1
PF6005	Blind back plate	600x600	1
PF8005	Blind back plate	800x600	1

# ArTu K (w=400/600mm)

## Kit for segregated switchboards



Code	Description	Dimensions mm (h x w)	Pack/pieces
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### Blind standard, recessed and ventilated panels for OESA/OETL and general apparatus

#### 12 DIN modules W=400mm

<b>PC1400</b>	Flat blind panel	100x400	1
<b>PC2400</b>	Flat blind panel	200x400	1
<b>PC3400</b>	Flat blind panel	300x400	1
<b>PC4400</b>	Flat blind panel	400x400	1
<b>PC6400</b>	Flat blind panel	600x400	1

#### 24 DIN modules W=600mm

<b>PC1600</b>	Flat blind panel	100x600	1
<b>PC2600</b>	Flat blind panel	200x600	1
<b>PC3600</b>	Flat blind panel	300x600	1
<b>PC4600</b>	Flat blind panel	400x600	1
<b>PC6600</b>	Flat blind panel	600x600	1
<b>PC8600</b>	Flat blind panel	800x600	1
<b>PR2600</b>	Blind recessed panel	200x600	1
<b>PR4600</b>	Blind recessed panel	400x600	1
<b>PR6600</b>	Blind recessed panel	600x600	1

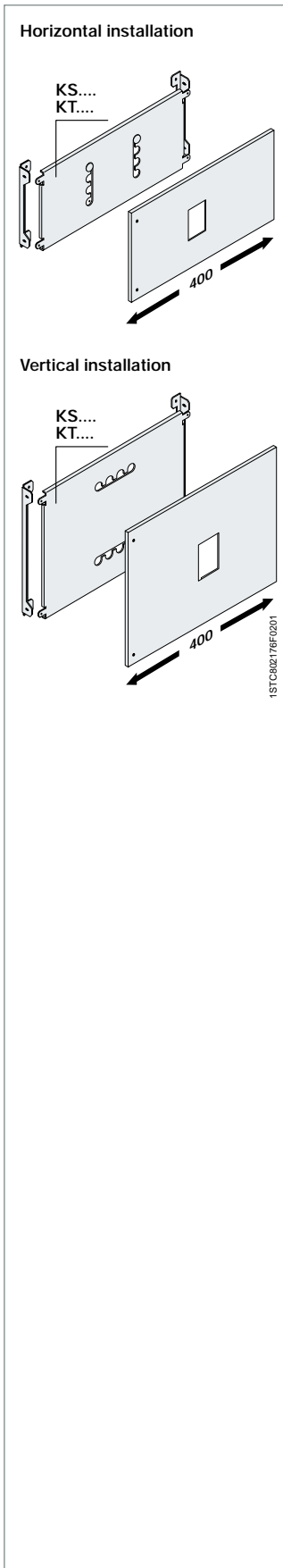
### Panels for square measuring instruments

#### 24 DIN modules W=600mm

<b>PS2720</b>	Panel for 2 instruments	72x72mm	200x600	1
<b>PS2960</b>	Panel for 2 instruments	96x96mm	200x600	1
<b>PS4720</b>	Panel for 4 instruments	72x72mm	200x600	1
<b>PS4960</b>	Panel for 4 instruments	96x96mm	200x600	1

# ArTu K (w=400mm)

## Kit for segregated switchboards



Code	Description	Dimensions mm (hxl)	Installation	Pack/pieces
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### Kit for installing Isomax and Tmax circuit-breakers

#### 12 DIN modules W=400mm

##### Isomax S1 (rear terminals)

<b>KS1410</b>	Kit for S1 4 poles fixed	200x400	horizontal	1
<b>KS1415</b>	Kit for S1 3 poles fixed	200x400	horizontal	1
<b>KS1420</b>	Kit for S1 4 poles plug-in	200x400	horizontal	1
<b>KS1425</b>	Kit for S1 3 poles plug-in	200x400	horizontal	1

##### Isomax S2 (rear terminals)

<b>KS2410</b>	Kit for S2 4 poles fixed	200x400	horizontal	1
<b>KS2415</b>	Kit for S2 3 poles fixed	200x400	horizontal	1
<b>KS2420</b>	Kit for S2 4 poles plug-in	200x400	horizontal	1
<b>KS2425</b>	Kit for S2 3 poles plug-in	200x400	horizontal	1

##### Isomax S3 (rear terminals)

<b>KS3410</b>	Kit for S3 3-4 poles fixed	300x400	horizontal	1
<b>KS3420</b>	Kit for S3 3-4 poles plug-in	300x400	horizontal	1
<b>KS3430</b>	Kit for S3 3-4 poles withdrawable	300x400	horizontal	1

##### Isomax S4 (rear terminals)

<b>KS4410</b>	Kit for S4 3-4 poles fixed	300x400	horizontal	1
<b>KS4420</b>	Kit for S4 3-4 poles plug-in	300x400	horizontal	1
<b>KS4430</b>	Kit for S4 3-4 poles withdrawable	300x400	horizontal	1

##### Isomax S5 (rear terminals)

<b>KS5410</b>	Kit for S5 (400A) 3-4 poles fixed	400x400	horizontal	1
<b>KS5420</b>	Kit for S5 (400A) 3-4 poles plug-in	400x400	horizontal	1
<b>KS5430</b>	Kit for S5 (400A) 3-4 withdrawable	400x400	horizontal	1

##### Tmax T2 (rear terminals)

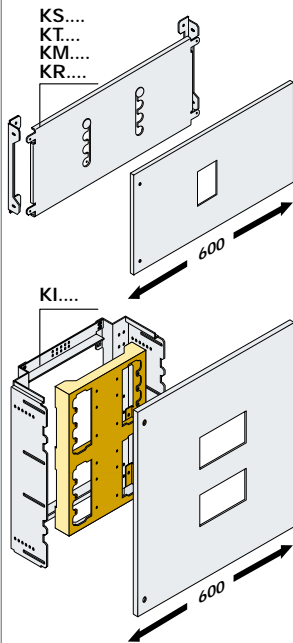
<b>KT2410</b>	Kit for T2 3-4 poles fixed	200x400	horizontal	1
<b>KT2420</b>	Kit for T2 4 poles plug-in	200x400	horizontal	1

##### Tmax T3 (rear terminals)

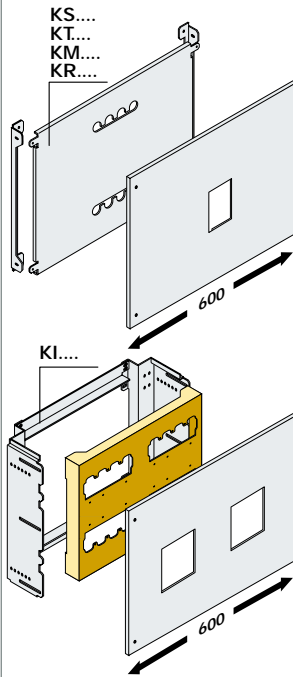
<b>KT3410</b>	Kit for T3 3-4 poles fixed	300x400	horizontal	1
<b>KT3420</b>	Kit for T3 3-4 poles plug-in	300x400	horizontal	1

# ArTu K (w=600mm)

## Horizontal installation



## Vertical installation



Code	Description	Dimensions mm (h x w)	Installation	Pack/pieces
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## Kit for installing Isomax, Tmax and Emax circuit-breakers

### 24 DIN modules W=600mm

#### Isomax S1 (rear terminals)

KS1110	Kit for S1 4 poles fixed	200x600	horizontal	1
KS1115	Kit for S1 3 poles fixed	200x600	horizontal	1
KS1100	Kit for S1 4 poles fixed + diff. mod.	200x600	horizontal	1
KS1120	Kit for S1 4 poles plug-in	200x600	horizontal	1
KS1125	Kit for S1 3 poles plug-in	200x600	horizontal	1

#### Isomax S2 (rear terminals)

KS2110	Kit for S2 4 poles fixed	200x600	horizontal	1
KS2115	Kit for S2 3 poles fixed	200x600	horizontal	1
KS2100	Kit for S2 4 poles fixed + diff. mod.	200x600	horizontal	1
KS2120	Kit for S2 4 poles plug-in	200x600	horizontal	1
KS2125	Kit for S2 3 poles plug-in	200x600	horizontal	1

#### Isomax S3 (rear terminals)

KS3110	Kit for S3 3-4 poles fixed + accessories	300x600	horizontal	1
KS3100	Kit for S3 4 poles fixed + diff. mod.	300x600	horizontal	1
KS3120	Kit for S3 3-4 poles plug-in + accessories	300x600	horizontal	1
KS3130	Kit for S3 3-4 poles withdrawable + accessories	300x600	horizontal	1
KM3110	Kit for S3 3-4 poles fixed motor operator	300x600	horizontal	1
KM3120	Kit for S3 3-4 poles plug-in motor operator	300x600	horizontal	1
KI3110	Kit for S3 4 poles plug-in interlocked + accessories	400x600	vertical	1
KI3120	Kit for S3 4 poles plug-in interlocked	400x600	vertical	1
KI3122	Kit for S3 4 poles plug-in interlocked motor operated	400x600	vertical	1
KI3130	Kit for S3 4 poles withdrawable interlocked	400x600	vertical	1
KI3132	Kit for S3 4 poles withdrawable interlocked motor operated	400x600	vertical	1

#### Isomax S4 (rear terminals)

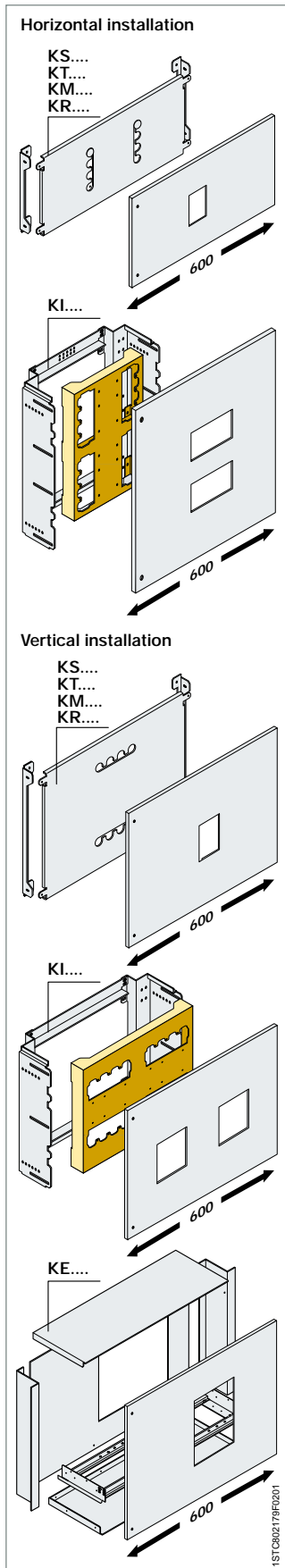
KS4110	Kit for S4 4 poles fixed + accessories	300x600	horizontal	1
KS4120	Kit for S4 3-4 poles plug-in + accessories	300x600	horizontal	1
KS4130	Kit for S4 3-4 poles withdrawable + accessories	300x600	horizontal	1
KM4110	Kit for S4 3-4 poles fixed motor operator	300x600	horizontal	1
KM4120	Kit for S4 3-4 poles plug-in motor operator	300x600	horizontal	1
KI4110	Kit for S4 3-4 poles fixed interlocked	500x600	vertical	1
KI4112	Kit for S4 4 poles fixed interlocked motor operated	500x600	vertical	1
KI4120	Kit for S4 4 poles plug-in interlocked	500x600	vertical	1
KI4122	Kit for S4 4 poles plug-in interlocked motor operated	500x600	vertical	1
KI4130	Kit for S4 4 poles withdrawable interlocked	500x600	vertical	1
KI4132	Kit for S4 4 poles withdrawable inter. motor operated	500x600	vertical	1

#### Isomax S5 (rear terminals)

KS5110	Kit for S5 3-4 poles (400A) fixed	400x600	horizontal	1
KS5120	Kit for S5 3-4 poles (400A) plug-in + accessories	400x600	horizontal	1
KS5130	Kit for S5 3-4 poles (400A) withdrawable + accessories	400x600	horizontal	1
KM5110	Kit for S5 3-4 poles (400A) fixed motor operator	400x600	horizontal	1
KM5120	Kit for S5 3-4 poles (400A) plug-in motor operator	400x600	horizontal	1
KS5210	Kit for S5 3-4 poles (400A) fixed + accessories	500x600	vertical	1
KS5220	Kit for S5 3-4 poles (400A) plug-in + accessories	500x600	vertical	1
KS5230	Kit for S5 3-4 poles (400A) withdrawable + accessories	500x600	vertical	1
KM5210	Kit for S5 3-4 poles (400A) fixed motor operator	500x600	vertical	1

# ArTu K (w=800mm)

## Kit for segregated switchboards



Code	Description	Dimensions mm (hwxw)	Installation	Pack/pieces
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### Kit for installing Isomax, Tmax and Emax circuit-breakers

#### 24 DIN modules W=600mm

##### Isomax S5 (rear terminals)

KI5110	Kit for S5 4 poles (400A) fixed interlocked	500x600	vertical	1
KI5112	Kit for S5 4 poles (400A) fixed/withdrawable inter. mot. oper.	500x600	vertical	1
KM5220	Kit for S5 3-4 poles (400A) plug-in motor operator	500x600	vertical	1
KI5120	Kit for S5 4 poles (400A) plug-in interlocked	500x600	vertical	1
KI5130	Kit for S5 4 poles (400A) withdrawable inter. mot. oper.	500x600	vertical	1

##### Isomax S6 (rear terminals)

KS6110	Kit for S6 3-4 poles fixed	500x600	horizontal	1
KM6110	Kit for S6 3-4 poles fixed motor operated	500x600	horizontal	1
KR6110	Kit for S6 3-4 poles fixed rotary handle	500x600	horizontal	1
KI6210	Kit for S6 4 poles fixed interlocked	800x600	horizontal	1
KI6212	Kit for S6 4 poles interlocked motor operated	800x600	horizontal	1
KS6130	Kit for S6 3-4 poles withdrawable	500x600	horizontal	1
KM6130	Kit for S6 3-4 poles withdrawable motor operated	500x600	horizontal	1
KI6230	Kit for S6 4 poles withdrawable interlocked	800x600	horizontal	1
KI6232	Kit for S6 3-4 poles withdrawable inter. mot. operated	800x600	horizontal	1
KS6210	Kit for S6 3-4 poles fixed	600x600	vertical	1
KS6230	Kit for S6 3-4 poles withdrawable	600x600	vertical	1
KR6210	Kit for S6 3-4 poles fixed rotary handle	600x600	vertical	1
KM6210	Kit for S6 3-4 poles fixed motor operator	600x600	vertical	1
KM6230	Kit for S6 3-4 poles withdrawable motor operator	600x600	vertical	1

##### Isomax S7 (rear terminals)

KS7110	Kit for S7 3-4 poles fixed	600x600	horizontal	1
KR7110	Kit for S7 3-4 poles fixed rotary handle	600x600	horizontal	1
KM7110	Kit for S7 3-4 poles fixed motor operator	600x600	horizontal	1
KI7210	Kit for S7 4 poles fixed interlocked	800x600	horizontal	1
KI7212	Kit for S7 4 poles fixed interlocked motor operated	800x600	horizontal	1
KI7230	Kit for S7 4 poles withdrawable interlocked	800x600	horizontal	1
KI7232	Kit for S7 4 poles withdrawable interlocked motor operated	800x600	horizontal	1
KS7210	Kit for S7 4 poles fixed rotary handle	800x600	vertical	1
KR7210	Kit for S7 4 poles fixed motor operator	800x600	vertical	1
KM7210	Kit for S7 4 poles withdrawable	800x600	vertical	1
KS7230	Kit for S7 4 poles withdrawable	800x600	vertical	1
KM7230	Kit for S7 4 poles withdrawable motor operator	800x600	vertical	1

##### Tmax T2 (rear terminals)

KT2110	Kit for T2 3-4 poles fixed	200x600	horizontal	1
KT2120	Kit for T2 3-4 poles plug-in	200x600	horizontal	1

##### Tmax T3 (rear terminals)

KT3110	Kit for T3 3-4 poles fixed	300x600	horizontal	1
KT3115	Kit for T3 3-4 poles fixed rotary handle	300x600	horizontal	1
KT3120	Kit for T3 3-4 poles plug-in	300x600	horizontal	1
KT3124	Kit for T3 3-4 poles withdrawable rotary handle	300x600	horizontal	1

##### Emax E1-E2

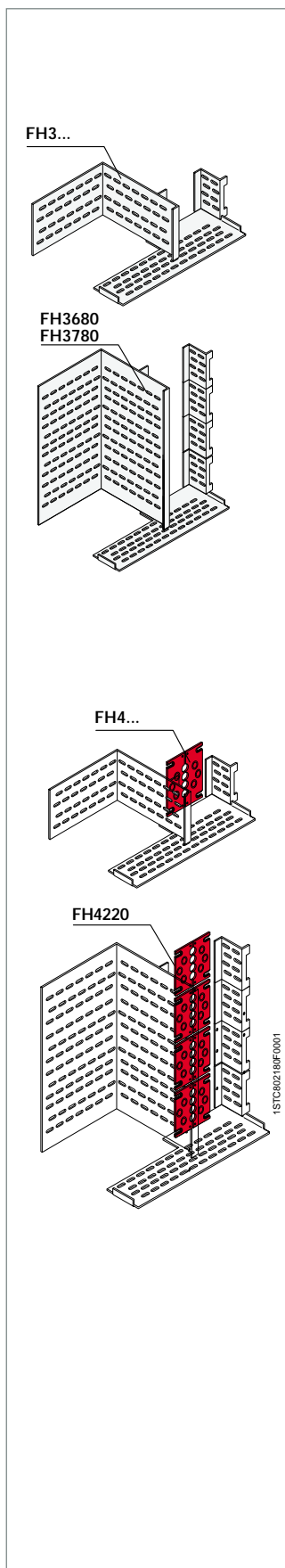
KE2215	Kit for E1-E2 3-4 poles fixed	600x600	vertical	1
KE2235	Kit for E1-E2 3-4 poles withdrawable	600x600	vertical	1

##### Emax E3

KE3205	Kit for E3 3-4 poles fixed	600x600	vertical	1
KE3236	Kit for E3 3-4 poles withdrawable	600x600	vertical	1
KE4214	Kit for E3 3-4 poles fixed	600x800	vertical	1
KE4234	Kit for E3 3-4 poles withdrawable	600x800	vertical	1

# ArTu K

## Segregations



Code	Description	Panel dimensions mm (h x w)	Pack/pieces
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### Form 3 segregations

#### Horizontal installation

<b>FH3224</b>	Isomax S1- S2 and Tmax T2 segregation kit	200x400	1
<b>FH3434</b>	Isomax S3 - S4 and Tmax T3 segregation kit	300x400	1
<b>FH3544</b>	Isomax S5 segregation kit	400x400	1
<b>FH3764</b>	Isomax S7 segregation kit	600x400	1
<b>FH3220</b>	Isomax S1-S2 and Tmax T2 segregation kit	200x600	1
<b>FH3430</b>	Isomax S3 - S4 and Tmax T3 segregation kit	300x600	1
<b>FH3540</b>	Isomax S5 segregation kit	400x600	1
<b>FH3650</b>	Isomax S6 segregation kit	500x600	1
<b>FH3760</b>	Isomax S7 segregation kit	600x600	1
<b>FH3680</b>	Isomax S6 interlocked + accessories segregation kit	800x600	1
<b>FH3780</b>	Isomax S7 interlocked + accessories segregation kit	800x600	1

#### Vertical installation

<b>FV3556</b>	Isomax S5 segregation kit D=600mm	500x400/600	1
<b>FV3558</b>	Isomax S5 segregation kit D=800mm	500x400/600	1
<b>FV3668</b>	Isomax S6 segregation kit D=800mm	600x600	1
<b>FV3788</b>	Isomax S7 segregation kit D=800mm	800x600	1

### Form 4 segregations

#### Horizontal installation

<b>FH4220</b>	Isomax S1-S2 and Tmax T2 segregation kit	200x400/600	1
<b>FH4430</b>	Isomax S3-S4 and Tmax T3 segregation kit	300x400/600	1
<b>FH4540</b>	Isomax S5 segregation kit	400x400/600	1
<b>FH4650</b>	Isomax S6 segregation kit	500x600	1
<b>FH4760</b>	Isomax S7 segregation kit	600x600	1
<b>FH4220<sup>(1)</sup></b>	Isomax S6-S7 segregation kit	800x600	1

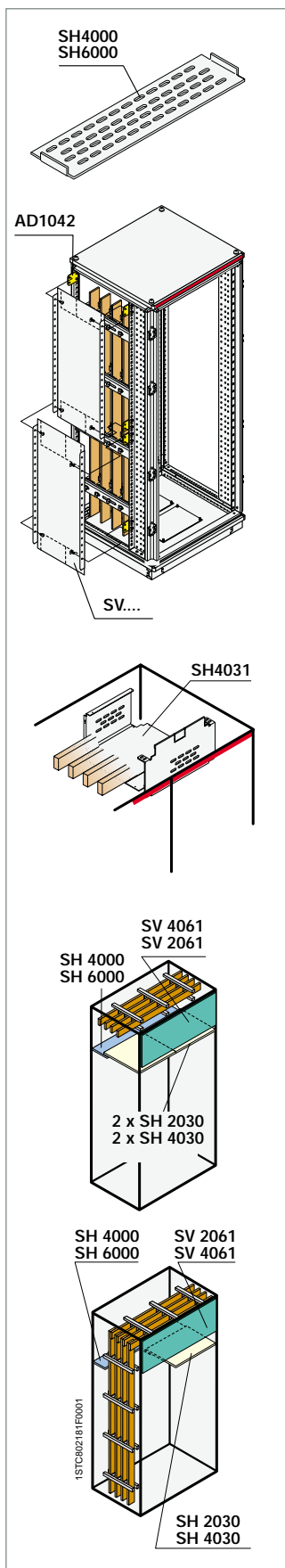
#### Vertical installation

<b>FV4556</b>	Isomax S5 segregation kit D=600mm	500x400/600	1
<b>FV4558</b>	Isomax S5 segregation kit D=800mm	500x400/600	1
<b>FV4668</b>	Isomax S6 segregation kit D=800mm	600x600	1
<b>FV4788</b>	Isomax S7 segregation kit D=800mm	800x600	1

<sup>(1)</sup> 4 pieces must be ordered

# ArTu K

## Segregations



Code	Description	Dimensions mm (w)	Pack/pieces
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### Segregations

SH4000	Universal busbar segregation shelf	400	1
SH6000	Universal busbar segregation shelf	600	1
SH4030	Horizontal busbar segregation	400	1
SH2030	Horizontal busbar segregation	600	1
SV4061	Vertical busbar segregation	400	1
SV2061	Vertical busbar segregation	600	1
SV1860	Vertical busbar segregation D=600mm	1800	1
SV2265	Vertical busbar segregation D=600mm	2000	1
SV1880	Vertical busbar segregation D=800mm	1800	1
SV2285	Vertical busbar segregation D=800mm	2000	1

Code	Description	Dimensions mm (h)	Pack/pieces
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### Busbar compartment segregations

SH4031	Horizontal busbar segregation-internal cable container	200x600/800	1
SH4032	Horizontal busbar segregation-additional cable container	200x600/800	1
SH4033	Horizontal busbar segregation-additional cable container	300x600/800	1
SH4034	Horizontal busbar segregation-structure used as cable container	400x600/800	1
SH4035	Horizontal busbar segregation-structure used as cable container	600x600/800	1
AD1024	Internal cable container rear segregation	1800	1
AD1025	Internal cable container rear segregation	2000	1

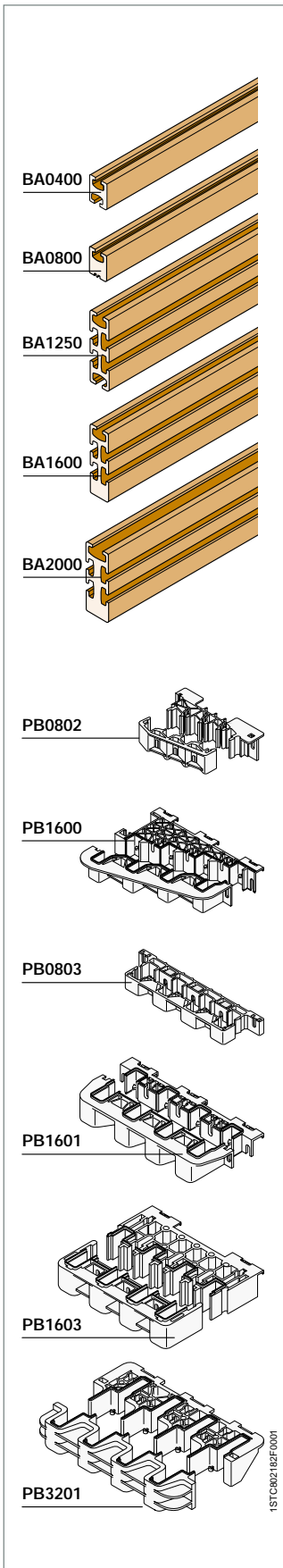
Code	Description	Dimensions mm (wxd)	Pack/pieces
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### Accessories

AD1042	N°2 spacers for fixing AD1024 or AD1025		1
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# ArTu L - M - K

## Busbars with shaped profile



Code	Description	Dimensions mm (w)	Pack/pieces
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### Distribution busbars

<b>BA0400</b>	Busbar In=400A	1730	1
<b>BA0800</b>	Busbar In=800A	1730	1
<b>BA1250</b>	Busbar In=1250A	1730	1
<b>BA1600</b>	Busbar In=1600A	1730	1
<b>BA2000</b>	Busbar In=3200A (2 busbars per phase)	1730	1

### Busbar holders

#### Scaled

<b>PB0802</b>	Scaled busbar holder In=800A - 35kA	1
<b>PB1600</b>	Scaled busbar holder up to In=1600A - 75kA	1

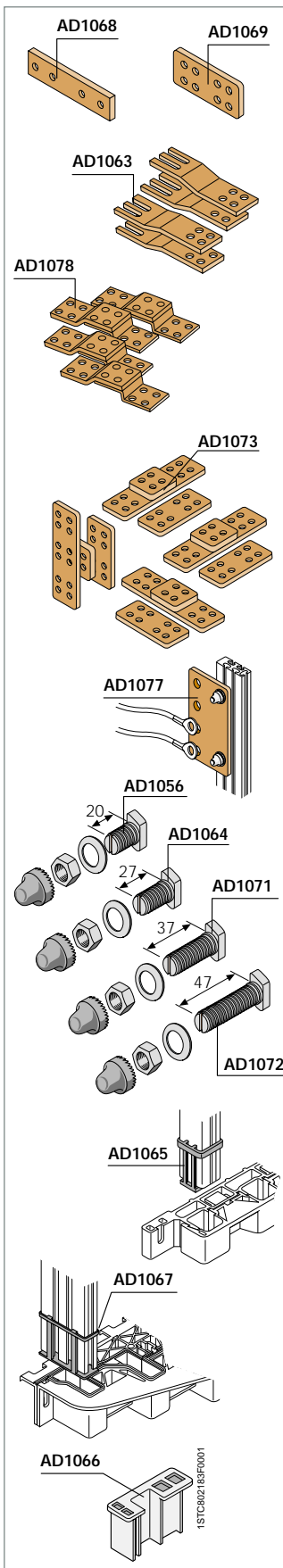
#### Linear

<b>PB0803</b>	Linear busbar holder In=800A - 35kA	1
<b>PB1601</b>	Linear busbar holder up to In=1600A - 75kA	1
<b>PB1603</b>	Linear busbar holder up to In=1600A - 65kA	1
<b>PB3201</b>	Linear busbar holder up to In=3200A - 100kA (2 busbars per phase)	1

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# ArTu L - M - K

## Busbars with shaped section



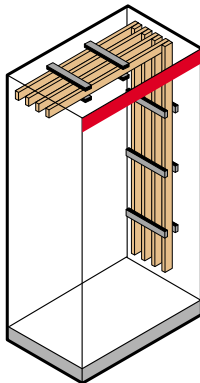
Code	Description	Pack/pieces
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### Joints for busbars

<b>AD1068</b>	N°4 joints for 800A busbars with shaped section (with 800/1250/1600A busbars)	1
<b>AD1069</b>	N°4 joints for 1250/1600A busbars with shaped section (with 1250/1600A busbars)	1
<b>AD1063</b>	N°4 joints for connecting busbars with shaped section (with rectangular pre-drilled busbars pitch 25mm)	1
<b>AD1078</b>	N°4 joints for connecting busbars with shaped section up to 3200A (with busbars with shaped section up to 1600A)	1
<b>AD1077</b>	N°4 copper 400A branch joints	1
<b>AD1073</b>	N°4 joints for connecting 3200A busbars with shaped section (with 3200A busbars with shaped section)	1

### Selection of the connection joint and busbar holder compatibility

	Horizontal busbars				
	Bars with shaped section		Flat busbars		
	Busbar holder	PB3201 (3200A)	PB1601 (1250/1600A)	PB1603 (1250/1600A)	BP3200 (3200A)
Vertical busbars Bars with shaped section	PB3201 (3200A)	2x AD1069 <sup>(1)</sup> 1x AD1073 <sup>(2)</sup>			
	PB1601 (1250/1600A)	AD1078	AD1069		AD1063
	PB1603 (1250/1600A)			AD1069	
	PB1600 (1250/1600A)		AD1069		
	PB1601 (≤800A)	AD1078	AD1068		
	PB1603 (≤800A)			AD1068	



Joints valid for "T" and "L" branches.

<sup>(1)</sup> Only "L" branch

<sup>(2)</sup> Only "T" branch

### Hammer seal screws

<b>AD1064</b>	N°12 M8 hammer screws L=27mm for flat busbars up to 10mm, complete with screw-covering cap	1
<b>AD1071</b>	N°12 M8 hammer screws L=37mm for flat busbars up to 20mm, complete with screw-covering cap	1
<b>AD1072</b>	N°12 M8 hammer screws L=47mm for flat busbars up to 30mm, complete with screw-covering cap	1
<b>AD1056</b>	N°12 M8 hammer screws L=20mm for cable terminal	1

### Resting bases

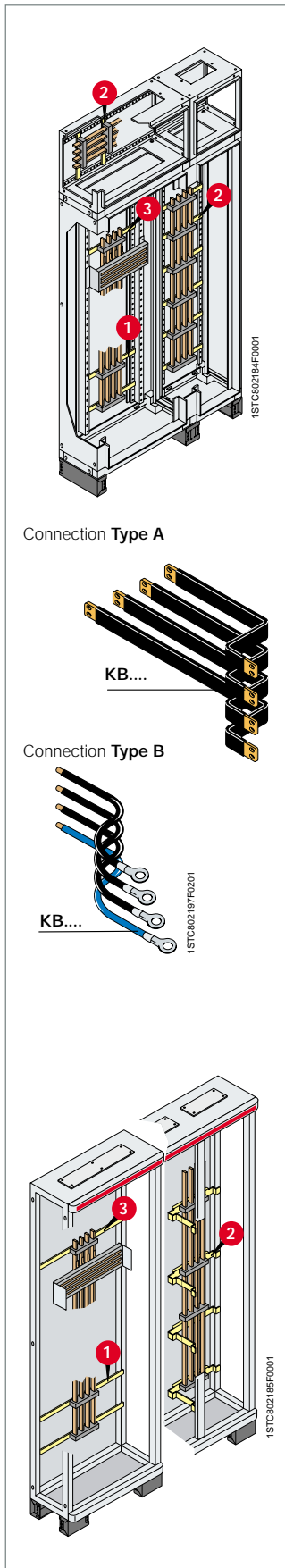
<b>AD1065</b>	N°4 resting bases for 400/800A busbars	1
<b>AD1067</b>	N°4 resting bases for 1250/1600A busbars	1

### Adapters for busbars

<b>AD1066</b>	N°4 adapters for In=400/800A busbars with busbar holder (PB1600-PB1601-PB1603)	1
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# ArTu L - M

## Crosspieces for busbars with shaped section



Code	Position	Description	Pack/pieces
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### ArTu L

#### Busbars vertically on back of structure

TL1000	1	N°2 fixing crosspieces W=600mm for linear busbar holder PB0803	1
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#### Busbars vertically on back of cable container or horizontally in cable connection box

TL3000	2	N°2 fixing crosspieces W=300mm for linear busbar holder PB0803	1
TL2000	2	N°2 fixing crosspieces W=300mm for scaled busbar holder PB0802	1

#### Connection to Unifix H system

TL1000	3	N°2 fixing crosspieces W=300mm for linear busbar holder PB0803	1
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#### Prefabricated kit for connection between apparatus and busbars with shaped section 400/800A

##### Horizontal circuit-breaker

KB1001	Connection bet. Tmax T1 <sup>(1)</sup> -T2 in the structure and busbars in the cable cont.-floor-mounted	Type B	1
KB1002	Connection bet. Tmax T3 in the structure and busbars in the cable cont.-wall/floor-mounted	Type B	1
KB1003	Connection bet. Isomax S4 in the structure and busbars in the cable cont.-floor-mounted	Type B	1
KB1004	Connec. bet. Isomax S5 (400A) in the struc. and busbars in the cable cont.-wall/floor-mounted	Type A	1
KB1005	Connec. bet. Isomax S5 (630A) in the struc. and busbars in the cable cont.-wall/floor-mounted	Type A	1

##### Vertical circuit-breaker

KB1006	Connection bet. Tmax T3 in the structure and busbars in the cable cont. - wall/floor-mounted	Type B	1
	Connection bet. Isomax S4 in the structure and busbars in the cable cont. - floor-mounted		
KB1010	Connection bet. Tmax T3 in the cable cont. and busbars in the structure - wall/floor-mounted	Type B	1
	Connection bet. Isomax S4 in the cable cont. and busbars in the structure - floor-mounted		
KB1008	Connection bet. Isomax S5 (400A) in the structure and busbars in the cable cont.-floor-mounted	Type A	1
KB1009	Connection bet. Isomax S5 (630A) in the structure and busbars in the cable cont.-floor-mounted	Type A	1
KB1012	Connection bet. Isomax S5 (400A) in the cable cont. and busbars in the structure-floor-mounted	Type A	1
KB1013	Connection bet. Isomax S5 (630A) in the cable cont. and busbars in the structure-floor-mounted	Type A	1
KB1014	Connec. bet. Tmax T3 in the structure/cable cont. and busbars on the back-wall/floor-mounted	Type A	1
KB1015	Connec. bet. Isomax S5 (400A) in the struc./cable cont. and busbars on the back-floor-mounted	Type A	1
KB1016	Connec. bet. Isomax S5 (630A) in the struc./cable cont. and busbars on the back-floor-mounted	Type A	1
KB1017	Connec. bet. Isomax S5 (630A) in the struc./cable cont. and busbars on the back-floor-mounted	Type A	1
KB1018	Connec. bet. Tmax T3 in the structure/cable cont. and busbars on the back-wall/floor-mounted <sup>(2)</sup>	Type A	1

<sup>(1)</sup> For Tmax T1 use extended terminals

<sup>(2)</sup> Only with flat busbars and scaled busbar holder.

Code	Position	Description	Pack/pieces
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### ArTu M

#### Busbars vertically on back of structure

TV6200	1	N°2 fixing crosspieces W=600mm for linear busbar holder PB0803	1
TV8200	1	N°2 fixing crosspieces W=800mm for linear busbar holder PB0803	1

#### Busbars vertically on back of additional cable container

TR3001	1	N°2 crosspieces external cable container W=300mm with PB0802	1
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#### Busbars vertically in internal cable container

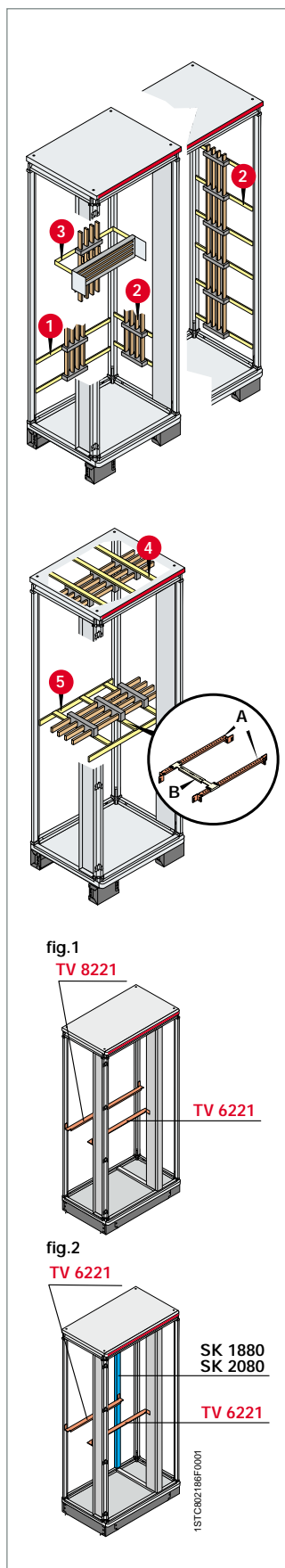
TV2000	2	N°2 crosspieces internal cable container W=200mm with PB0802	1
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#### Connection to the Unifix H system

TV6200	3	N°2 crosspieces structure W=600mm with PB0803	1
TV8200	3	N°2 crosspieces structure W=800mm with PB0803	1

# ArTu K

## Crosspieces for busbars with shaped section



Code	Position	Description	Pack/pieces
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### ArTu K

#### Busbars vertically on back of structure

TV4001	1	N°2 crosspieces structure W=400mm with PB0803 or PB0802	1
TV6202	1	N°2 crosspieces structure W=600mm with PB0803	1
TV8202	1	N°2 crosspieces structure W=800mm with PB0803	1
TV4000	1	N°2 crosspieces structure W=400mm with PB1600, PB1601 or PB1603	1
TV6201	1	N°2 crosspieces structure W=600mm with PB1601 or PB1603	1
TV8201	1	N°2 crosspieces structure W=800mm with PB1601 or PB1603	1

#### Busbars vertically on back of external cable container

TV2201	1	N°2 crosspieces external cable container W=200mm with PB0802	1
TV3201	1	N°2 crosspieces external cable container W=300mm with PB0802 or PB1600	1

#### Busbars vertically on side of internal/additional cable container

TV3000	2	N°2 crosspieces internal cable container D=250mm with PB0802	1
TV3101	2	N°2 crosspieces internal cable container D=350mm with PB0802	1
TV6101	2	N°2 crosspieces internal cable container D=600mm with PB1600 <sup>(1)</sup> , PB1601 or PB1603	1
TV8101	2	N°2 crosspieces internal cable container D=800mm with PB1600, PB1601, PB1603 or PB3201	1

#### Busbars vertically on side of structure or of additional cable container

TV6001	2	N°2 crosspieces open frame D=600mm with PB01603	1
TV6005	2	N°2 crosspieces closed frame D=600mm with PB01603	1
TV8001	2	N°2 crosspieces open frame D=800mm with PB1600, PB1601, PB1603 or PB3201	1
TV8005	2	N°2 crosspieces closed frame D=800mm with PB1600, PB1601, PB1603 or PB3201	1

#### Connection to the Unifix H system

TV6203	3	N°2 crosspieces structure W=600mm with PB0803	1
TV8203	3	N°2 crosspieces structure W=800mm with PB0803	1

#### Busbars horizontal at top

TV6101	4	N°2 crosspieces structure D=600mm with PB1603	1
TV8211	4	N°2 crosspieces structure D=800mm with PB1601, PB1603 or PB3201	1

#### Busbars horizontal at any height

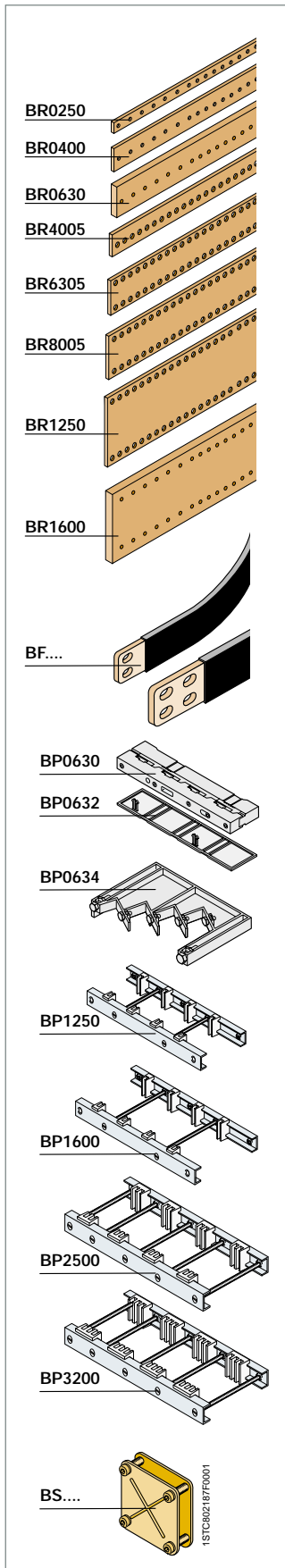
TV4221 <sup>(2)</sup>	5/A	N°2 crosspieces structure W=400mm with PB1601 or PB1603	1
TV6221 <sup>(2)</sup>	5/A	N°2 crosspieces structure W=600mm with PB1601, PB1603 or PB3201	1
TV8221 <sup>(2)</sup>	5/A	N°2 crosspieces structure W=800mm with PB1601, PB1603 or PB3201	1
TV6011	5/B	N°2 crosspieces structure D=600mm with PB1603	1
TV8011	5/B	N°2 crosspieces structure D=800mm with PB1601, PB1603 or PB3201	1

<sup>(1)</sup> With PB1600 only in the additional cable container.

<sup>(2)</sup> With structures W=800mm with internal cable container, use a TV6221 crosspiece plus a TV8221 crosspiece as in fig. 1 or two TV6221 crosspieces with the intermediate upright SK1880 or SK2080, as in fig. 2.

# ArTu L - M - K

## Flat busbars



Code	Description	Dimensions mm (w)	Pack/pieces
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### Flat busbars

<b>BR0250</b>	N°2 Busbars $I_n=400A$ , section 32x5mm	1750	1
<b>BR0400</b>	<sup>(1)</sup> N°2 Busbars $I_n=630A$ , section 50x5mm	1750	1
<b>BR0630</b>	N°2 Busbars $I_n=630A$ section 30x10mm	1750	1
<b>BR4005</b>	N°2 Busbars $I_n=400A$ , section 32x5mm	1750	1
<b>BR6305</b>	<sup>(1)</sup> N°2 Busbars $I_n=630A$ , section 50x5mm	1750	1
<b>BR8005</b>	N°2 Busbars $I_n=800A$ , section 63x5mm	1750	1
<b>BR1250</b>	N°2 Busbars $I_n=1250A$ , section 100x5mm	1750	1
<b>BR1600</b>	N°2 Busbars $I_n=1600A$ , section 100x10mm	1750	1

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

### Flexible busbars

<b>BF1602</b>	N°2 Flexible busbars, section 20x3 $I_n=250A$	2000	1
<b>BF2502</b>	N°2 Flexible busbars, section 20x5 $I_n=400A$	2000	1
<b>BF4002</b>	Flexible busbars, section 24x6 $I_n=500A$	2000	1
<b>BF4012</b>	<sup>(2)</sup> Flexible busbars, section 32x5 $I_n=630A$	2000	1
<b>BF6302</b>	Flexible busbars, section 40x8 $I_n=1000A$	2000	1
<b>BF8002</b>	Flexible busbars, section 50x10 $I_n=1250A$	2000	1

<sup>(2)</sup> Only for circuit-breakers with front extended terminals or rear terminals

Code	Description	Pack/pieces
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### Busbar holder

<b>BP0630</b>	N°2 linear busbar holders $I_n=630A - 32kA$	1
<b>BP0632</b>	N°2 terminal covers for linear busbar holders BP0630	1
<b>BP0634</b>	N°2 scaled busbar holders $I_n=630A - 23kA$	1
<b>BP1250</b>	N°2 busbar holders for busbars 5mm thick	1
<b>BP1600</b>	N°2 busbar holders for busbars 10mm thick	1
<b>BP2500</b>	N°2 busbar holders for 2 busbars per phase 10mm thick	1
<b>BP3200</b>	N°2 busbar holders for 3 busbars per phase 10mm thick	1

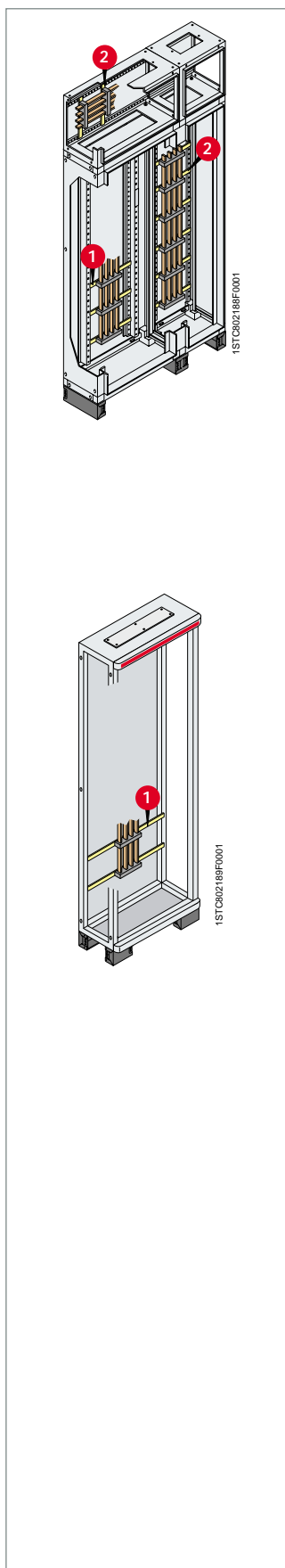
### Busbar clamps

<b>BS3250</b>	N°4 busbar tightening plates for busbars H=40mm	1
<b>BS5050</b>	N°4 busbar tightening plates for busbars H=50mm	1
<b>BS6350</b>	N°4 busbar tightening plates for busbars H=63mm	1

Kit for tightening the flexible busbars onto the rigid busbars, without the need to drill the flexible busbars.

# ArTu L - M

## Crosspieces for flat busbars



Code	Position	Description	Pack/pieces
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### ArTu L

#### Busbars vertically on back of structure or of cable container

TL1000	1	N°2 crosspieces back of structure W=600mm with BP0630	1
TL3000	2	N°2 crosspieces back of cable container W=300mm with BP0630 or BP0634	1

#### Busbars horizontally in cable connection box

TL3000	2	N°2 crosspieces back of box W=300mm with BP0630 or BP0634	1
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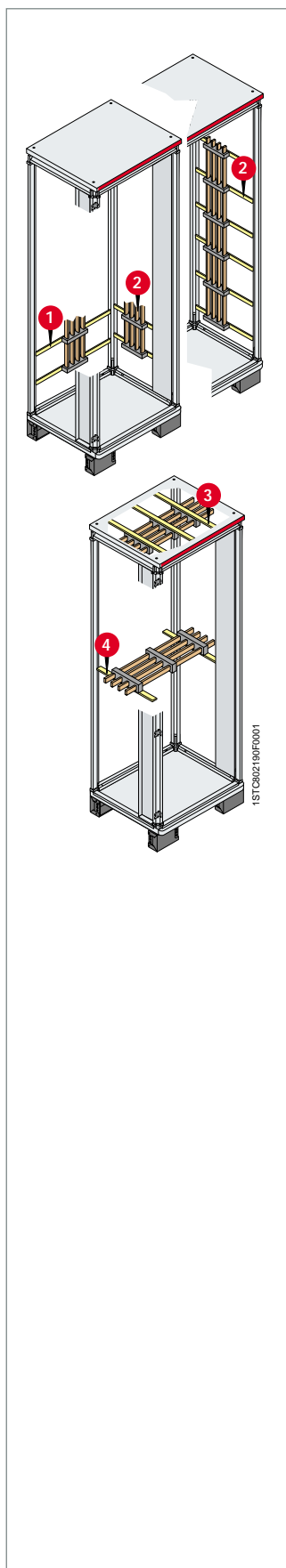
### ArTu M

#### Busbars vertically on back of structure or of external cable container

TV6200	1	N°2 crosspieces back of structure W=600mm with BP0630	1
TV8200	1	N°2 crosspieces back of structure W=800mm with BP0630	1
TR3001	1	N°2 crosspieces back of cable container W=300mm with BP0630	1

# ArTu K

## Crosspieces for flat busbars



Code	Position	Description	Pack/pieces
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### ArTu K

#### Busbars vertically on back of structure

TR7005	1	N°2 crosspieces back of structure W=600mm with BP1250, BP1600, BP2500 o BP3200	
TR8000	1	N°2 crosspieces back of structure W=800mm with BP1250, BP1600, BP2500 o BP3200	

#### Busbars vertically on side of structure

TR6001	2	N°2 crosspieces on side of structure open frame D=600mm	1
TR8001	2	N°2 crosspieces on side of structure open frame D=800mm	1
TR6005	2	N°2 crosspieces on side of structure closed frame D=600mm	1
TR8005	2	N°2 crosspieces on side of structure closed frame D=800mm	1

#### Busbars vertically on side of internal cable container

TR6101	2	N°2 crosspieces on side of cable container D=600mm	1
TR8101	2	N°2 crosspieces on side of cable container D=800mm	1
TR6301	4	N°2 horizontal crosspieces on side of cable container D=600mm	1
TR8301	4	N°2 horizontal crosspieces on side of cable container D=800mm	1

#### Busbars horizontally at top of structure

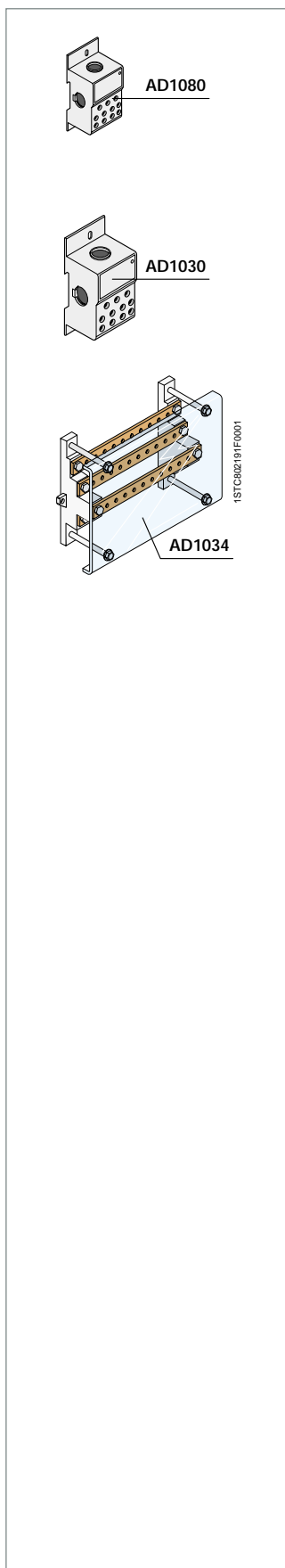
TV1261	3	N°2 horizontal crosspieces D=600mm	1
TV8211	3	N°2 horizontal crosspieces D=800mm	1

#### Busbars horizontally at any height in the structure

TR6201	4	N°2 horizontal crosspieces on structure open frame D=600mm with BP1250 or BP1600	1
TR8201	4	N°2 horizontal crosspieces on structure open frame D=800mm with BP1250, BP1600, BP2500 o BP3200	1
TR6205	4	N°2 horizontal crosspieces on structure closed frame D=600mm with BP1250 or BP1600	1
TR8205	4	N°2 horizontal crosspieces on structure closed frame D=800mm with BP1250, BP1600, BP2500 o BP3200	1

# ArTu L - M - K

## Dividers

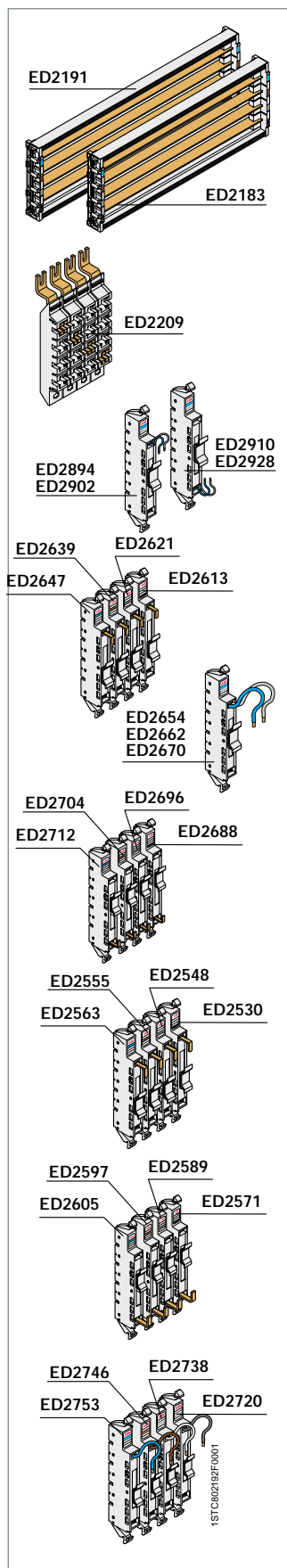


Code	Description	Pack/pieces
<b>Dividers</b>		
AD1028	Modular four-pole 80A divider	1
AD1029	Modular four-pole 125A divider	1
AD1027	Modular four-pole 160A divider	1
AD1034 <sup>(1)</sup>	Horizontal modular four-pole 250A divider (W=600mm)	1
AD1053	Horizontal modular four-pole 250A divider (W=800mm)	1
AD1080	Modular single-pole 125A divider	1
AD1081	Modular single-pole 160A divider	1
AD1030	Modular single-pole 250A divider	1
AD1031	Modular single-pole 400A divider	1
AD1038	Supports for fixing to the ArTu L structure for AD1034	1
AD1035	Supports for fixing to the ArTu M/K structure for AD1034 and AD1053	1
AD1083	Connection accessory between two AD1080	1

<sup>(1)</sup> Except wall-mounted ArTu M (D=150mm)

# Unifix cabling system

## Unifix H



Code	Description	Pack/pieces
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### Unifix H

#### Frames for Tmax and Isomax S1-S2

ED2183	Frame with 24 DIN module busbars (W=600mm)	1
ED2191	Frame with 36 DIN module busbars (W=800mm)	1

#### Power supply modules

ED2209	4P 400A power supply module (for ED2183-ED2191)	1
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#### Base modules I<sub>n</sub> 16A

ED2894	Base modules for DIN L1-N top 16A auxiliaries	1
ED2902	Base modules for DIN L1-L2 top 16A auxiliaries	1
ED2910	Base modules for DIN L1-N bottom 16A auxiliaries	1
ED2928	Base modules for DIN L1-L2 bottom 16A auxiliaries	1

#### Base modules I<sub>n</sub> 40A

ED2613	Base modules L1 top 40A	1
ED2621	Base modules L2 top 40A	1
ED2639	Base modules L3 top 40A	1
ED2647	Base modules Neutral top 40A	1
ED2654	Base modules L1/Neutral top 40A	1
ED2662	Base modules L2/Neutral top 40A	1
ED2670	Base modules L3/Neutral top 40A	1
ED2688	Base modules L1 bottom 40A	1
ED2696	Base modules L2 bottom 40A	1
ED2704	Base modules L3 bottom 40A	1
ED2712	Base modules Neutral bottom 40A	1

#### Base modules I<sub>n</sub> 63A

ED2530	Base modules L1 top 63A	1
ED2548	Base modules L2 top 63A	1
ED2555	Base modules L3 top 63A	1
ED2563	Base modules Neutral bottom 63A	1
ED2571	Base modules L1 bottom 63A	1
ED2589	Base modules L2 bottom 63A	1
ED2597	Base modules L3 bottom 63A	1
ED2605	Base modules Neutral bottom 63A	1

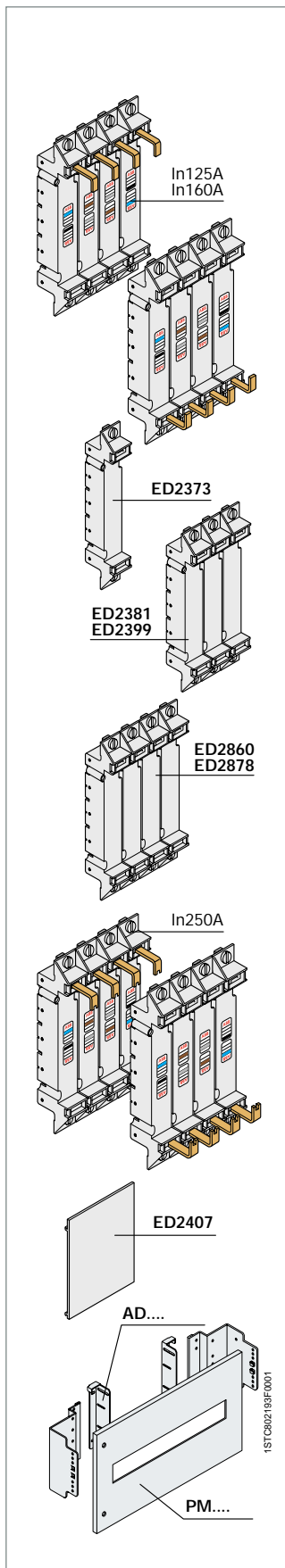
#### Base modules I<sub>n</sub> 100A

ED2720	Base modules with cable L1 top 100A	1
ED2738	Base modules with cable L2 top 100A	1
ED2746	Base modules with cable L3 top 100A	1
ED2753	Base modules with cable Neutral top 100A	1

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# Unifix cabling system

## Unifix H



Code	Description	Pack/pieces
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### Unifix H

#### Base modules I<sub>n</sub> 160A Tmax T1

ED2217	Base modules L1 top L2 bottom	1
ED2225	Base modules L2 top L1 bottom	1
ED2233	Base modules L3 top Neutral bottom	1
ED2241	Base modules Neutral top L3 bottom	1
ED2373	Base modules false pole for residual release	1
ED2381	Base modules false pole for solenoid operator	1

#### Base modules I<sub>n</sub> 125A Isomax S1

ED2761	Base modules L1 top L2 bottom	1
ED2779	Base modules L2 top L1 bottom	1
ED2787	Base modules L3 top Neutral bottom	1
ED2795	Base modules Neutral top L3 bottom	1
ED2860	Base modules false pole for Isomax RC residual release	1

#### Base modules I<sub>n</sub> 160A Tmax T2

ED2258	Base modules L1 top L2 bottom	1
ED2266	Base modules L2 top L1 bottom	1
ED2274	Base modules L3 top Neutral bottom	1
ED2282	Base modules N top L3 bottom	1
ED2373	Base modules false pole for residual release	1
ED2399	Base modules false pole for solenoid operator	1

#### Base modules I<sub>n</sub> 160A Isomax S2

ED2803	Base modules L1 top L2 bottom	1
ED2811	Base modules L2 top L1 bottom	1
ED2829	Base modules L3 top N bottom	1
ED2837	Base modules N top L3 bottom	1
ED2878	Base modules false pole for Isomax RC residual release	1

#### Base modules I<sub>n</sub> 250A Tmax T3

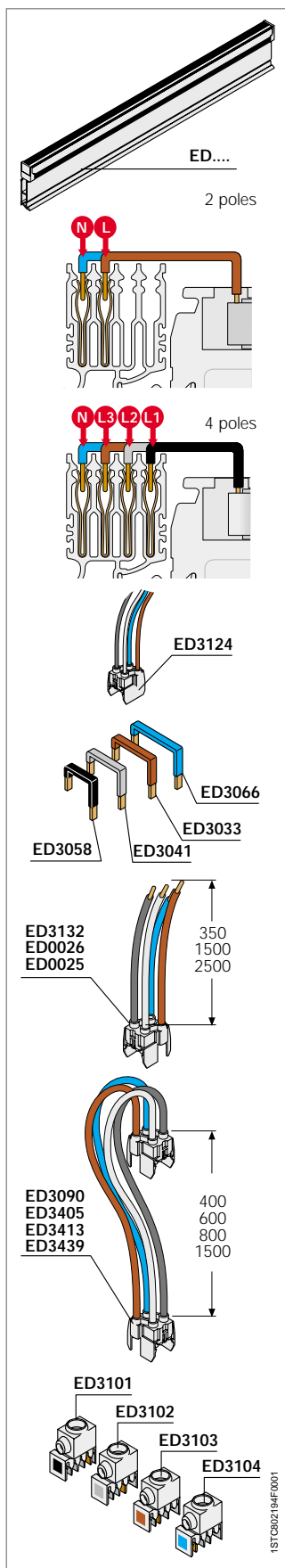
ED2290	Base modules L1 top	1
ED2308	Base modules L2 top	1
ED2316	Base modules L3 top	1
ED2324	Base modules N top	1
ED2332	Base modules L1 top	1
ED2340	Base modules L2 top	1
ED2357	Base modules L3 top	1
ED2365	Base modules N top	1
ED2373	Base modules false pole for residual release	1

#### Accessories

ED2845	Base modules false pole for DDA	1
ED2852	Base modules false pole for modular MDRC	1
ED2407	N°2 covers for IP20 (for ED2183-ED2191) W=173mm (10 DIN modules)	1
ED2936	N°6 duct supports	1
AD1097	Kit for ArTu L for ED2183	1
AD1061	Kit for ArTu M - K without segregation for ED2183,ED2191	1
PM3624	Modular front panel 300x600mm (h <sub>xw</sub> )	1
PM3836	Modular front panel 300x800mm (h <sub>xw</sub> )	1

# Unifix cabling system

## Unifix L



Code	Description	Pack/pieces
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### Unifix L

#### 2-pole busbars

ED2985	100A 2P 8 module busbars	1
ED2993	100A 2P 12 module busbars (W=400mm)	1
ED3009	100A 2P 18 module busbars	1
ED3017	100A 2P 24 module busbars (W=600mm)	1
ED3025	100A 2P 36 module busbars (W=800mm)	1

#### 4-pole busbars

ED2944	100A 4P 12 module busbars (W=400mm)	1
ED2951	100A 4P 18 module busbars	1
ED2969	100A 4P 24 module busbars (W=600mm)	1
ED2977	100A 4P 36 module busbars (W=800mm)	1

#### Connections for various apparatus

ED3108	Connection with 2 conductors L/N 16A	1
ED3116	Connection with 3 conductors L1/L2/L3 16A	1
ED3124	Connection with 4 conductors L1/L2/L3/N 16A	1
ED3355	Connection with 2 conductors L1/N 40A	1
ED3363	Connection with 3 conductors L1/L2/L3 40A	1
ED3371	Connection with 4 conductors L1/L2/L3/N 40A	1

#### Connections for apparatus

ED3272	N°10 connections L1-N 40 A	1
ED3280	N°10 connections L2-N 40 A	1
ED3298	N°10 connections L3-N 40 A	1
ED3033	N°10 connections L 1 100A	1
ED3041	N°10 connections L 2 100A	1
ED3058	N°10 connections L 3 100A	1
ED3066	N°10 connections N 100A	1
ED3132	Power supply with 4P 100A cable (W=350mm)	1
ED0026	Power supply with 4P 100A cable (W=1500mm)	1
ED0025	Power supply with 4P 100A cable (W=2500mm)	1

#### Power supply modules with cable

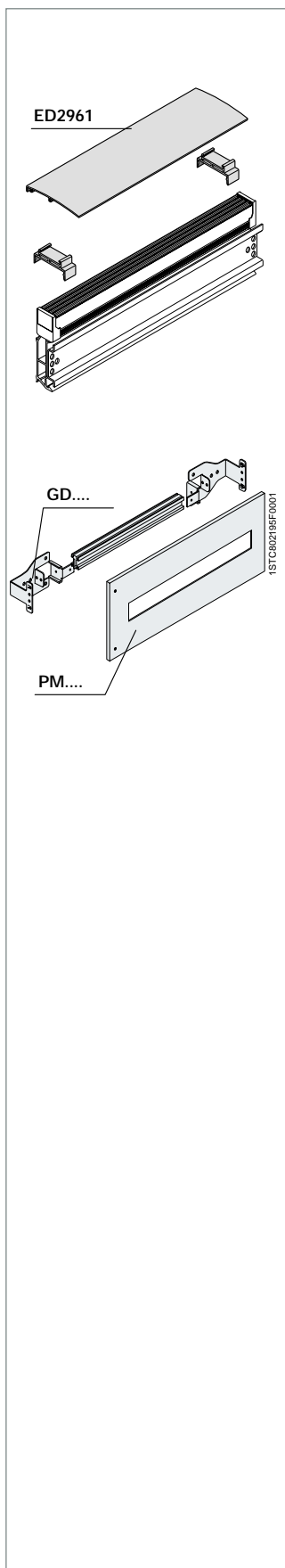
ED3082	Parallel power supply module 2P 100A with cable W=600mm	1
ED3405	Parallel power supply module 4P 100A with cable W=400mm	1
ED3090	Parallel power supply module 4P 100A with cable W=600mm	1
ED3413	Parallel power supply module 4P 100A with cable W=800mm	1
ED3439	Parallel power supply module 4P 100A with cable W=1500mm	1

#### Power supply modules without cable In 100A

ED3101	N°10 single-pole power supply modules L 1	1
ED3102	N°10 single-pole power supply modules L 2	1
ED3103	N°10 single-pole power supply modules L 3	1
ED3104	N°10 single-pole power supply modules N	1

# Unifix cabling system

## Unifix L



Code	Description	Pack/pieces
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### Unifix L

#### Accessories

ED3140	N°10 power supply terminals 63A for cable 25mm <sup>2</sup>	1
ED2961	N°10 busbar covers - W=600mm	1
ED2962	N°2 busbar covers - W=800mm	1
GD1520	DIN rail kit and supports ArTu L W=600mm	1
GD4002	DIN rail kit and supports ArTu K without segregation W=400mm	1
GD6002	DIN rail kit and supports ArTu M / K without segregation W=600mm	1
GD8002	DIN rail kit and supports ArTu M / K without segregation W=800mm	1
PM1500	Modular front panel 150x600mm (hwxw) only ArTu L	1
PM2424	Modular front panel 200x400mm (hwxw)	1
PM2624	Modular front panel 200x600mm (hwxw)	1
PM2836	Modular front panel 200x800mm (hwxw)	1

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