

ENCLOSURES AND SYSTEMS FOR ELECTRIC CABINETS

2019

product catalogue



 **LAFER**[®]
simple ideas for great projects

40 1979
2019



Quick

Small electrical cabinets for industrial, civil and service sector up to 250 A



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Electrical cabinets for industrial, civil and service sector up to 630 A



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All Lafer series are available in stainless steel



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**New
2019**

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Motor Control Center with withdrawable units up to 6300 A



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The perfect Partner exists.



A company able to innovate, evolve and believe in the future and in progress.

Specialised in the production of electrical cabinets for energy distribution, automation and rack systems, Lafer is the perfect blend between innovation and flexibility.

It works with customers in Italy and abroad on the strength of a cutting-

edge, automated production system.

All stages of processing are carried out internally which allow us to offer a full management of each order.

Lafer ensures certain delivery times that are always associated with a complete service meeting the customer's

requirements but, above all, Lafer manufactures quality products reflecting 100% its way of being: advanced, customized systems that perfectly meet the requirements of the installer, the customer and the end user.



production
system video



The numbers of a big company

Lafer manufactures all products inhouse in a **12.000 m²** structure that hosts all phases of processing.

To manage at best more than 1,000 orders per month, a perfect organization is needed: more than **60 experienced operators** in **13 dedicated departments**, technicians and professionals

of the sector allow us to ensure the quality of the finished product, respecting project specifications and times required.



Optimization and evolution of production processes

Advanced and highly evolved technologies are required by a production system which makes flexibility its starting point.

Integrated management of orders at any time to monitor the progress of the processing steps.

Robotic lines and computerized systems allow us to work quickly, efficiently, without giving up the quality of the product realized.





FAST-ONE™

Quick, intuitive
and advanced.
Imagine the cabinet, with
FAST-ONE you realize it.

FAST-ONE™ solution changes your way of working cleverly. The easy, quick, efficient configurator accelerates the production phases and optimizes the verifications eliminating automatically the errors. It reduces costs and time, it makes the design phase more fluid, it simplifies the manufacturing, the assembly and the installation of your projects. Today you can order the products in ready delivery. Universal and modular, it is the maximum freedom without useless restrictions.

FAST-ONE™. Studied and developed with you and for you.

www.fast-one.it

**New "Online Store": Check the availability
of products in stock ready for delivery.**

Fast-one is a Windows environment package for the drawing of electrical cabinets and the creation of bill of materials and respective costs.

What FAST-ONE can do:

- Frontal view and plan of the cabinet structure.
- Insertion and replacement of assembly parts.
- Possibility to choose devices of all brands (ABB, SCHNEIDER, SIEMENS, etc.) with automatic loading of the panel for each circuit breaker.
- Creation of the bill of materials used in the drawing and possibility of sending the project by e-mail directly to Lafer.
- Automatic determination of busbar holders and busbar systems dimensions according to electrical features.
- Quotation and updated cost estimate.
- Determination of the overtemperature inside the cabinet.
- Possibility of customizing the project with customer's logo or header.
- PDF and DWG export.
- Available in 5 languages: Italian, English, German, French and Spanish.



Some Fast-one illustrative configurations



Quick



Slim



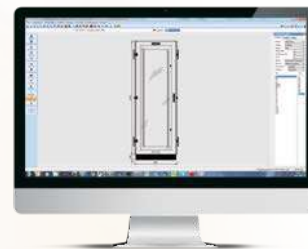
Easy 630



Compact



Automation



Lafer@ck



MC-Cub



ME-Cub



PW-Tech



Quick

Small electrical cabinets for industrial, civil and service sector up to 250 A





Later. Around you



**Their name has changed, the advantages are increasing.
Quick: the new series of electrical cabinets that replaces "Wall cabinets" series.**

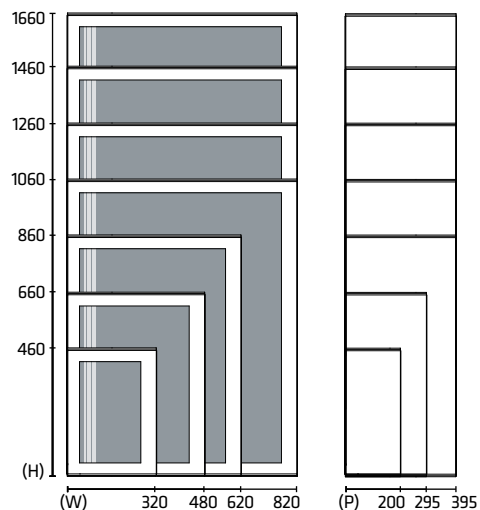
**Better access from the front with the increase in the width and easy disassembly of the frames independently fixed.
Same internal accessories available for Slim, Easy 630 and Compact series thanks to the ModularDIN™ system that enables rapidity and precision of the assembly of modular circuit breakers.**

Main characteristics

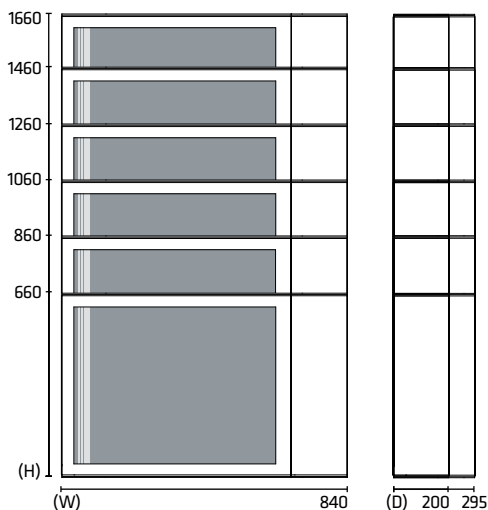
- Monoblock structure made of welded sheet with a thickness of 1,2 mm.
- Degree of protection from IP31 (open version) to IP55 with blind door or transparent door with toughened glass.
- Top and bottom completely removable.
- Possibility of vertical connection and frame for recessed mounting.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Patented and certified earth connection system.
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, stainless steel small cabinet.

Technical specifications

Small cabinet



Small cabinet with cable housing



	Width (W) mm	Height (H) mm	Depth (D) mm
Small cabinet	320 (11 modules)	460 / 660 / 860 / 1060 / 1260 / 1460 / 1660 (usable space = H - 60)	200 / 295 / 395 (usable space = P - 75)
	480 (16 modules)		
	620 (24 modules)		
	820 (34 modules)		
Small cabinet with cable housing	840 (24 modules)	660 / 860 / 1060 / 1260 / 1460 / 1660 (usable space = H - 60)	200 / 295 (usable space = P - 75)

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 250 A
		Rated short-time withstand current for 1 sec. (I_{cw})	15 kA

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP31 to IP55
	Covers height (h)	150 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000	
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front	
	Execution	Form 1	
	Material	Structure	Pickled plate, 12/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

Typology

Small cabinet: monoblock structure made of welded sheet with a thickness of 1,2 mm.



Small cabinet with cable housing: monoblock structure made of welded sheet with a thickness of 1,2 mm, with cable housing for cables, terminal block or busbar system.



Top and bottom: made of sheet 1,2 mm thick, easily removable and designed for the connection of wiring channels of the most known brands.

Cable ducting plate: plate made of Aluzinc sheet steel with gasket. Hole compatible with fastening systems of cable ducting commercially available.



Inox: on request, stainless steel small cabinet.

Accessories

Connection frame: it allows a vertical connection between two small cabinets.

Plinth: available with a height of 60 or 120 mm.



Wiring modality

ModularDIN™ system: rapidity of assembly and disassembly of aluminium LDIN modular rails with the new joint system without screws. It is compatible with the most splitter blocks commercially available.

Wiring plate: plate made of Aluzinc sheet steel with a thickness of 1,5 mm, removable from the front for bench wiring. Plate with multiple holes to fasten ModularDIN™ and supports of any brand of circuit breakers.



Details

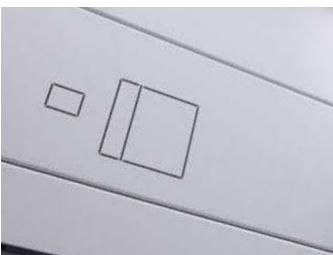
Glass door: made of sheet 1,5 mm thick with grey toughened glass.



Blind door: it is possible to replace the glass door with the blind door. The blind door is made of sheet 1,5 mm thick with a gasket to guarantee the IP55 degree. On request, holes for devices and circuit breakers.



Holed covers: covers arranged with holes for devices and circuit breakers of any brand. According to the type of circuit breaker used, we supply a specific support kit.



Hinges and locks: an exclusive system developed by Lafer that enables a quick opening and closing of covers through screws by ¼ turn. All covers are reversible: it is possible to invert the locks with the hinges in few seconds.



Vertical frames: easily removable as they are fixed to the structure independently.



Opening systems



IP55 standard: small cabinet with glass door and inner covers.



Swivel frame: frontal glass door with hinged covers fixed on a swivel frame in order to get directly to the wiring plate.



Double section: the structure of the small cabinet can be opened side-ways. Solution with glass door and inner covers. Thanks to this system it is possible to open the frontal part of the small cabinet and get directly to the wiring plate.



IP31 frame: it is possible to replace the glass door or the blind door with the IP31 frame. This solution is possible both with covers and with inner door.



Inner door: designed with glass door and inner door.



Slim

Electrical cabinets for industrial,
civil and service sector up to 630 A





Later. Around you



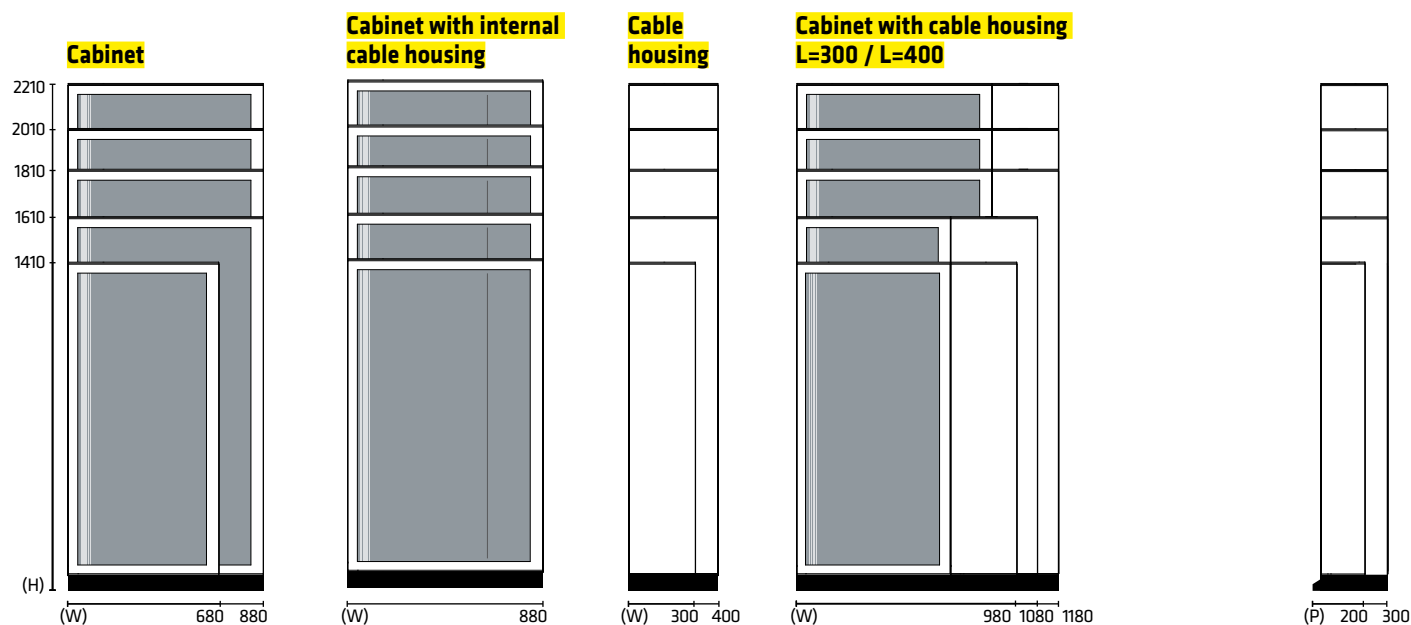
The new series of electrical cabinets designed to have the maximum access to the wiring and to the maintenance.

Complete modularity of the cabinet divided by the cable housing with possibility of removing the frontal part. Same internal accessories available for Quick, Easy 630 and Compact series thanks to the ModularDIN™ system that enables rapidity and precision of assembly of modular circuit breakers.

Main characteristics

- Monoblock structure made of sheet with a thickness of 1,5 mm.
- Degree of protection from IP30 (open version) to IP43 with blind door or transparent door with toughened glass.
- Frontal part completely removable.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Patented and certified earth connection system.
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, stainless steel cabinet.

Technical specifications



	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	680 (24 modules)	1410 / 1610 / 1810 / 2010 / 2210 (usable space = H - 210)	200 (usable space = 125) 300 (usable space = 218)
	880 (36 modules)		
Cabinet with internal cable housing	880 (24 moduli)		
Cabinet with cable housing	680 + 300 (24 moduli)		
	680 + 400 (24 moduli)		
	880 + 300 (36 moduli)		
Cable housing	300		
	400		

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 630 A
		Rated short-time withstand current for 1 sec. (I_{cw})	25 kA

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP43
	Covers height (h)	150 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000	
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front / Side	
	Execution	Form 1 / Form 2a	
	Material	Structure	Pickled plate, 15/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

ENG_04_2018 - studiobrand.it - In order to ensure a continuous improvement of the products, Lafer reserves the right to make modifications to the characteristics described (without notice).

Typology

Cabinet: monoblock structure made of welded sheet with a thickness of 1,5 mm.



Cabinet with internal cable housing: monoblock structure made of welded sheet with a thickness of 1,2 mm, with internal cable housing for cables, terminal block or busbar system.



Cabinet with cable housing: monoblock structure made of welded sheet with a thickness of 1,2 mm, with cable housing for cables, terminal block or busbar system.



Cable housing: monoblock structure made of welded sheet with a thickness of 1,5 mm, which can be positioned near the cabinet.



IP30 frame: it is possible to replace the glass door with the IP30 frame (open version).

Wiring modality



Wiring: possibility of horizontal and vertical wiring.



ModularDIN™ system: rapidity of assembly and disassembly of aluminium LDIN modular rails with the new joint system without screws. It is compatible with the most splitter blocks commercially available.



Cable ducting fastening: kit for fixing the cable ducting vertically and horizontally.



Outer details

Glass door: made of sheet 1,5 mm thick with grey toughened glass.



Holed covers: covers arranged with holes for devices and circuit breakers of any brand. According to the type of circuit breaker used, we supply a specific support kit.



Hinges and locks: an exclusive system developed by Lafer that enables a quick opening and closing of covers through screws by 1/4 turn. All covers are reversible: it is possible to invert the locks with the hinges in few seconds.



Door disassembly: it is possible to remove the door easily by taking out the outer pin hinge.



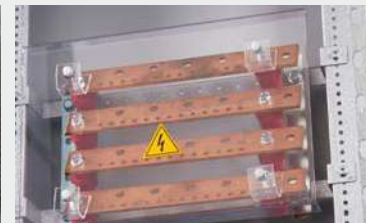
Inner details



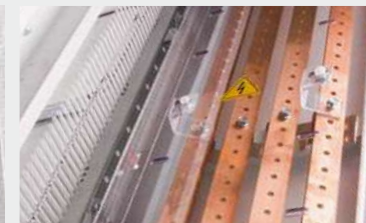
Frontal part disassembly: rapidity of intervention for the maintenance.



Circuit breakers fastening: kit for fixing modular circuit breakers, disconnecting switches and moulded case circuit breakers of any brand.



Horizontal busbar system: busbar system up to 630 A.



Vertical busbar system: busbar system located in the cable housing L=300 and L=400 up to 630 A.



Vertical segregation: possibility to divide the cabinet between switches zone and busbars compartment.



Fixing bracket: terminal block cables and cable ducting.



Easy 630

Electrical cabinets for industrial
and service sector up to 630 A





Lafer. Around you

Easy 630

Electrical cabinets for industrial and service sector up to 630 A



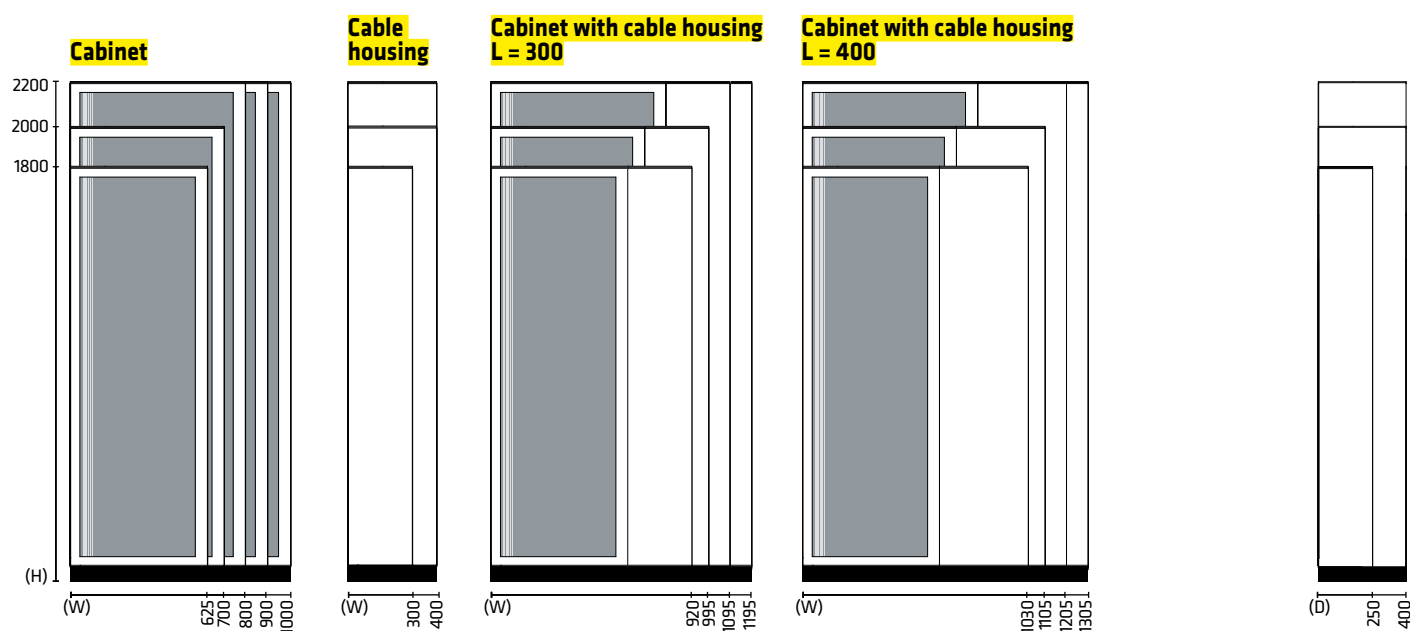
Handy and practical.

They offer a quick wiring solution by removing completely the frontal part. Same internal accessories available for Quick, Slim and Compact series thanks to the ModularDIN™ system that enables rapidity and precision of the assembly of modular circuit breakers.

Main characteristics

- Assembled structure made of sheet with a thickness of 1,5 mm.
- Degree of protection from IP30 (open version) to IP55 with blind door or transparent door with toughened glass.
- Frontal part completely removable.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Patented and certified earth connection system.
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, stainless steel cabinet.

Technical specifications



	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625 (24 modules)	1800 / 2000 / 2200 (usable space = H - 200)	250 (usable space = 125) 400 (usable space = 218)
	700 (24 modules)		
	800 (34 modules)		
	900 (36 modules)		
	1000 (46 modules)		
Cable housing	300	1800 / 2000 / 2200 (usable space = H - 200)	250 / 400
	400		
Cabinet with cable housing	625 + 300 (24 modules)	1800 / 2000 / 2200 (usable space = H - 200)	250 (usable space = 125) 400 (usable space = 218)
	700 + 300 (24 modules)		
	800 + 300 (34 modules)		
	900 + 300 (36 modules)		
	625 + 400 (24 modules)		
	700 + 400 (24 modules)		
	800 + 400 (34 modules)		
	900 + 400 (36 modules)		

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 630 A
		Rated short-time withstand current for 1 sec. (I_{cw})	25 kA

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP55
	Covers height (h)	150 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000	
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front / Side / Rear	
	Execution	Form 1 / Form 2a	
	Material	Structure	Pickled plate, 15/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 - 25/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

Typology

Cabinet: assembled structure made of sheet with a thickness of 1,5 mm.



Cabinet with cable housing: assembled structure made of sheet with a thickness of 1,5 mm and with cable housing for cables, terminal block or busbar system.



Cable housing: assembled structure made of sheet with a thickness of 1,5 mm, which can be positioned near the cabinet.



IP30 frame: it is possible to replace the glass door with the IP30 frame (open version).



Inox: on request, stainless steel cabinet.

Wiring modality



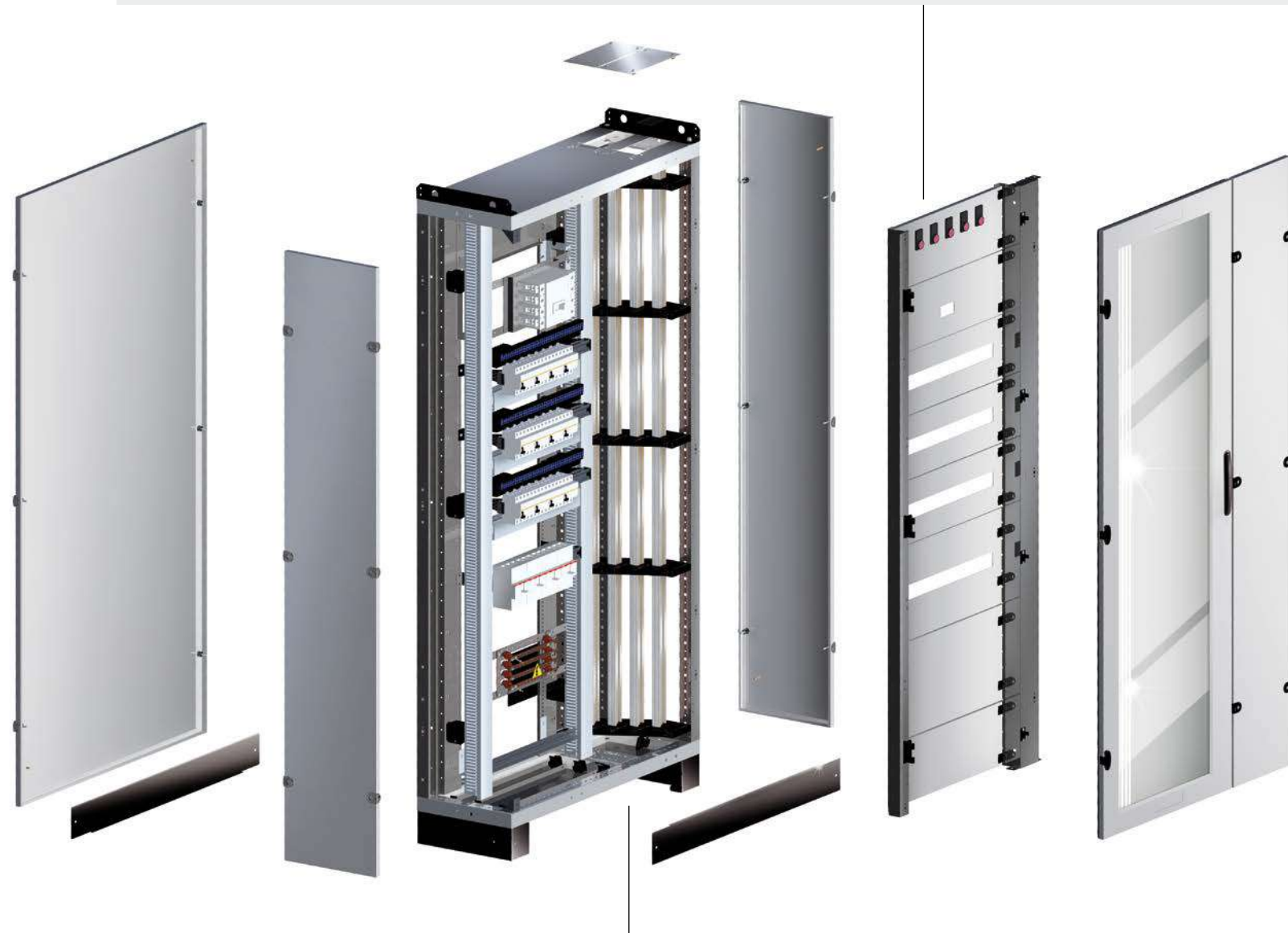
Wiring: possibility of horizontal and vertical wiring.



ModularDIN™ system: rapidity of assembly and disassembly of aluminium LDIN modular rails with the new joint system without screws. It is compatible with the most splitter blocks commercially available.



Cable ducting fastening: kit for fixing the cable ducting vertically and horizontally.



Outer details

Glass door: made of sheet 1,5 mm thick with grey toughened glass.



Holed covers: covers arranged with holes for devices and circuit breakers of any brand. According to the type of circuit breaker used, we supply a specific support kit.



Hinges and locks: an exclusive system developed by Lafer that enables a quick opening and closing of covers through screws by 1/4 turn. All covers are reversible: it is possible to invert the locks with the hinges in few seconds.



Door disassembly: it is possible to remove the door easily by taking out the outer pin hinge.



Inner details



Frontal part disassembly: rapidity of intervention for the maintenance.



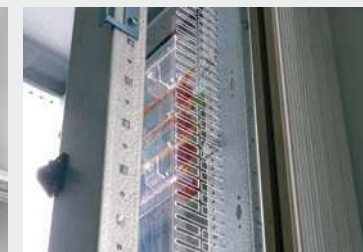
Circuit breakers fastening: kit for fastening modular circuit breakers, disconnecting switches and moulded case circuit breakers of any brand.



Sloping Smart-Energy: busbar system on cable housing W=300 and W=400.



Linear Smart-Energy: busbar system on circuit breakers space.



Vertical dividing panel: possibility of dividing the cabinet between circuit breakers space and cable housing.



Compact

Electrical cabinets for industrial and service sector up to 1600 A





C

Lafer. Around you



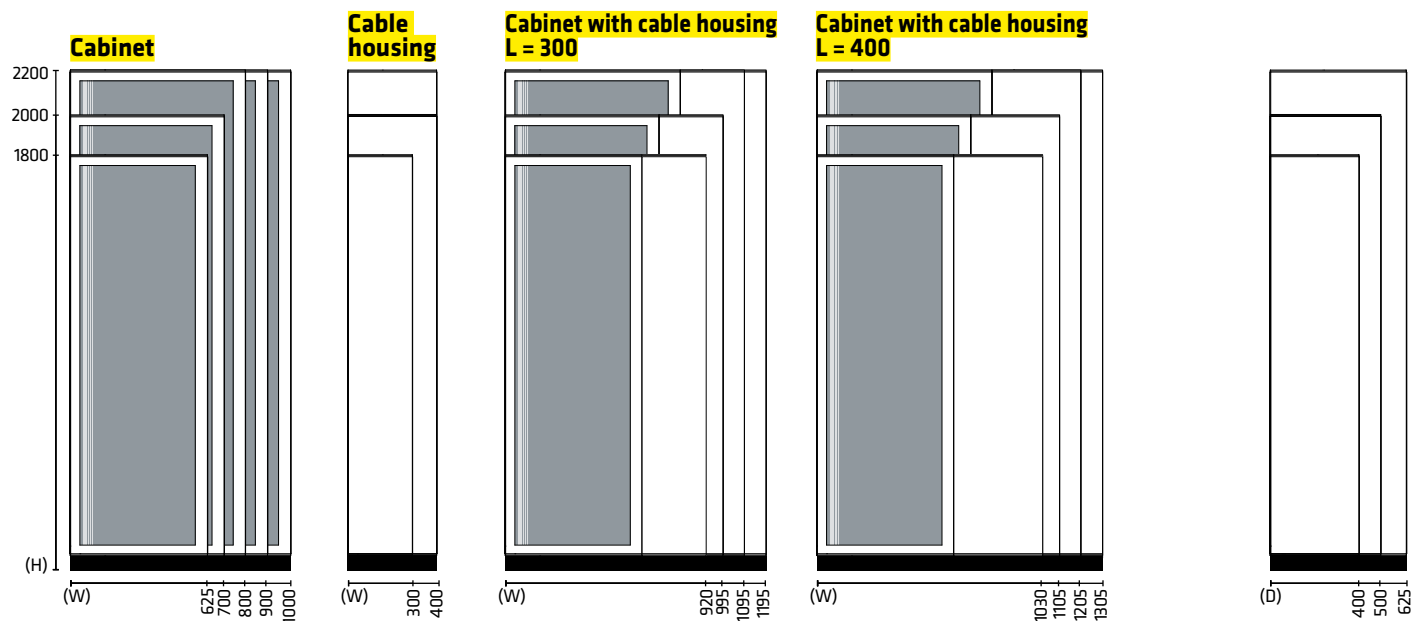
Versatile and strong.

They offer a quick wiring solution with a wide range of solutions: wiring plate, internal wiring frame, inner door and swivel frame. Same internal accessories available for Quick, Slim and Easy 630 series thanks to the ModularDINTM system that enables rapidity and precision of the assembly of modular circuit breakers.

Main characteristics

- Assembled structure made of sheet with a thickness of 2 mm.
- Degree of protection from IP30 (open version) to IP55 with blind door or transparent door with toughened glass.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Patented and certified earth connection system.
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, stainless steel cabinet.

Technical specifications



	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625 (24 modules)	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 (usable space = 218)
	700 (24 modules)		
	800 (34 modules)		
	900 (36 modules)		
	1000 (46 modules)		
Cable housing	300	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625
	400		
Cabinet with cable housing	625 + 300 (24 modules)	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625
	700 + 300 (24 modules)		
	800 + 300 (34 modules)		
	900 + 300 (36 modules)		
	625 + 400 (24 modules)		
	700 + 400 (24 modules)		
	800 + 400 (34 modules)		
	900 + 400 (36 modules)		

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 1600 A
		Rated short-time withstand current for 1 sec. (I_{cw})	50 kA

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP55
	Covers height (h)	150 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000	
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front / Side / Rear	
	Execution	Form 1 / Form 2a / Form 2b / Form 3a	
	Material	Structure	Pickled plate, 15/10 - 20/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 - 25/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

Typology

Cabinet: assembled structure made of sheet with a thickness of 2 mm.



Cabinet with cable housing: assembled structure made of sheet with a thickness of 2 mm, with cable housing for cables, terminal block or busbar system.



Cable housing: assembled structure made of sheet with a thickness of 2 mm, which can be positioned near the cabinet.

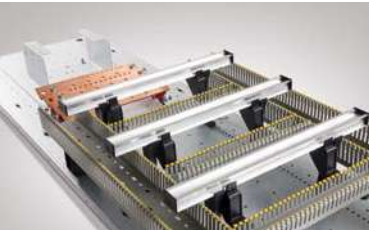


IP30 frame: it is possible to replace the glass door with the IP30 frame (open version).



Inox: on request, stainless steel cabinet.

Wiring modality



Wiring plate: plate made of sheet with a thickness of 2,5 mm, removable from the front for bench wiring. Plate with more holes to fasten ModularDIN™ and supports of any brand of circuit breakers.



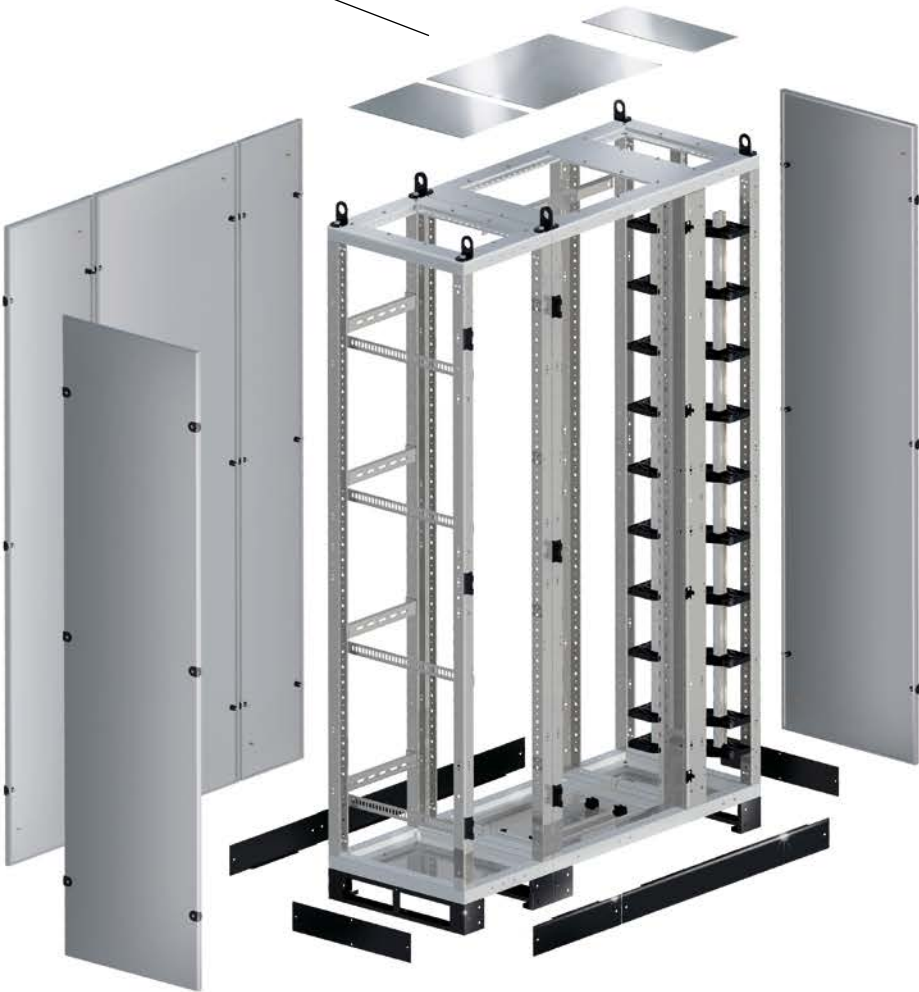
Internal wiring frame: two vertical uprights made of Aluzinc sheet steel with a thickness of 2 mm to fasten ModularDIN™ and supports of any brand of circuit breakers.



ModularDIN™ system: rapidity of assembly and disassembly of aluminium LDIN modular rails with the new joint system without screws. It is compatible with the most splitter blocks commercially available.



Cable ducting fastening: kit for fixing the cable ducting vertically.

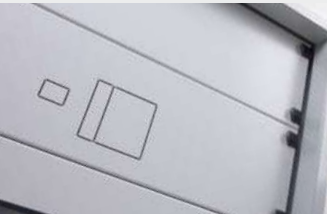


Outer details

Glass door: made of sheet 2 mm thick with grey toughened glass.



Holed covers: covers arranged with holes for devices and circuit breakers of any brand. According to the type of circuit breaker used, we supply a specific support kit.



Hinges and locks: an exclusive system developed by Lafer that enables a quick opening and closing of covers through screws by ¼ turn. All covers are reversible: it is possible to invert the locks with the hinges in few seconds.



Door disassembly: it is possible to remove the door completely by taking out the outer pin hinge.



Inner details



Inner door: designed with glass door and inner door.



Swivel frame: frontal glass door with hinged covers fixed on a swivel frame in order to get directly to the wiring plate.



Sloping Smart-Energy: busbar system placed on the cable housing W= 300 and W=400 and on the top.



Linear Smart-Energy: vertical busbar system placed on circuit breakers space and on the top of the cabinet.





Automation

Electrical cabinets for industrial automation
up to 4000 A



Later. Around you





Strong and customized.

Designed and produced to meet all requirements of the industrial automation. They offer a wiring solution with a plate that can be inserted frontally or sideways. They can be equipped with sloping or linear Smart-Energy busbar system.

Main characteristics

- Assembled structure made of sheet with a thickness of 2 mm.
- Degree of protection from IP30 (open version) to IP55 with blind door or transparent door with toughened glass.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- On request, stainless steel cabinet.
- Patented and certified earth connection system.
- Full range of internal finishing accessories to provide solutions for any requirement.
- Seismic test CESI no. B3020327 with acceleration 1,0g.



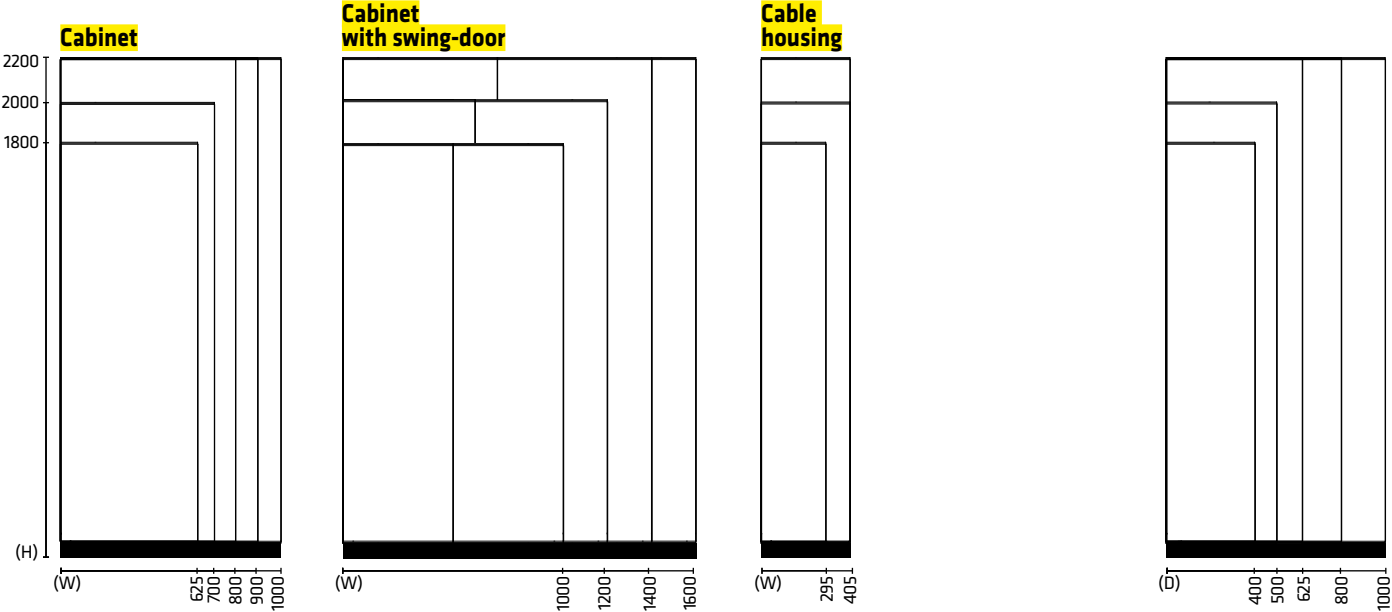
Automation Attic Power

- Arrangement for busbar system positioning under the roof of the cabinet. Equipped with a segregation conceived for an easy and fast connection.



Technical specifications

Automation Standard



	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)
	700		
	800		
	900		
	1000		
Cabinet with swing-door	1000	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)
	1200		
	1400		
	1600		
Cable housing	300	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 / 800 / 1000
	400		

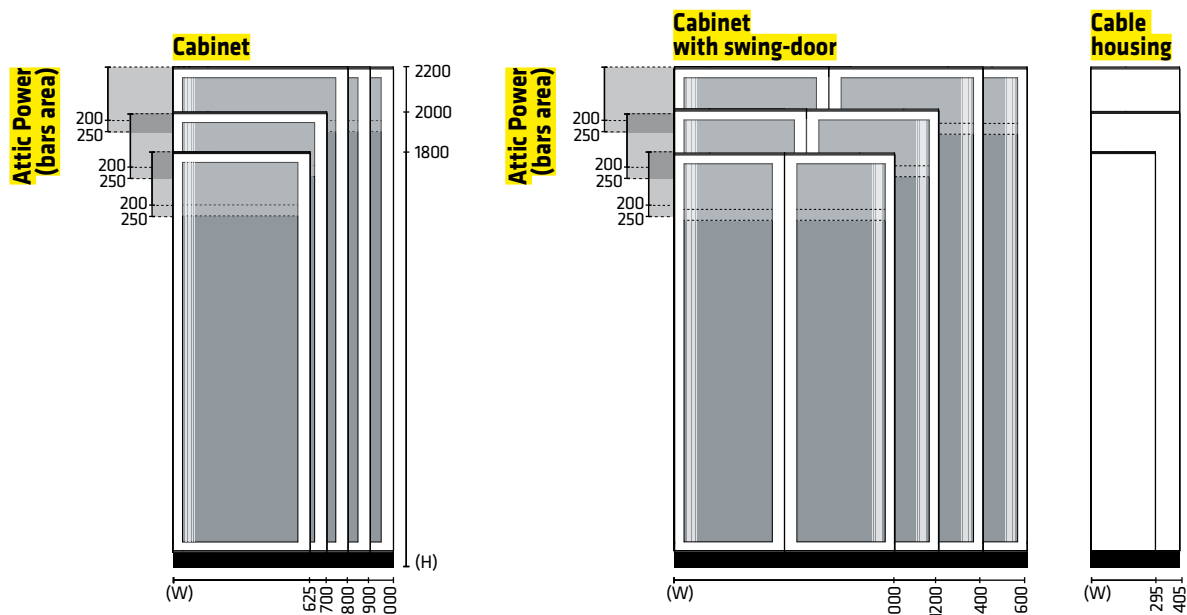
Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 3200 A
		Rated short-time withstand current for 1 sec. (I_{cw})	60 kA

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP55
	IK test (shock resistance)	IK10 blind door	
	Access	From the front / Side / Rear	
	Execution	Form 1	
	Material	Structure	Pickled plate, 15/10 - 20/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 mm - 25/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

Technical specifications

Automation **Attic Power**



	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625	1800 (200/250 bars positioning) 2000 (200/250 bars positioning) 2200 (200/250 bars positioning)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)
	700		
	800		
	900		
	1000		
Cabinet with swing-door	1000	1800 (200/250 bars positioning) 2000 (200/250 bars positioning) 2200 (200/250 bars positioning)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)
	1200		
	1400		
	1600		
Cable housing	300	1800 (200/250 bars positioning) 2000 (200/250 bars positioning) 2200 (200/250 bars positioning)	400 / 500 / 625 / 800 / 1000
	400		

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 4000 A
		Rated short-time withstand current for 1 sec. (I_{cw})	75 kA

Electrical data	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP55
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front / Side / Rear	
	Execution	Form 2	
	Material	Structure	Pickled plate, 15/10 - 20/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 mm - 25/10 mm thick
	Plastic components	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

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Standard



Cabinet: assembled structure made of sheet with a thickness of 2 mm with blind door.



Cabinet with swing-door: assembled structure made of sheet with a thickness of 2 mm.

Attic Power



IP30 Attic Power cabinet: structure prepared for the busbar system positioning under the roof of the cabinet, comprehensive of segregations and frontal blind door.



IP55 Attic Power cabinet: structure prepared for the busbar system positioning under the roof of the cabinet, comprehensive of segregations, frontal glass door and sheet inner door.

Busbar systems



Inclined or linear Smart-Energy basic: busbar system up to 1250 A.

Smart-Energy plus: busbar system up to 4000 A.

Smart-Energy copper busbar system: copper profile up to 4000 A.

Segregation: lexan segregation system divided into three sections, prepared for the passage of flexy bars or traditional systems.

Details



Customization:

it is possible to customize the carpentry with the customer's logo.



Swing-door closing:

a system to align perfectly the two doors.



Latch door: a system to block the door with a 90° opening.



Locks: swivel handle and triangular lock on request.



Wiring solutions



Frontal insertion: a new system with sliding on rails to facilitate the positioning of the wiring plate.

Side insertion: a new system that enables to use the whole width of the wiring plate.

Wiring plate: wiring plate placed at the back in order to use the whole depth of the cabinet.

Customized plate: wiring plate with holes realized depending on the type of circuit breakers and devices to install.

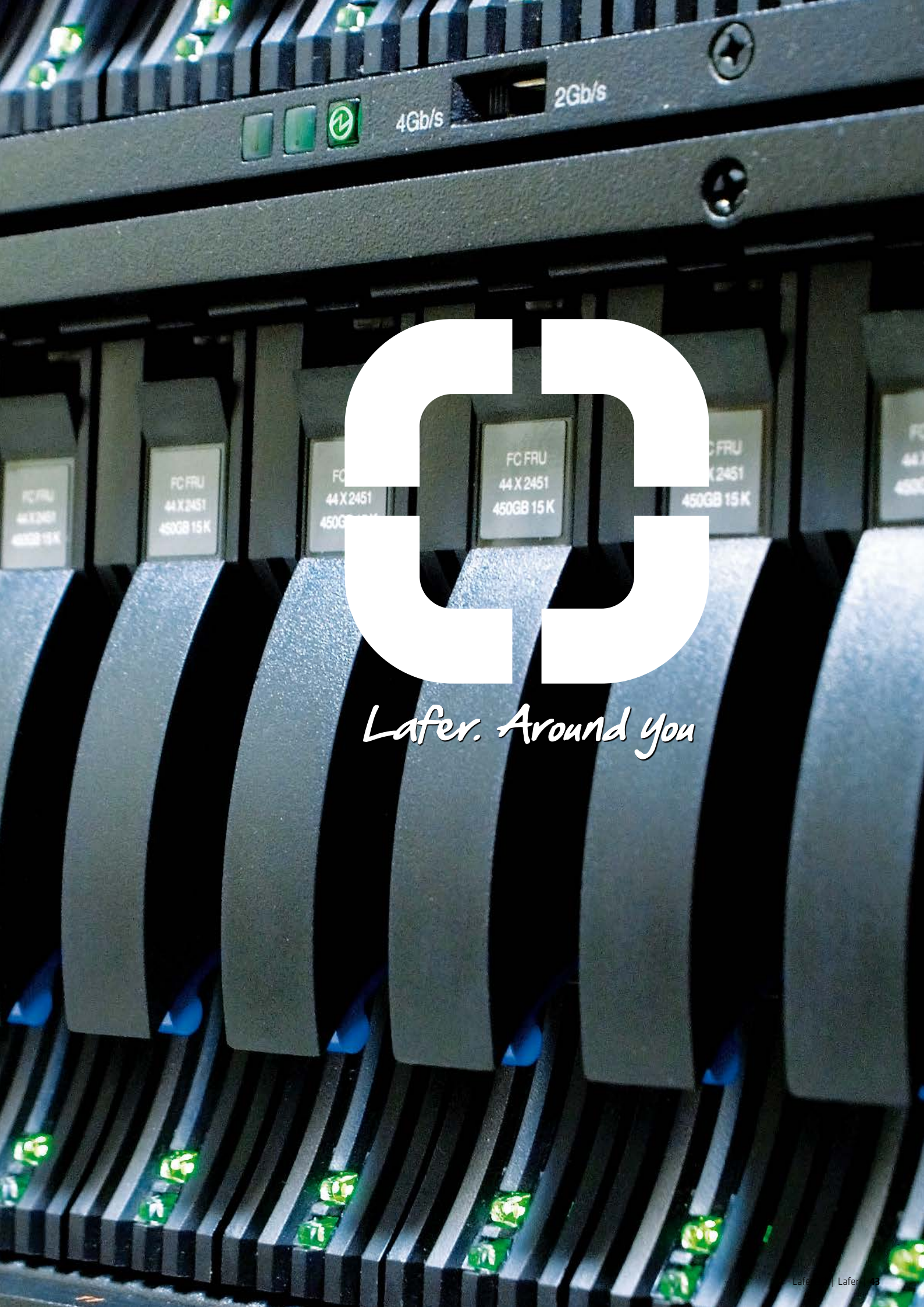
Internal supports: supports for heavy loads.



Lafer@ck

Electrical cabinets
for server and LAN





Lafer. Around you



**They are designed for all information systems and data network.
They ensure quick wiring solutions and offer a wide range of accessories.**

**Both cabinets and small cabinets are designed for the information infrastructure.
Small cabinets are suitable for the installation of light equipments as switches while cabinets are suitable for the installation of strong equipments as company servers.**

Main characteristics

- Degree of protection IP30 with transparent door with toughened glass.
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, stainless steel cabinet.

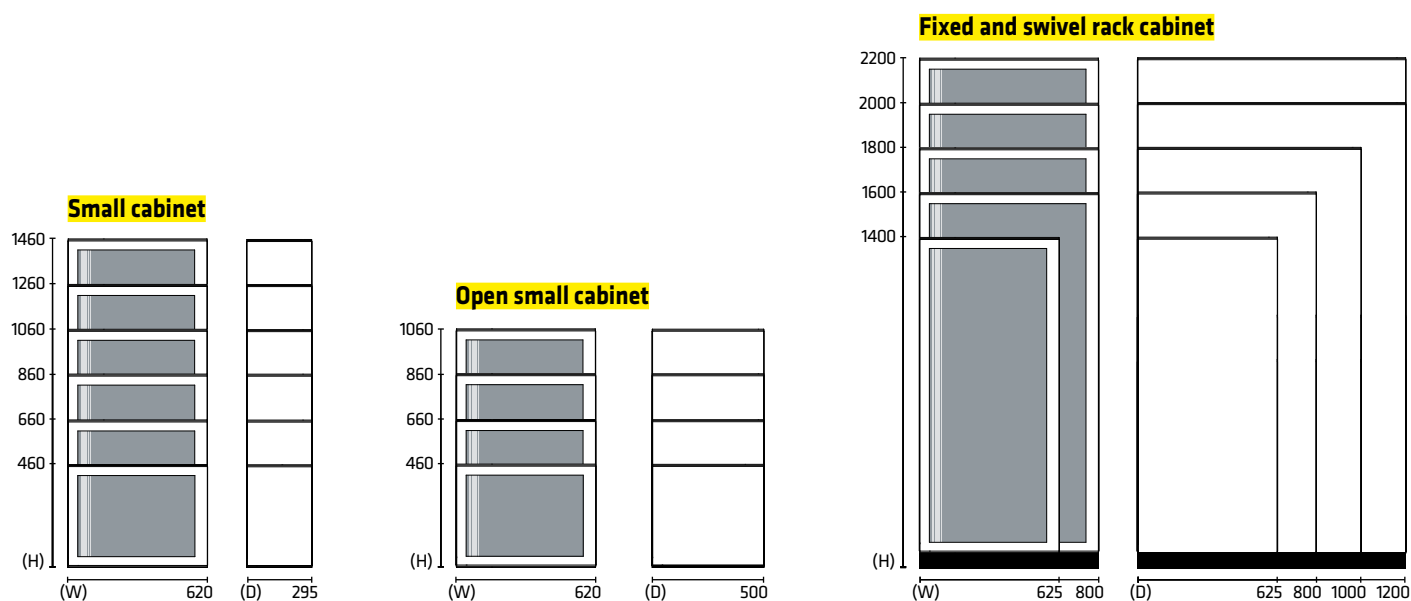
Small cabinets characteristics

- Monoblock structure made of welded sheet with a thickness of 1,2 mm.
- Plates on the top or bottom for the passage of cables.
- Possibility of vertical connection.

Cabinets characteristics

- Assembled structure made of sheet with a thickness of 1,5 mm.
- Possibility of side connection.

Technical specifications



	Width (W) mm	Height (H) mm			Depth (D) mm
Small cabinet	620	460 (9 units) 1060 (22 units)	660 (13 units) 1260 (27 units)	860 (18 units) 1460 (31 units)	295
Open small cabinet	670	460 (9 units) 1060 (22 units)	660 (13 units) 1260 (27 units)	860 (18 units)	520
Fixed rack cabinet	625	1400 (26 units) 2000 (40 units)	1600 (31 units) 2200 (44 units)	1800 (35 units)	625 / 800 / 1000 / 1200
	800				
Rotating rack cabinet	625	2000 (37 units) 2200 (42 units)			625 / 800 / 1000 / 1200
	800				

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	690 V
		Rated operational voltage (U_e)	400 V
		Rated frequency (f_n)	50 / 60 Hz

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP55
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front / Side / Rear	
	Material	Structure	Pickled plate, 15/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		Internal accessories	RAL 9005 G embossed black
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

Typology

Small cabinet: monoblock structure made of welded sheet with a thickness of 1,2 mm.



Open small cabinet: monoblock structure made of welded sheet with a thickness of 1,2 mm with removable side panels.



Fixed rack cabinet: assembled structure made of sheet with a thickness of 1,5 mm with side supports for equipment.



Swivel rack cabinet: assembled structure made of sheet with a thickness of 1,5 mm with a solid frame that can be opened up to 135° for the support of equipment.



Inox: on request, small cabinet and cabinet made of stainless steel.

Panels



Rack panels:

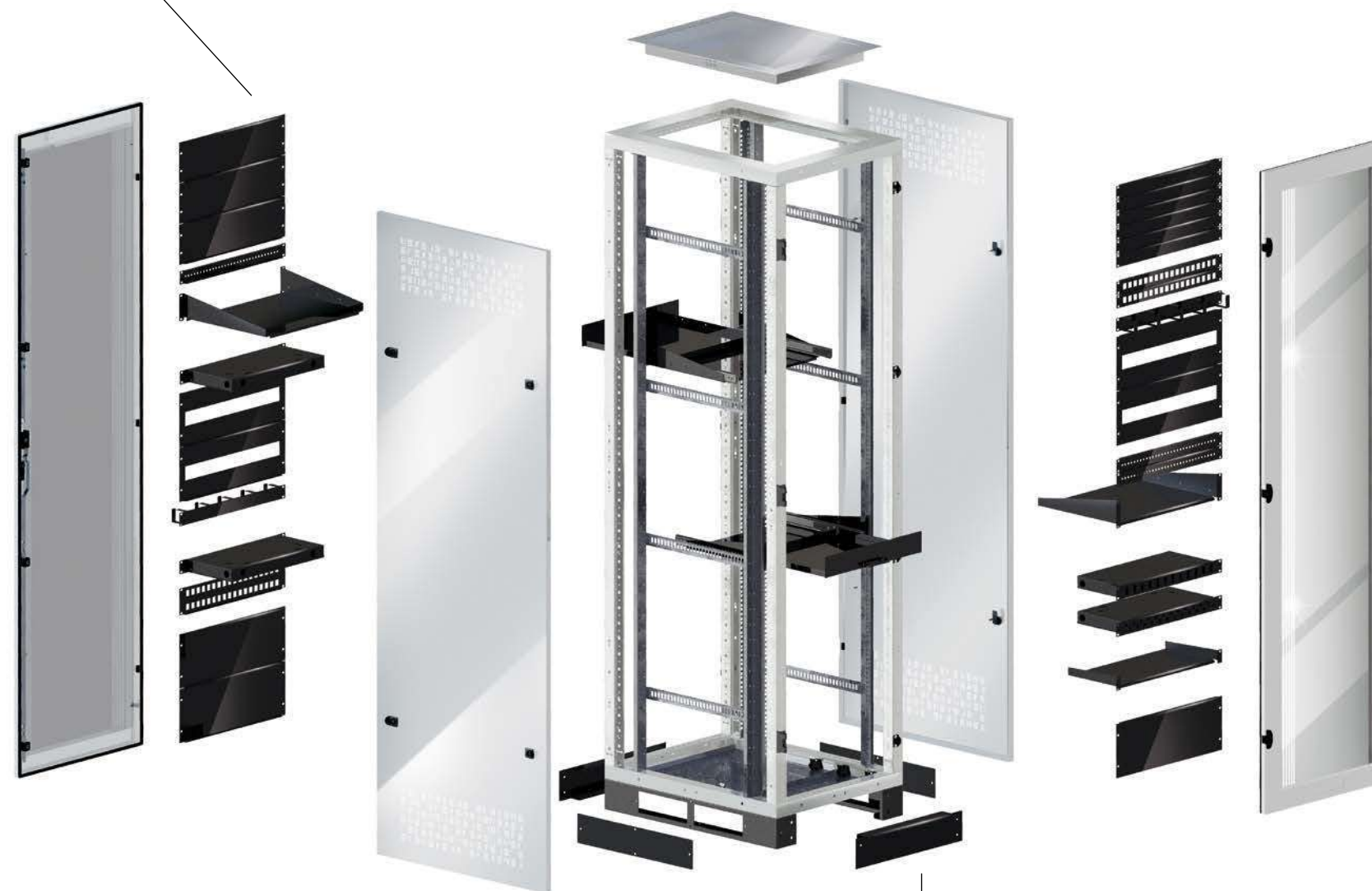
- Panel for RJ plugs.
- Blind panel.
- Modular panel.
- Customized holes.

Shelves and drawers



Rack shelves and drawers:

- Blind shelf.
- Shelf with ventilation slits.
- Optical fibre cassettes.
- Removable shelf.



Outer details

Glass door: made of sheet 1,5 mm thick with grey toughened glass.



Blind door: it is possible to replace the glass door with the blind door.



Perforated door: made of sheet 1,5 mm with honeycomb mesh.



Door with ventilation slits: it is possible to replace the side panel with the door with ventilation slits.



IP30 frame: it is possible to replace the glass door with IP30 frame (open version).



Ventilated roof: arranged for the installation of grilles, filters and fans with forced ventilation.



Inner details



Cable management

- Traditional cable organizer
- Easyr@ck cable organizer

Cable fastening

- Cable management ring
- Side and back cable retainers



Inox

All Lafer series
are available in stainless steel





Lafer: Around you



Resistant and customized.

They offer a high resistance to aggressive substances and they represent the perfect solution for aseptic environments. They can be customized with holes and other machinings on request.

Main characteristics

- Stainless steel structure: AISI 304 satinized.
- Degree of protection from IP30 (open version) to IP55 with blind door or transparent door with toughened glass.
- Internal components made of Aluzinc sheet steel and Sendzimir.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Patented and certified earth connection system.
- Full range of internal finishing accessories to provide solutions for any requirement.

On request

- Stainless steel structure AISI 316 satinized.
- Stainless steel structure AISI 304 and 316 half-bright.
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Stainless steel internal components.

For further details, please consider the page of each Lafer series.

Lafer Series		assembled structure	monoblock structure	plinth	closing plate	doors and hinges	side and back closing panels	hinged cover	inner door and swivel frame	wiring plate	drawers	internal wiring frame	internal accessories
PW - Tech		I		I	I	I	I	I	I	S			A
ME - Cub		I		I	I	I	I	I			A		A
MC - Cub		I		I	I	I	I	I			S		A
Compact		I		I	I	I	I	I	I	S			A
Easy 630		I		I	I	I	I	I				A	A
Slim			I	I	I	I	I	I				A	A
Quick			I	I	I	I	I	I	I	A			A
Automation		I		I	I	I	I			S			A
Lafer@ck		I	I	I	I	I	I	I	I			A	A

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

I = Stainless steel AISI 304 satinized

A = Aluzinc® sheet steel

S = Sendzimir sheet steel

Typology



Small cabinet: welded stainless steel monoblock structure with a thickness of 1,2 mm.



Cabinet: stainless steel assembled structure with a thickness of 1,5-2 mm.



Cabinet with cable housing: stainless steel assembled structure with a thickness of 1,5-2 mm , comprehensive of cable housing, terminal block or busbar system.



Modular cabinet: stainless steel structures laterally coupled, thickness 1,5 mm -2 mm.

Details

Hinges and locks: an exclusive system developed by Lafer that enables a quick opening and closing of covers through screws by ¼ turn. All covers are reversible: it is possible to invert the locks with the hinges in few seconds.



Holed covers: stainless steel covers arranged with holes for devices and circuit breakers of any brand. According to the type of circuit breaker used, we supply a specific support kit.



Blind door: it is possible to replace the glass door with the blind door. It is made of stainless steel with a thickness of 1,5 mm.



Glass door: made of stainless steel 1,5 mm thick with grey toughened glass.



Wiring plate: plate made of Aluzinc sheet steel 1,5 mm thick and Sendzimir 2,5 mm thick. Plate with more holes to fasten ModularDIN™ and supports of any brand of circuit breakers.

MC-Cub

Motor Control Center with fixed units
up to 6300 A



Lafer. Around you





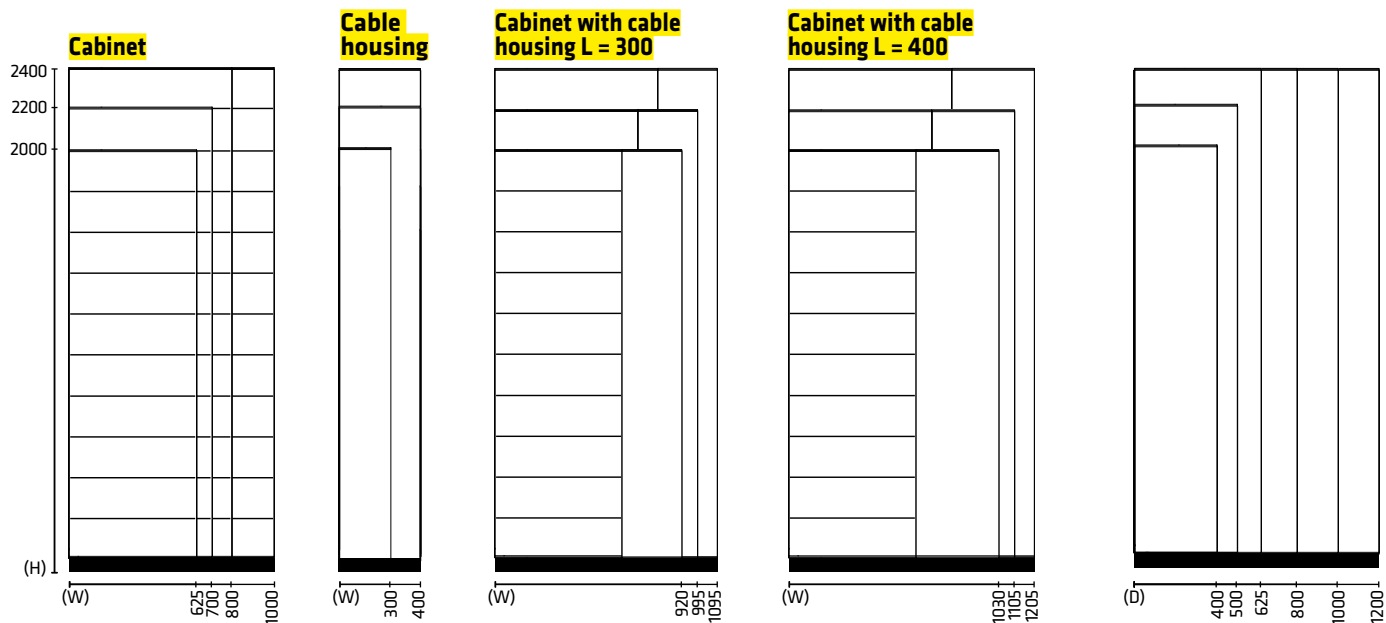
Designed and produced for starting and motor control center.

They offer a quick wiring solution with many solutions: rear busbars, side busbars and rear busbars with tunnel.

Main characteristics

- Assembled structure made of sheet with a thickness of 2 mm.
- Degree of protection from IP30 (open version) to IP55 with blind door or transparent door with toughened glass.
- Compartment with hinged cover, wiring plate, horizontal partition and side segregation.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Patented and certified earth connection system.
- Plinth with reinforced covering flanges for a handling on rollers.
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, stainless steel cabinet.

Technical specifications



	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625	2000 / 2200 / 2400 (usable space = H - 400)	400 / 500 / 625 / 800 / 1000 / 1200 (usable space = 300 / 400)
	700		
	800		
	1000		
Cable housing	300	2000 / 2200 / 2400 (usable space = H - 400)	400 / 500 / 625 / 800 / 1000 / 1200 (usable space = 300 / 400)
	400		
Cabinet with cable housing	625 + 300	2000 / 2200 / 2400 (usable space = H - 400)	400 / 500 / 625 / 800 / 1000 / 1200 (usable space = 300 / 400)
	700 + 300		
	800 + 300		
	625 + 400		
	700 + 400		
	800 + 400		
Back to back cabinet	On request		

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	1000 V
		Rated operational voltage (U_e)	690 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 kV
		Rated frequency (f_n)	50 / 60 Hz
	Current ratings	Rated current (I_n)	Up to 6300 A
		Rated short-time withstand current for 1 sec. (I_{cw})	70 kA

Mechanical characteristics	IP degree of protection	Internal	Up to IP2X
		External enclosure	From IP30 to IP55
	Covers height (h)	150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 / 900 / 1000	
	IK test (shock resistance)	IK09 glazed door	
		IK10 blind door	
	Access	From the front / Side / Rear	
	Execution	Form 3b	
	Material	Structure	Pickled plate, 15/10 - 20/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 mm thick
	Powder coating	Standard	RAL 7035 B light grey (orange peel)
		On request	Powder RAL colours and stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	

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Typology

Cabinet - rear busbars: cabinet with sections and segregation form 3b. Vertical and horizontal busbar system placed at the back.



Cabinet - rear busbars: cabinet with sections and segregation form 3b. Vertical and horizontal busbar system placed at the back.



Cabinet - rear busbars with tunnel: cabinet with sections and segregation form 3b. Vertical busbar system placed at the back and horizontal busbar system placed on the top.



Back to back cabinet: cabinet with sections and segregation form 3b. Vertical busbar system placed on the sides or at the back and horizontal busbar system placed on the top.



Inox: on request, stainless steel cabinet.

Busbar systems



Smart-Energy Basic: Horizontal busbar system up to 1250 A placed on the top of the cabinet.



Smart-Energy Plus: Horizontal busbar system up to 4000 A placed on the top of the cabinet.



Smart-Energy Copper: Horizontal busbar system up to 4000 A placed on the top of the cabinet.



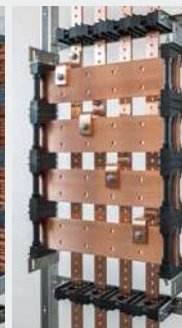
Smart-Energy Basic: Vertical / Horizontal busbar system up to 4000 A placed on the back of the cabinet.



Smart-Energy Plus:



Smart-Energy Copper:



Plain copper busbar:



Inner details



Compartment - side bars: with hinged cover, wiring plate, horizontal partition and lexan side segregation.



Compartment - rear bars: with hinged cover, wiring plate, horizontal partition and Aluzinc sheet steel side segregation.



Upper segregation: made of Aluzinc sheet steel with possibility of fixing the cable ducting.



Terminal block support: support for fixing the terminal block on a DIN rail inside the cable housing.

Outer details

IP30: hinged cover, degree of protection IP30.



IP41: fixed cover with ventilation shutters and gasket, degree of protection IP41.



IP42: hinged cover with gasket, degree of protection IP42.



IP54: inner hinged covers and transparent toughened glass door, degree of protection IP54.





ME-Cub 2.0

Motor Control Center
with withdrawable units up to 6300 A - 105 Ka

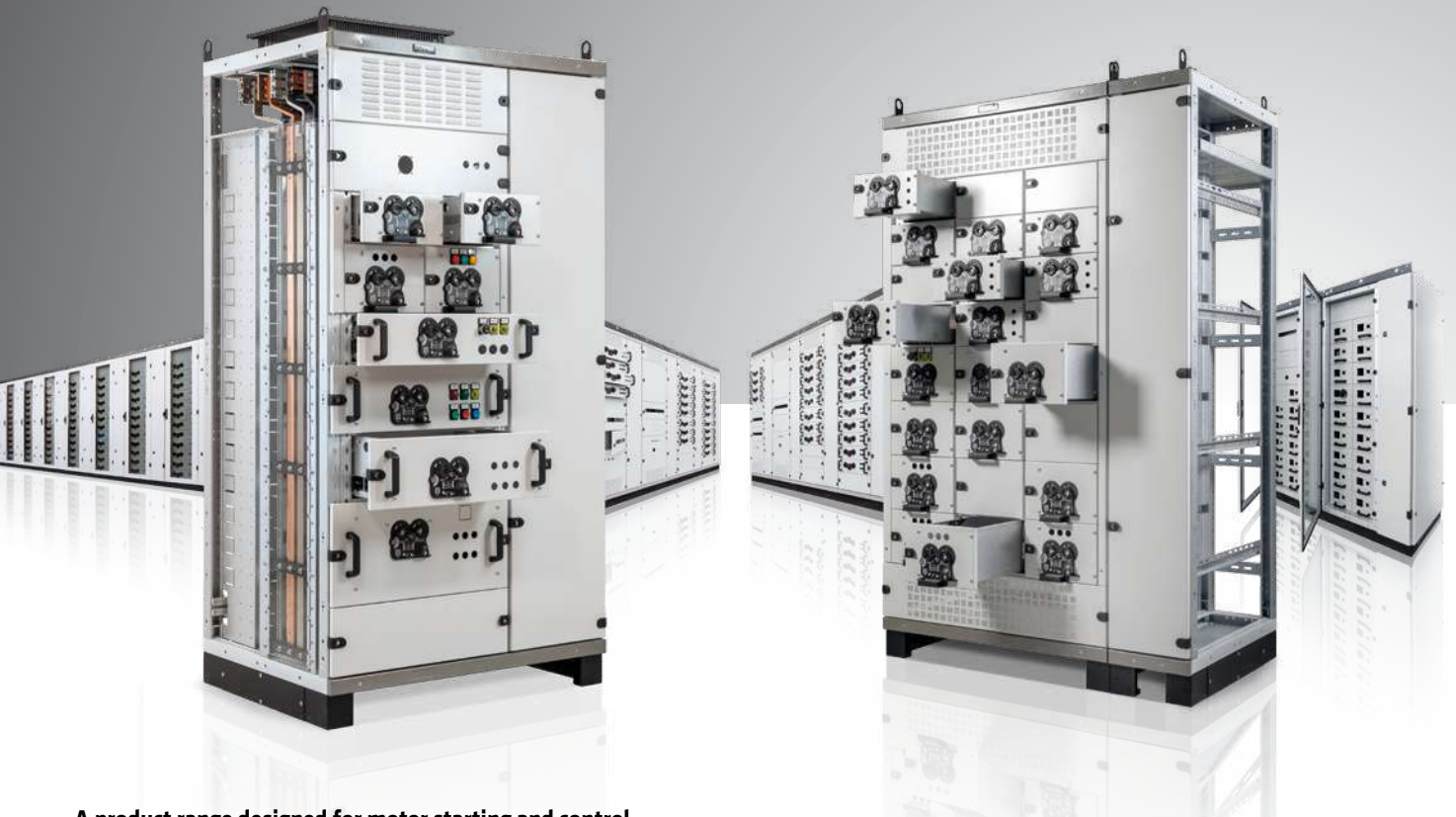




Later. Around you

ME-Cub 2.0

Motor Control Center with withdrawable units up to 6300 A



A product range designed for motor starting and control.

Me-cub 2.0 versatile design can accommodate different sizes of withdrawable units providing a solution to all types of applications.

Main characteristics

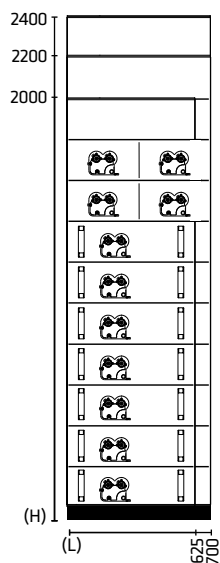
- Assembled sheet metal enclosure (upright thickness: 20/10 mm).
- Degree of protection from IP30 (cabinet without door) up to IP55 (cabinet equipped with transparent tempered glass door).
- Compartment equipped with side and horizontal partitions, rear wiring plate with female connector for auxiliary circuits and power pliers.
- Withdrawable unit equipped with customizable front panel, SwitchLAF™ 2.0 system, male connector for auxiliary circuits and power contacts.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- RAL 7035 B epoxy powder coating (other colours on request).
- Enclosures available in stainless steel on request.
- Patented and certified earthing system.
- Reinforced plinth for a safe handling of the enclosure.
- Full range of internal finishing accessories to meet any requirement.

Certifications

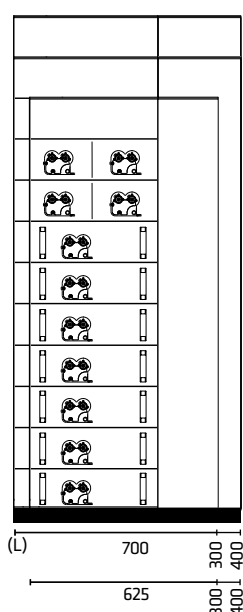
IEC 61439-1	test n. B0008006 test n. B8020497	Short-circuit withstand $I_n=6300$ and $I_{cc}=105$ kA for 1 sec. <ul style="list-style-type: none"> • Verification of the short-circuit withstand • Verification of the effective connection between the equipment masses and the protection circuit
IEC/TR 61641 CEI 17-86	test n. B0009515	Arc conditions due to internal fault 70 kA for 300 msec
IEC 61439-1 IEC/TR 61641	test n. B0007840	Verification of overtemperature limits <ul style="list-style-type: none"> • Verification of overtemperature limits • Verification of dielectric properties: industrial frequency and impulse tests • Verification of air clearance and creepage distances
CEI EN 60529	test n. EPT16AVM033754359 test n. EPT16AVM033754359 test n. EPT16AVM033754359 test n. CESI A902B006 test n. B0011835 test n. B4030377	Verification of degree of IP30 degree of protection Verification of degree of IP41 degree of protection Verification of degree of IP42 degree of protection Verification of degree of IP54 category 2 degree of protection Verification of degree of IP55 category 2 degree of protection Verification of degree of IP56 category 2 degree of protection
IEEE Std 693-2005 IEC 60068-2-57 IEC 62271-300 Transelec	test n. B3020295	Seismic test with acceleration 1,0g

Technical specifications

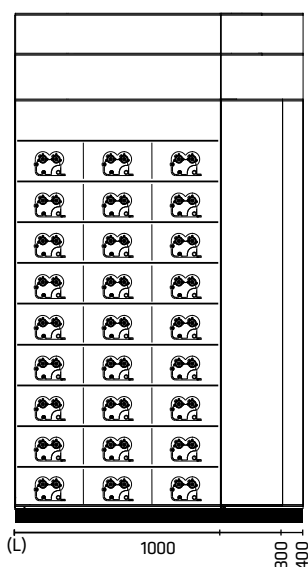
Free-standing cabinet



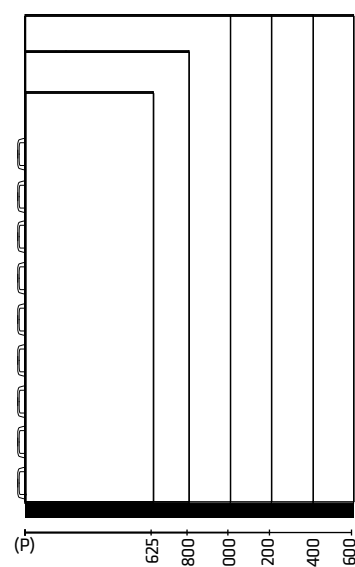
Cabinet with cable compartment



Multiswitch cabinet



Depth (D) mm



	Width (W) mm	Height (H) mm	Depth (D) mm		
Free-standing cabinet	625 (24 modules)	2000 / 2200 / 2400	625 / 800 / 1000		
	700 (24 modules)	(usable space = H - 200)	/ 1200 / 1400 / 1600		
Cabinet with cable compartment	625 + 300 (24 modules)	2000 / 2200 / 2400 (usable space = H - 200)	625 / 800 / 1000 / 1200 / 1400 / 1600		
	700 + 300 (24 modules)				
	625 + 400 (24 modules)				
	700 + 400 (24 modules)				
Multiswitch cabinet	1000 + 300 (44 modules)				
	1000 + 400 (44 modules)				
Back-to-back cabinet	Available on request				
Electrical data	Voltage ratings	Rated insulation voltage (U_i)		1000 V	
		Rated operational voltage (U_e)		690 V	
		Rated impulse withstand voltage (U_{imp})		6 / 8 / 12 kV	
		Rated frequency (f_n)		50 / 60 Hz	
	Current ratings	Rated current (I_n)	Main busbar system	Up to 6300 A	
			Vertica distribution busbars	400 / 630 / 800 A	
		Rated short-time withstand current for 1 sec. (I_{cw})		105 kA	
	Internal arc resistance	Permissible current under arcing conditions ($I_{p arc}$)		70 kA	
		Permissible arc duration (t_{arc})		300 ms	
	Withdrawable units pliers				160 / 320 A
	Auxiliary contacts connectors				10 / 16 A
	Auxiliary contacts				6 / 16 / 24 / 42 / 48

Mechanical Characteristics	IP Degree of protection	Internal	Up to IP2X
		External	From IP30 up to IP55
	Withdrawable units height (h)	150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600	
	Protection against mechanical impacts (IK code)	IK09 glass door	
		IK10 blind door	
	Access to the cabinet for circuit breakers connection	From the Front/Side/Rear	
	Form of internal separation	Form 3B/4B	
	Material	Structure	Pickled plate, 15/10 - 20/10 mm thick
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 - 25/10 mm thick
	Powder coating	Standard	RAL 7035B orange peel
		On request	RAL shades / stainless steel
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free	
	Customizable features	Busbar system	Insulated / Silvering / Tin plating
		Additional components	Position switch "drawer in test position"
			Position switch "drawer in disconnected/ connected position"
			Position switch "drawer in inserted/ withdrawn position"
			Position switch "drawer in inserted/ remote withdrawn position" (n°2)

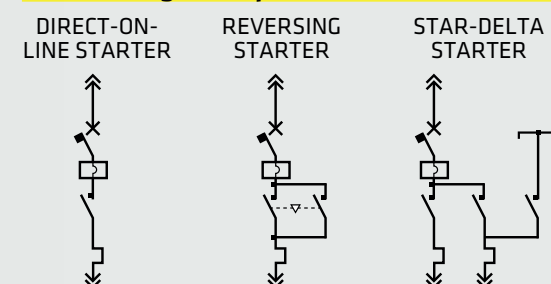
All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.



UNIT

Withdrawable drawer
Suitable for applications
from 18.5 Kw up to 200 kw

MOTOR STARTING UNIT
3-pole UNIT withdrawable drawer
4-pole UNIT withdrawable drawer
Available degrees of protection: IP30-IP42-IP55



Motor starting typologies: UNIT

400 V			
withdrawable drawer height mm	direct-on- line starter kW	reversing starter kW	star-delta starter kW
150	≤ 18.5	≤ 18.5	≤ 11
200	≤ 30	≤ 30	≤ 18.5
250	≤ 45	≤ 45	≤ 30
300	≤ 75	≤ 75	≤ 45
400	≤ 110	≤ 110	≤ 75
500	≤ 132	≤ 132	≤ 110
600			≤ 132

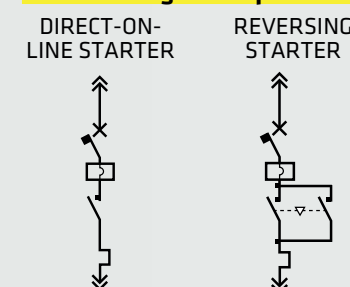
690 V			
withdrawable drawer height mm	direct-on- line starter kW	reversing starter kW	star-delta starter kW
150	≤ 18.5	≤ 18.5	≤ 11
200	≤ 37	≤ 37	≤ 30
250	≤ 75	≤ 75	≤ 55
300	≤ 110	≤ 110	≤ 75
400	≤ 160	≤ 160	≤ 110
500	≤ 200	≤ 200	≤ 160
600			≤ 200



1/2 UNIT

Withdrawable drawer
Suitable for applications
from 7.5 kW up to 22 kW

MOTOR STARTING UNIT
3-pole 1/2 UNIT withdrawable drawer
4-pole 1/2 UNIT withdrawable drawer
Available degrees of protection: IP30-IP42-IP55



Motor starting typologies: 1/2 UNIT

400 V		
withdrawable drawer height mm	direct-on- line starter kW	reversing starter kW
150	≤ 7.5	≤ 7.5
200	≤ 11	≤ 11
250	≤ 18.5	≤ 18.5

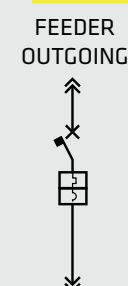
690 V		
withdrawable drawer height mm	direct-on- line starter kW	reversing starter kW
150	≤ 7.5	≤ 7.5
200	≤ 18.5	≤ 18.5
250	≤ 22	≤ 22



1/2 FEEDER

Withdrawable drawer
Suitable for applications
from 16A up to 100A

OUTGOING LINE
3-pole 1/2 FEEDER withdrawable drawer
4-pole 1/2 FEEDER withdrawable drawer
Available degrees of protection: IP30-IP42-IP55



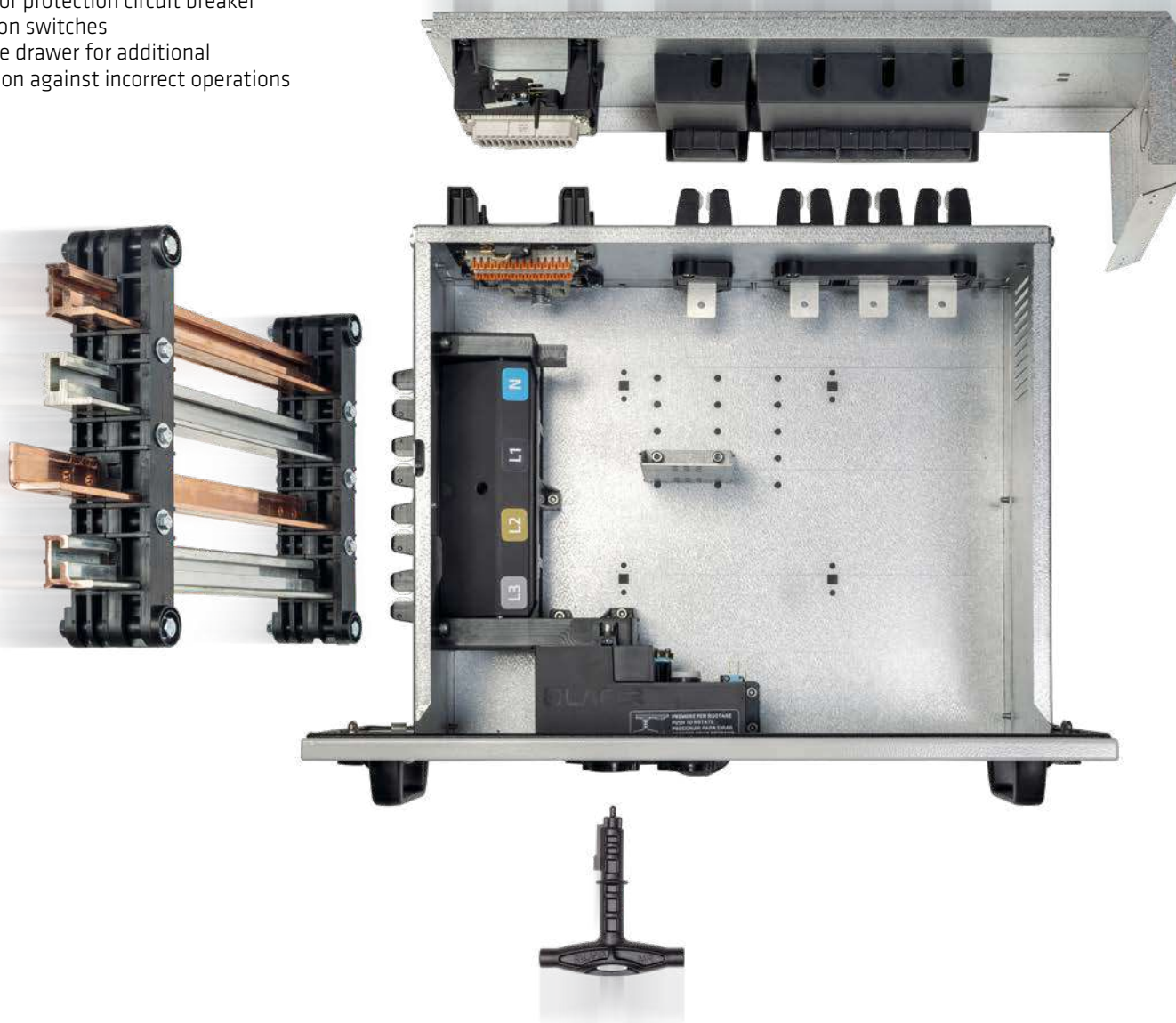
Motor starting typologies: 1/2 FEEDER

400 V / 690 V	
withdrawable drawer height mm	rated current A
150	≤ 35
200	≤ 80
250	≤ 100

Withdrawable drawer **UNIT**

Overview

- SwitchLAF 2.0 system
- Auxiliary connectors
- Outgoing contacts (power pliers)
- Sheet metal bracket for motor protection circuit breaker
- 5 position switches
- Lockable drawer for additional protection against incorrect operations



Accessories and main features



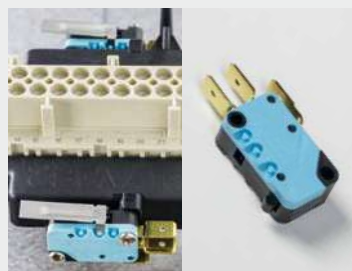
Safety features:

Drawer lockable in withdrawn position.



Safety features:

Padlockable drawer in case of a temporary breakdown.



5 position switches - drawer:

- in "Test" position
- in "Disconnected/ Connected" position
- in "Inserted/Withdrawn" position
- in "Inserted/Withdrawn/Remote" position (n°2)



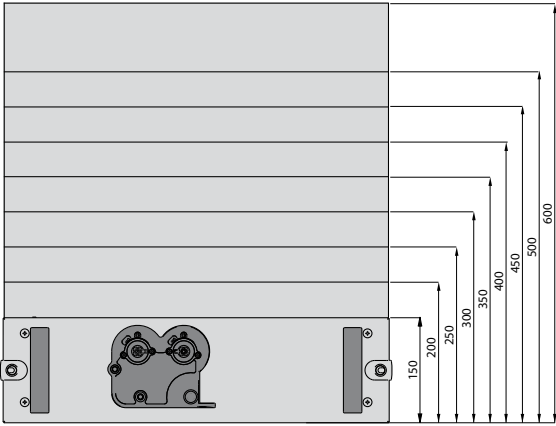
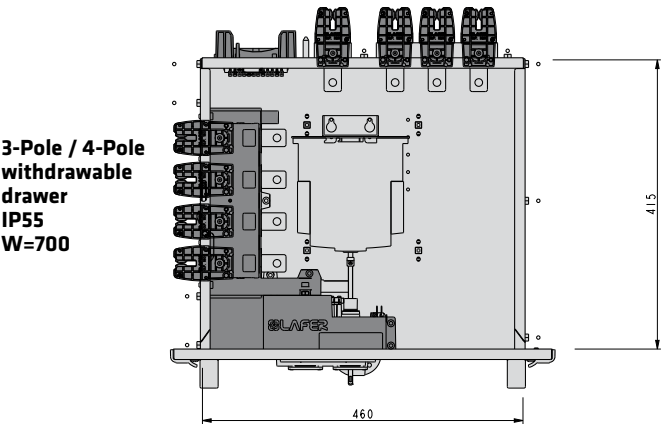
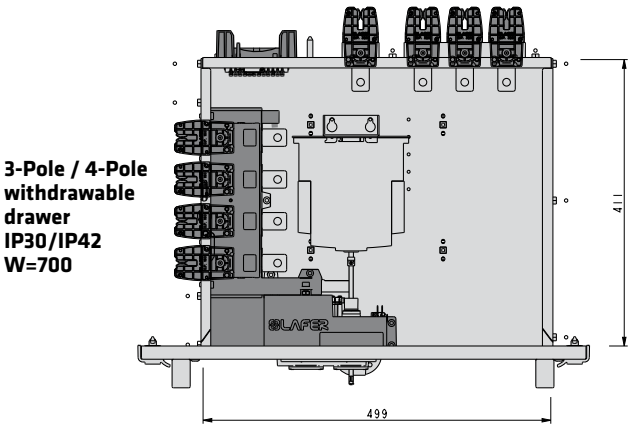
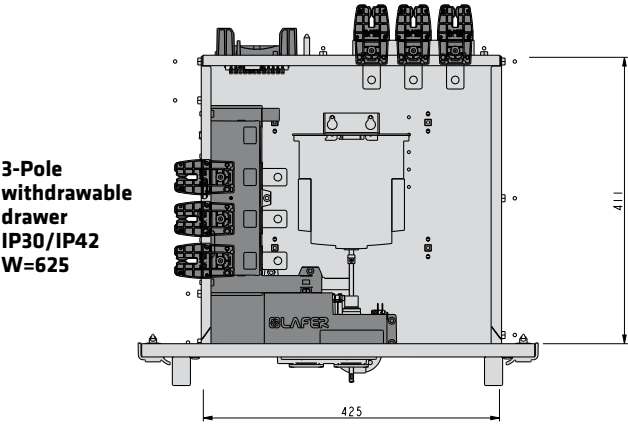
Withdrawable units coding:

Optional drawers identification system allowing an easy and unique identification of the position of each drawer in the cabinet.

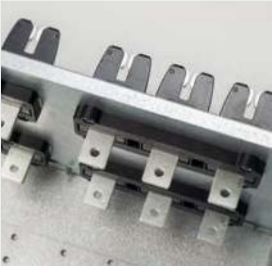
Electrical data

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	1000 V
		Rated operational voltage (U_e)	400 / 500 / 690 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 Kv
		Rated frequency (f_n)	50 / 60 Hz
	Power pliers	3-pole or 4-pole version*	
		Rated current [I_n]	160 / 320 A
		Rated short-circuit current [I_p]	15 / 38 kA
	Auxiliary connectors	Rated current [I_n]	10 / 16 A
		N° of auxiliary contacts	24 / 42/ 48
	Auxiliary contacts	Rated current [I_n]	16 A
		N° of cycles	20000000
		Contact type	2 changeover contacts
		Connection type	Fast-on 6,3 mm
Mechanical Characteristics	Drawers width (l)	625 / 700	
	Drawers height (h)	150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600	

*Not available for cabinets 625 mm wide



Customizable connectors:
24 pins, 42 pins or double connector.



Double outgoing plier:
Double outgoing plier for star-delta starters.



Universal shaft adapters:
3 different interchangeable shaft adapters compatible with all types of circuit breakers installed.



Connectors available on request: Wide range of special connectors available on request for Profibus, Modbus, Ethernet protocols etc.



Earthing: Self-centering grounding system.

Withdrawable drawer

1/2 UNIT

Overview

- SwitchLAF 2.0 system
- Auxiliary connectors
- Outgoing contacts (connectors)
- Sheet metal bracket for motor protection circuit breaker
- 5 position switches
- Lockable drawer for additional protection against incorrect operations



Accessories and main features



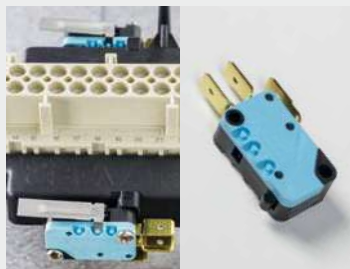
Safety features:

Drawer lockable in withdrawn position.



Safety features:

Padlockable drawer in case of a temporary breakdown.



5 position switches - drawer:

- in "Test" position
- in "Disconnected/ Connected" position
- in "Inserted/Withdrawn" position
- in "Inserted/Withdrawn/Remote" position (n°2)



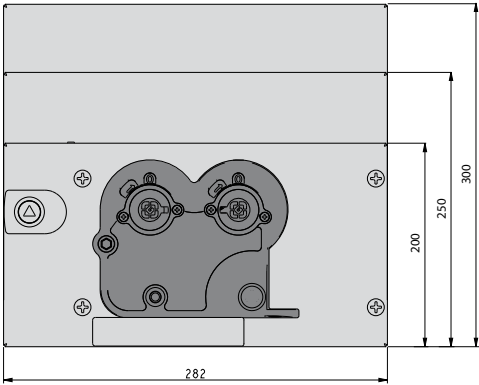
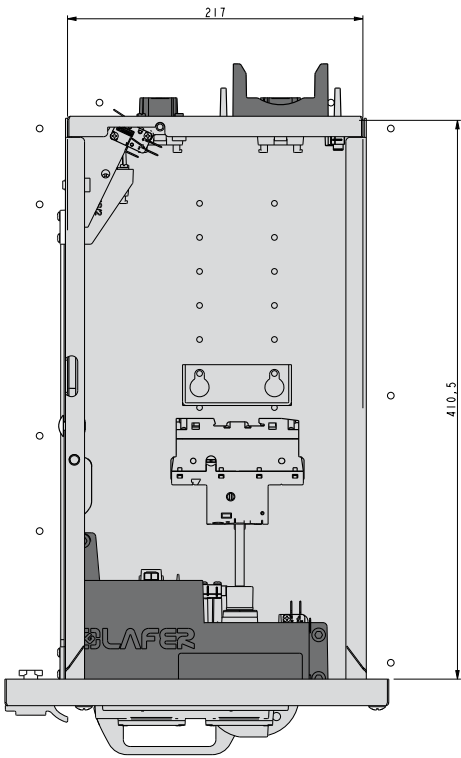
Withdrawable units coding:

Optional drawers identification system allowing an easy and unique identification of the position of each drawer in the cabinet.

Electrical data

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	1000 V
		Rated operational voltage (U_e)	400 / 500 / 690 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 Kv
		Rated frequency (f_n)	50 / 60 Hz
	Power contacts	Rated current [I_n]	16A
	Auxiliary connectors	Rated current [I_n]	10 / 16A
		N° of auxiliary contacts	24 / 42
	Auxiliary contacts	Rated current [I_n]	16 A
		N° of cycles	20000000
		Contact type	2 changeover contacts
		Connection type	Fast-on 6,3 mm
Mechanical Characteristics	Drawers width (l)	350	
	Drawers height (h)	150 / 200 / 250	

3-Pole / 4-Pole
withdrawable unit
IP30/IP42
W=350



Universal shaft adapters:
3 different interchangeable shaft adapters compatible with all types of circuit breakers installed.



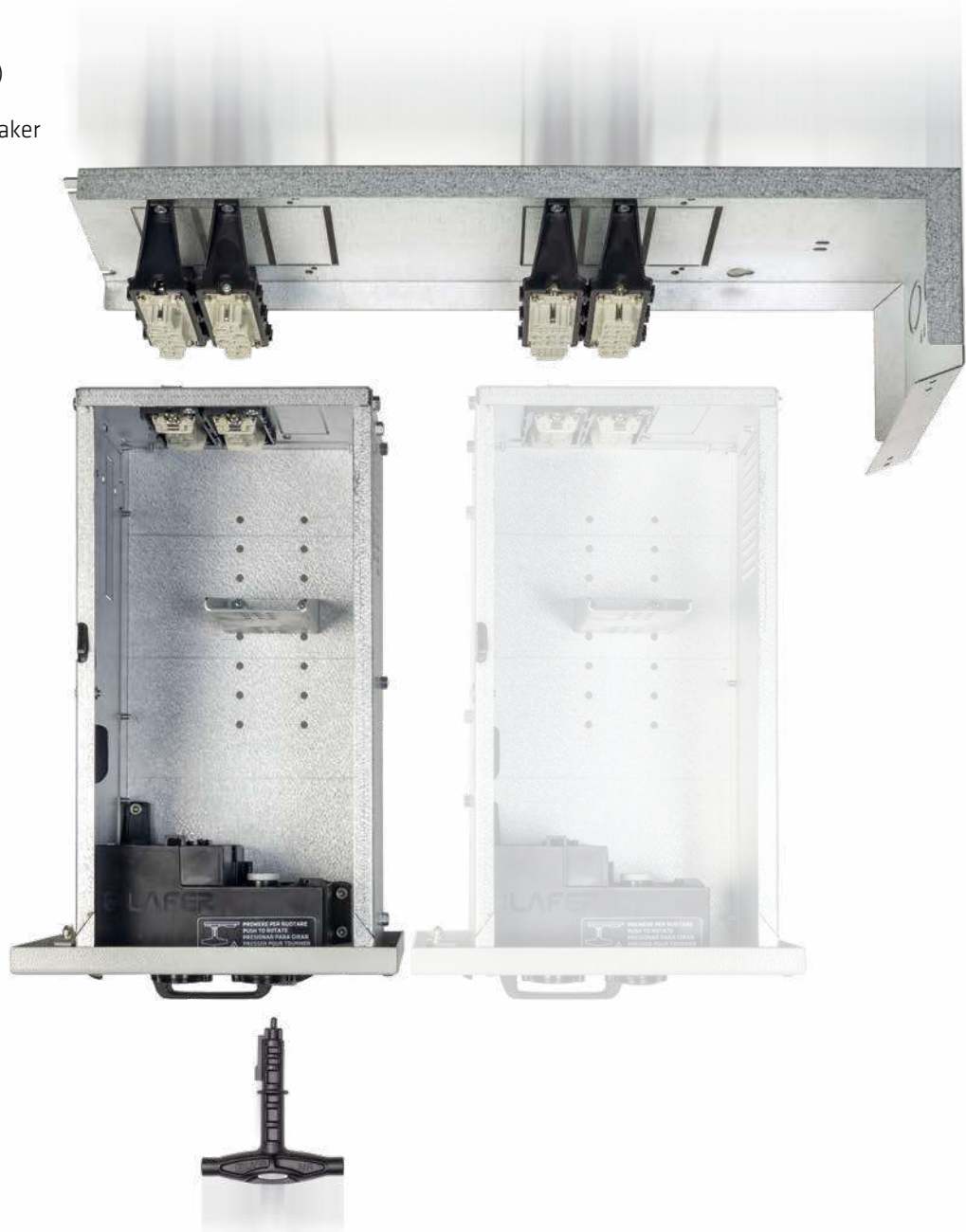
Connectors available on request:
Wide range of special connectors available on request for Profibus, Modbus, Ethernet protocols etc.

Withdrawable drawer

1/2 FEEDER

Overview

- SwitchLAF 2.0 system
- Auxiliary connectors
- Outgoing contacts (connectors)
- Sheet metal bracket for motor protection circuit breaker
- Lockable drawer for additional protection against incorrect operations



Accessories and main features



Safety features:

Drawer lockable in withdrawn position.



Safety features:

Padlockable drawer in case of a temporary breakdown.



Withdrawable units coding:

Optional drawers identification system allowing an easy and unique identification of the position of each drawer in the cabinet.



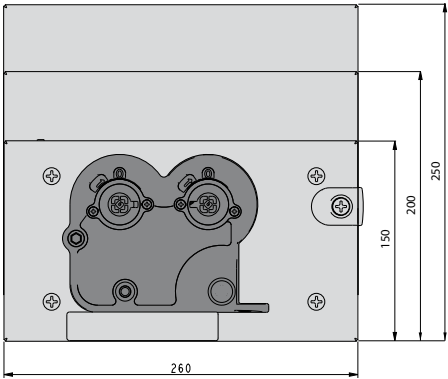
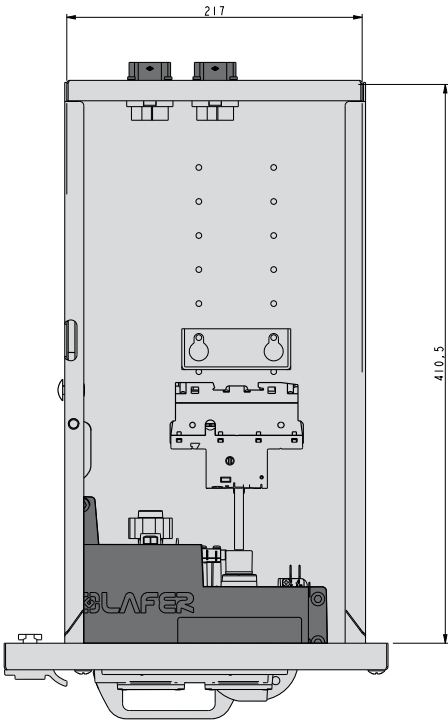
Universal shaft adapters: 3

different interchangeable shaft adapters compatible with all types of circuit breakers installed.

Electrical data

Electrical data	Voltage ratings	Rated insulation voltage (U_i)	1000 V
		Rated operational voltage (U_e)	400 / 500 / 690 V
		Rated impulse withstand voltage (U_{imp})	6 / 8 / 12 Kv
		Rated frequency (f_n)	50 / 60 Hz
	Power contacts	Rated current [I_n]	16 / 35 / 80 /100 A
	Auxiliary connectors	Rated current [I_n]	10 / 16A
		N° of auxiliary contacts	6 / 16 / 24 / 42
	Auxiliary contacts	Rated current [I_n]	16 A
		N° of cycles	20000000
		Contact type	2 changeover contacts
		Connection type	Fast-on 6,3 mm
Mechanical Characteristics	Drawers width (l)	350	
	Drawers height (h)	150 / 200 / 250	

3-Pole / 4-Pole
withdrawable unit
IP30/IP42
W=350



Connectors available on request:
Wide range of special connectors
available on request for Profibus,
Modbus, Ethernet protocols etc.



Earthing: Self-centering grounding
system.

Operation of **UNIT** and **½ UNIT** drawers

Commissioning of the drawer



1. drawer in “test” position

Push the test button (grey button) with the aid of SwitchLAF™ Key. The circuit will open and the physical correct insertion of the drawer checked. In case of a positive test, the hole allowing the performance of operation no.02 will open.



2. drawer in “disconnected” position

Insert SwitchLAF™ Key into the left-hand side hole, press and rotate 180° clockwise until the position “I” is reached. In this way the right-hand hole will open allowing the subsequent performance of operation no.3.



3. drawer in “connected” position

Press and rotate clockwise till reaching position “I”

Replacement of the drawer



1. drawer in “connected” position

Insert SwitchLAF™ Key into the right-hand side hole, press and rotate 180° anticlockwise until the position “0” is reached.



2. drawer in “disconnected” position

Insert SwitchLAF™ Key into the left-hand side hole, press and rotate 180° anticlockwise until the position “0” is reached.

Test of the drawer



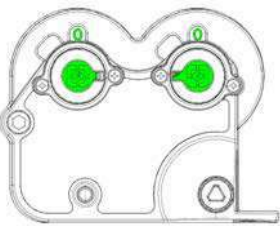
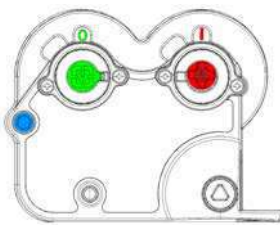
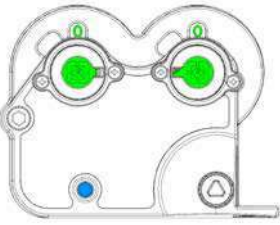
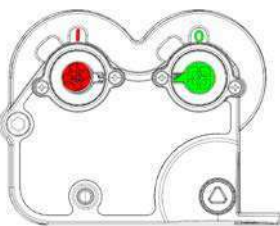
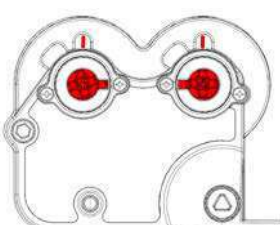
By-pass test

While the drawer is in Test position it is possible to carry out the electrical test downstream the main circuit breaker of the drawer.

Insert an Allen key (size n° 6) into the appropriate space as shown in the figure, rotate clockwise until hole “F2” is completely opened.

Insert SwitchLAF™ Key into “F2” hole and power the circuit breaker by rotating the key 180° clockwise until the position “I” is reached.

SwitchLAF™ 2.0 positions

SWITCHLAF™ 2.0 POSITION	CIRCUITS	SAFETY LOCKS	POSITION OF THE DRAWER
 0 0 WITHDRAWN	Main circuit opened Auxiliary circuits opened	The drawer can be locked by padlock	The drawer is advanced by 20 cm from the cabinet
 0 I TEST BY PASS	Main circuit opened Auxiliary circuits closed	SwitchLAF™ system can be locked by padlock	The drawer is physically inserted and blocked in the cabinet
 0 0 TEST	Main circuit opened Auxiliary circuits closed	SwitchLAF™ system can be locked by padlock	The drawer is physically inserted and blocked in the cabinet
 I 0 DISCONNECTED	Main circuit opened Auxiliary circuits closed		The drawer is physically inserted and blocked in the cabinet
 I I CONNECTED	Main circuit closed Auxiliary circuits closed		The drawer is physically inserted and blocked in the cabinet

Available configurations

Cabinet with cable compartment
Enclosure compatible with **UNIT**, $\frac{1}{2}$ **UNIT** and $\frac{1}{2}$ **FEEDER** withdrawable drawers and fixed drawer.
-Form of segregation (3B-4B-4A)
-Access to the cabinet for connections: front/rear



Cabinet MULTISWITCH
Enclosure compatible with $\frac{1}{2}$ **UNIT** and $\frac{1}{2}$ **FEEDER** withdrawable drawers.
• Form of segregation (3B-4B-4A)
• Access to the cabinet for connections: front/rear



Cabinet with glass door:
All available layouts (free-standing cabinet, cabinet with cable compartment or **MULTISWITCH** cabinet) can be equipped with glass door to achieve an IP55 degree of protection.



Vertical distribution busbars and main horizontal busbar system



Vertical distribution busbars up to 800A:
Available solutions: aluminium or copper profiles, flat copper or tin-plated copper bars

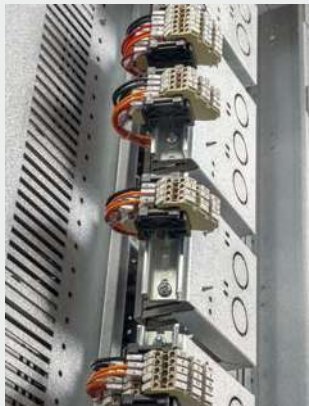


Main horizontal busbar system up to 4000A:
Available solutions: aluminium, copper or silver-plated copper profiles, copper profiles treated with protective coat or flat copper bars



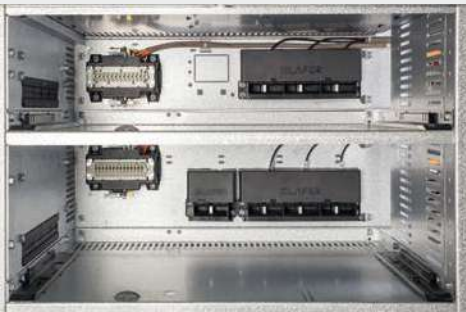
Main horizontal busbar system partitions
Sheet steel partition to prevent any contact with live parts

Cable compartment



Lateral compartment for terminal block and aluminium or copper earth bar

Fixed compartments for Unit, $\frac{1}{2}$ Unit and $\frac{1}{2}$ Feeder drawers



UNIT



$\frac{1}{2}$ UNIT / $\frac{1}{2}$ FEEDER



Unit, $\frac{1}{2}$ Unit and $\frac{1}{2}$ Feeder withdrawable drawers



UNIT



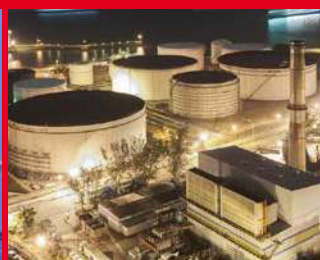
$\frac{1}{2}$ UNIT / $\frac{1}{2}$ FEEDER





PW-Tech

Power Center cabinets for low voltage power distribution up to 6300 A





Lafer. Around you





Devoted to energy distribution.

They offer many solutions to any wiring typology, accessibility and segregation form.

Main characteristics

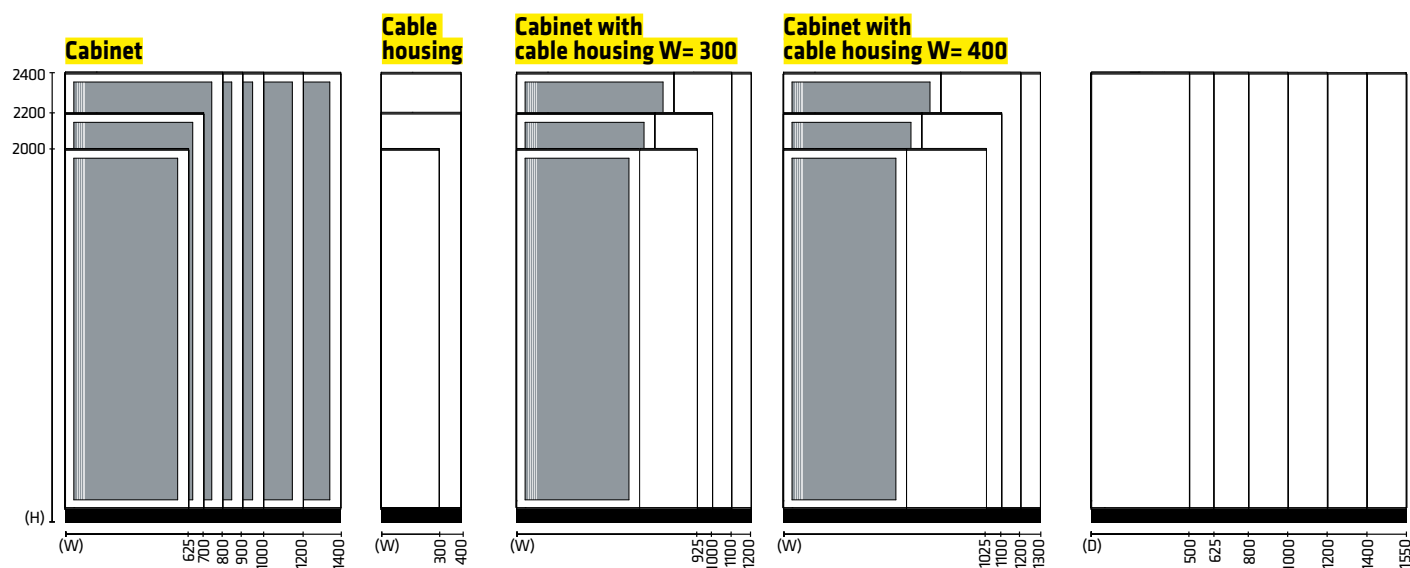
- Assembled structure made of sheet with a thickness of 20/10 mm.
- Plinth with reinforced flanges with a thickness 20/10 mm for handling on rollers.
- Degree of protection from IP30 (open version) to IP55 with blind door or transparent door with toughened glass.
- Possibility of side connection with other Lafer cabinets too (MC-Cub, ME-Cub and Automation).
- Installation of devices of all manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colours on request).
- Stainless steel cabinet on request.
- Patented and certified earth connection system.
- Internal finishing accessories for all kinds of exigences.

Certifications



IEC 61439-1	test n° B0008006 test n° B5002265	Short circuit $I_n=6300$ A e $I_{cc}=150$ kA per 1 sec. • Short circuit verification • Verification between the equipment masses and the protection circuit.
IEC/TR 61641 CEI 17-86	test n° B0009515 test n° B5014994	Internal arc fault verification 105 Ka for 300 msec.
IEC 61439-1 IEC/TR 61641	test n° B0007840 test n° 02472-15-0378	Overtemperature limits verification. • Dielectric properties verification: impulse and industrial frequency test. • Clearance and creepage distance verification.
CEI EN 60529	test n° B0011835	Degree of IP55 protection category 2 verification.
IEEE Std 693-2005 IEC 60068-2-57 IEC 62271-300 Transelec	test n° B3020295	Seismic test with acceleration 1,0g

Technical specifications



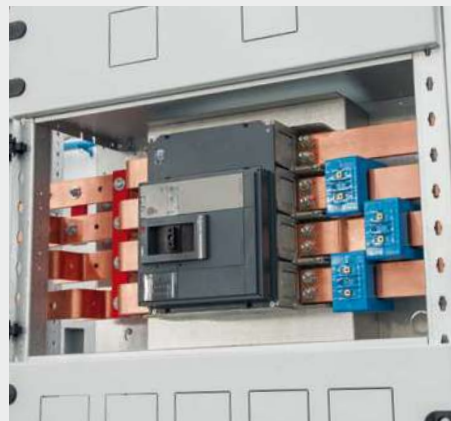
	Width (W) mm	Height (H) mm		Depth (D) mm
Cabinet	625 (24 modules)	2000 / 2200 / 2400 (usable space = H - 200)		500 / 625 / 800 / 1000 / 1200 / 1400 / 1550
	700 (24 modules)			
	800 (34 modules)			
	1000 (46 modules)			
	1200 (54 modules)			
	1400 (62 modules)			
Cable housing	300	2000 / 2200 / 2400 (usable space = H - 200)		500 / 625 / 800 / 1000 / 1200 / 1400 / 1550
	400			
Cabinet with cable housing	625 + 300 (24 modules)	2000 / 2200 / 2400 (usable space = H - 200)		500 / 625 / 800 / 1000 / 1200 / 1400 / 1550
	700 + 300 (24 modules)			
	800 + 300 (34 modules)			
	625 + 400 (24 modules)			
	700 + 400 (24 modules)			
	800 + 400 (34 modules)			
Back to back cabinet	On request			
Electrical data	Voltage ratings	Rated insulation voltage (U_i)		1000 V
		Rated operational voltage (U_e)		690 V
		Rated impulse withstand voltage (U_{imp})		8 / 12 kV
		Rated frequency (f_n)		50 / 60 Hz
	Current ratings	Rated current (I_n)		Up to 6300 A
		Rated short-time withstand current for 1 sec. (I_{cw})		150 kA
Mechanical characteristics	IP degree of protection	Internal	Up to IP2X	
		External enclosure	From IP30 to IP55	
	Covers height (h)	150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 / 900 / 1000		
	IK test (shock resistance)	IK09 glazed door		
		IK10 blind door		
	Access	From the front / Side / Rear		
	Execution	Form 1 / Form 2a / Form 2b / Form 3a / Form 3b / Form 4a / Form 4b		
	Material	Structure	Pickled plate, 15/10 - 20/10 mm thick	
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 - 25/10 mm thick	
	Powder coating	Standard	RAL 7035 B light grey (orange peel)	
		On request	Powder RAL colours and stainless steel	
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free		
	Bars treatment	Alubar	standard: tin	
			on request: Nickel/ Silver	
		Copper	standard: none	
			on request: Tin/ Nickel/ Silver	

All Lafer cabinets have been designed to be used in indoor environments. In case of outdoor applications, customers should require the supply of the specific rain canopy. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.

Typology

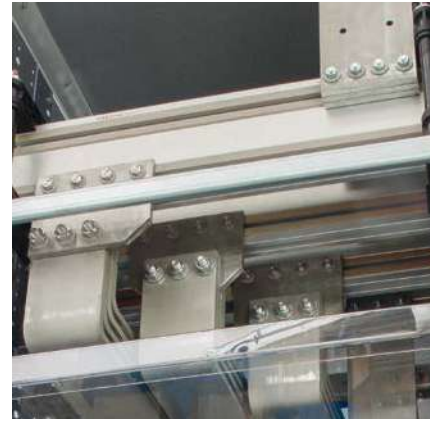


Cabinet with back access:
cabinet with sections up to 4b.
Vertical and horizontal busbar system placed at the back.



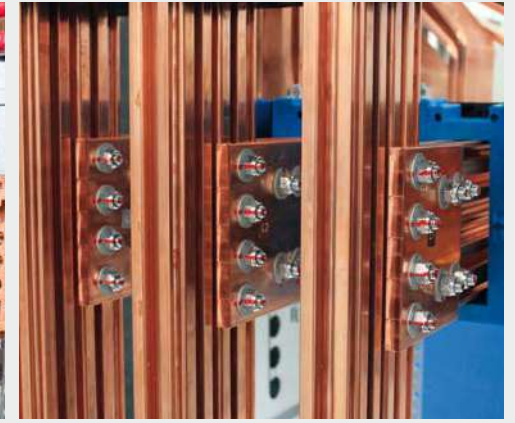
Cabinet with frontal access:
cabinet with sections up to 4a form.
Vertical busbar system placed on the side and horizontal busbar system placed on the top.

Smart Energy Plus



Smart-Energy plus busbar system:
anodized aluminium with nickel contact surface applied with cold spray technology up to 6300 A.

Smart Energy Copper



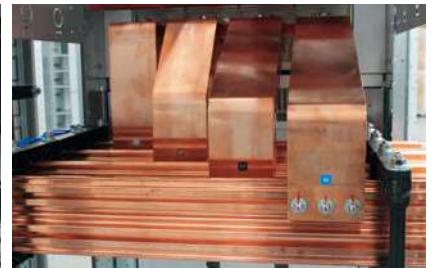
Smart-Energy copper busbar system:
extruded copper busbar up to 6300 A.



Connections

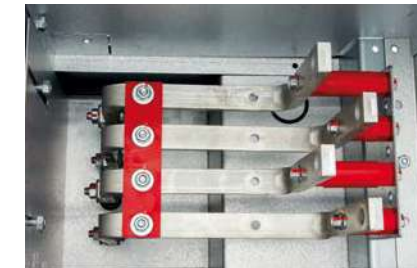


Alubar circuit breakers connection:
Tin-plated aluminium connections between circuit breakers and main busbar from 250 A up to 4000 A (nickel-plated or silver-plated aluminium on request).



Copper circuit breakers connections:
connections up to 6300 A.

Terminals extension



Copper or Aluminium **extension of horizontal or vertical circuit breakers terminals.**



Internal details



Compartment: with hinged cover, wiring plate, horizontal partition and Aluzinc sheet steel side segregation.

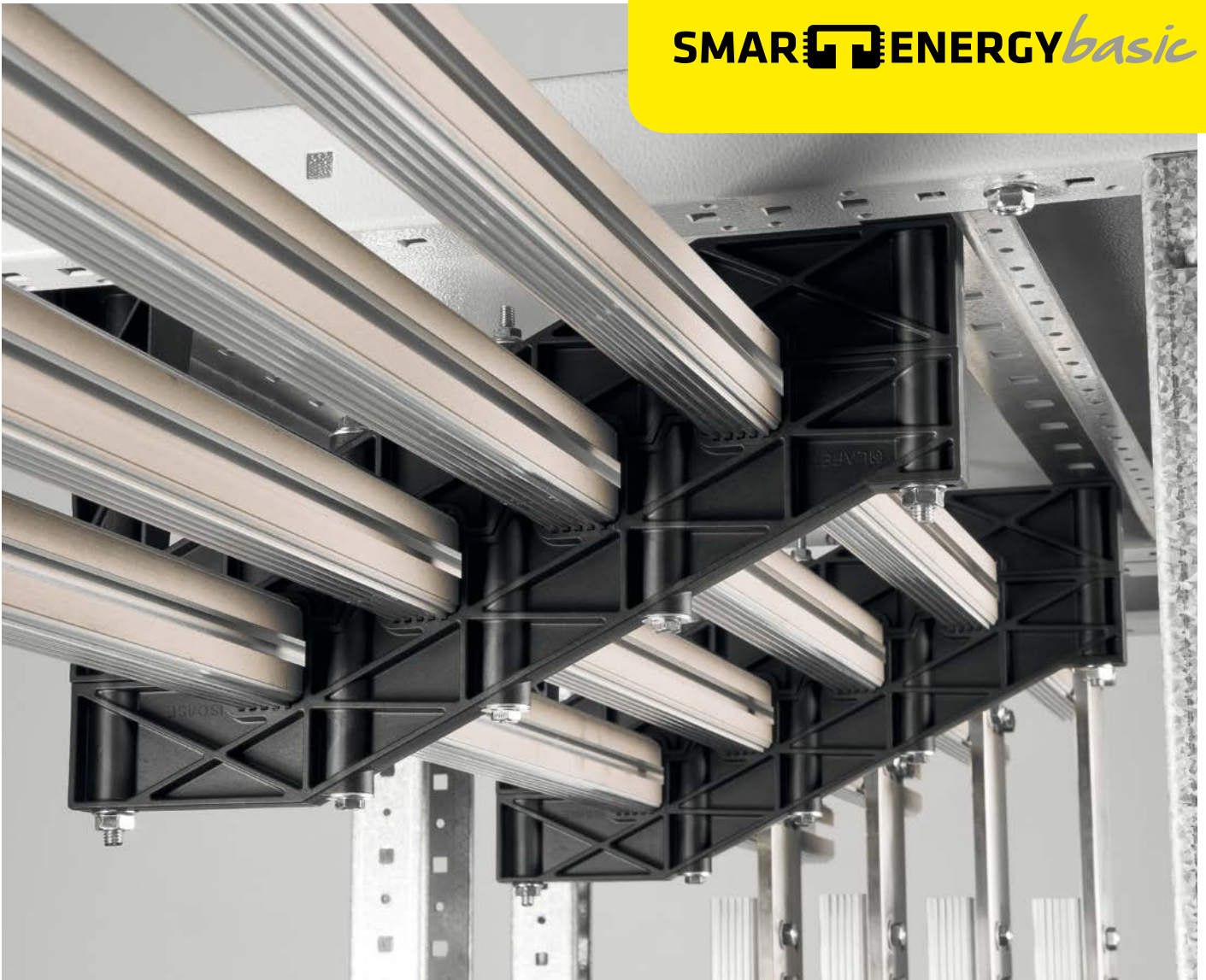


ModularDINTM system: rapidity of assembly and disassembly of LDIN modular rails, with the new joint system without screws. It is compatible with the majority of splitter blocks available on the market.



SMART ENERGY*basic*

Universal aluminium busbar system
up to 1250 A



An innovative, reliable and cost-effective solution

Main characteristics

- Anodized aluminium profiles 40x30 mm and nickel contact surface applied with cold spray technology.
- Busbar holders made of self-extinguishing PA6 polyamide, class V0 IEC 60695-11-10.
- Busbar system up to 1250 A
In = and Icc = 70 kA.
- Inclined and linear Smart-Energy placeable in the cable compartment, in rear and upper zone.
- Maximum ease of in wiring with hammer-head screws and Lafer accessories.
- Simplicity of coupling and junction between horizontal and vertical bars.
- Test CESI n. B3012744 short circuit withstand In = 1250 A and Icc = 70 kA for 1 sec.

Smart-Energy basic can be used in Lafer cabinets and in those of other brands as well.

Certifications

IEC 61439-1

test n. B3012744
test n. B3013956

resistance to short circuit In=630 A e Icc=35 kA for 1 sec.
resistance to short circuit In=1250 A e Icc=70 kA for 1 sec.

- test of resistance to the short circuit.
- test of connection masses equipment and protection circuit.



SMART ENERGY *basic*

A specific bar for every power

Anodized aluminium profiles and nickel contact surface applied with cold spray technology.

Bars available in two lengths 1750 mm and 2325 mm.



BA6
630 A
40x30 mm



BA8
800 A
40x30 mm



BA12
1250A
60x30 mm



BA16
1600A
60x30 mm

Cable compartment L=300



Cable compartment L=400

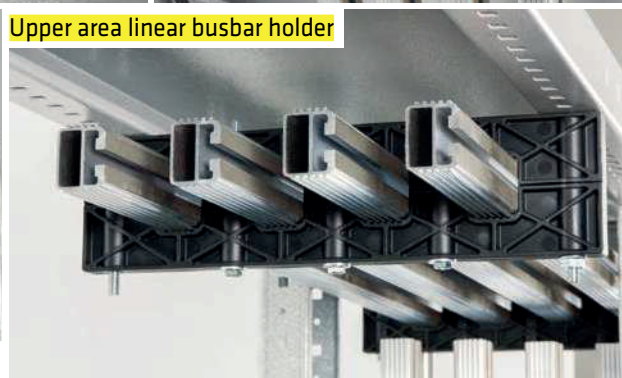


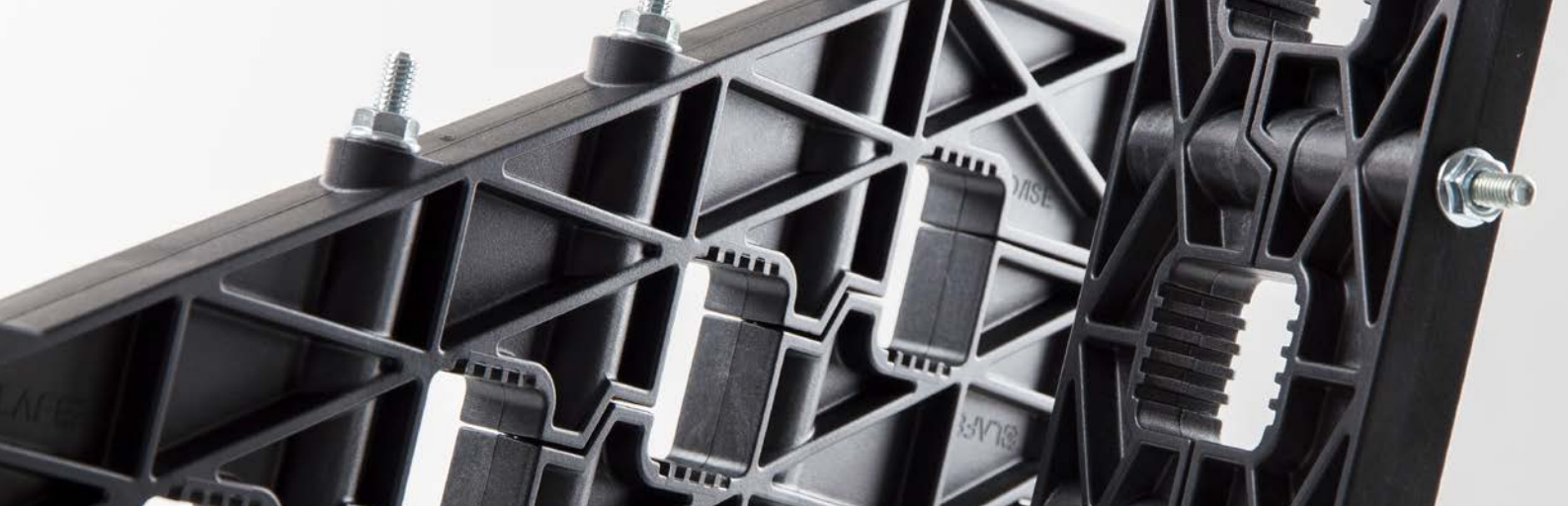
Rear area



Upper area inclined busbar holder

Upper area linear busbar holder





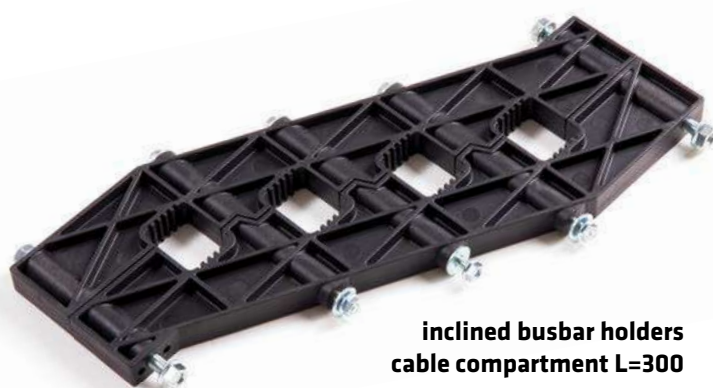
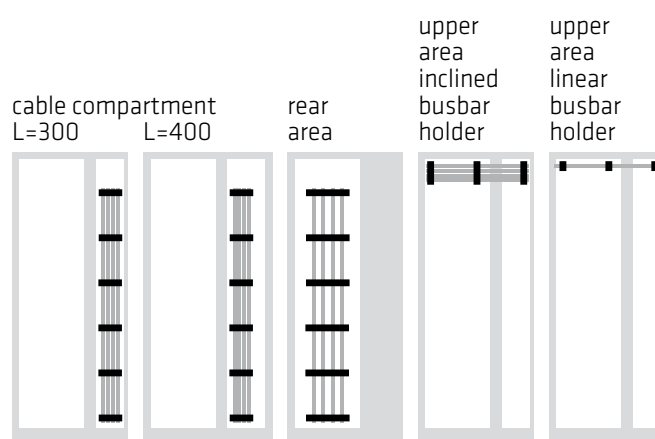
Busbar holders

Maximum speed of installation

Compatible with Smart-Energy basic and also with traditional copper bars.



linear busbar holders



**inclined busbar holders
cable compartment L=300**

In	Icc	n. bars	bars type	n. busbar holders	max distance. busbar holders
630 A	25 kA	4	BA6	3	850 mm
630 A	35 kA	4	BA6	4	600 mm
800 A	25 kA	4	BA8	3	850 mm
800 A	35 kA	4	BA8	4	600 mm
800 A	40 kA	4	BA8	5	450 mm
800 A	50 kA	4	BA8	6	350 mm
1000 A	25 kA	4	BA10	3	850 mm
1000 A	35 kA	4	BA10	4	600 mm
1000 A	40 kA	4	BA10	5	450 mm
1000 A	50 kA	4	BA10	6	350 mm
1000 A	60 kA	4	BA10	7	300 mm
1250 A	25 kA	4	BA12	3	850 mm
1250 A	35 kA	4	BA12	4	600 mm
1250 A	40 kA	4	BA12	5	450 mm
1250 A	50 kA	4	BA12	6	350 mm
1250 A	60 kA	4	BA12	8	250 mm
1250 A	70 kA	4	BA12	9	250 mm



**inclined busbar holders
cable compartment L=400**

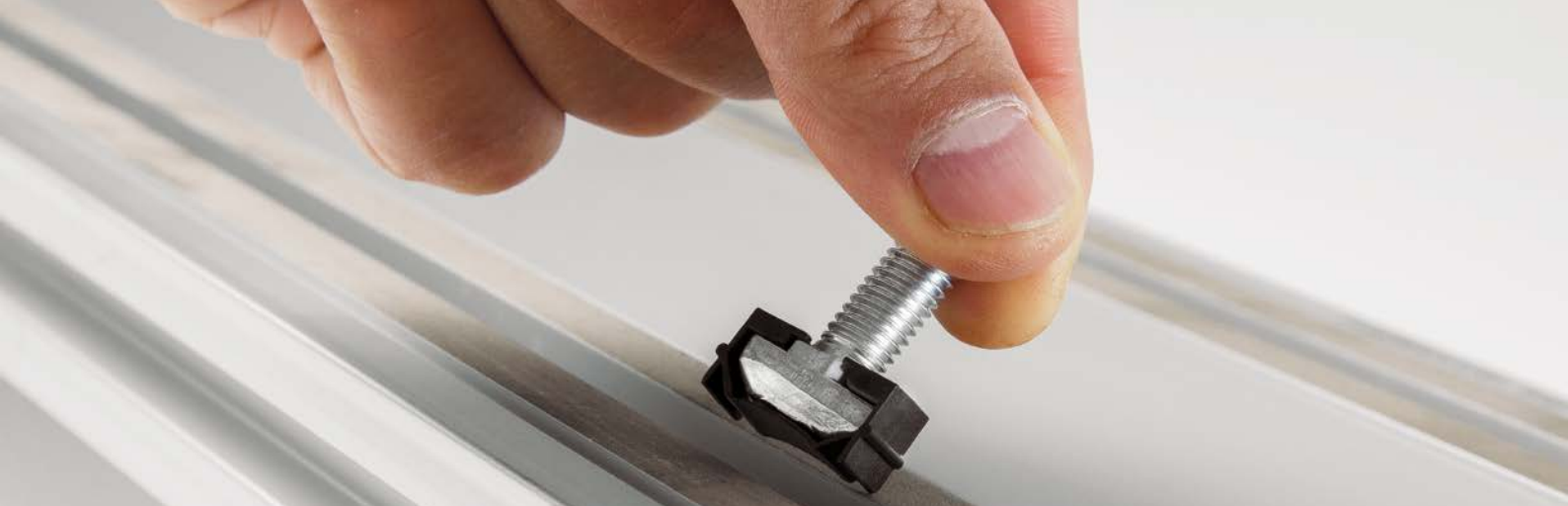


Connections systems and accessories

Modularity and power

Connection systems made in flexible copper braid and tin-plated aluminium plates.





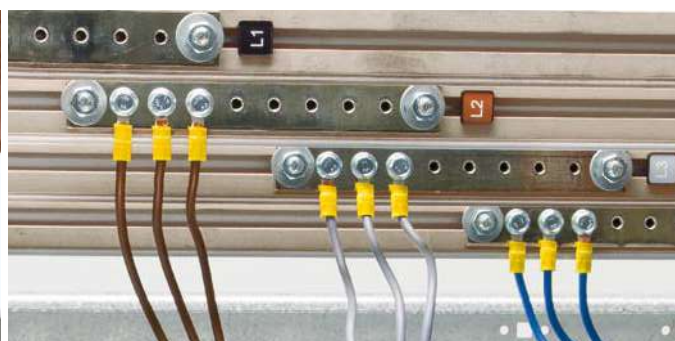
Accessories

Comfort close at hand

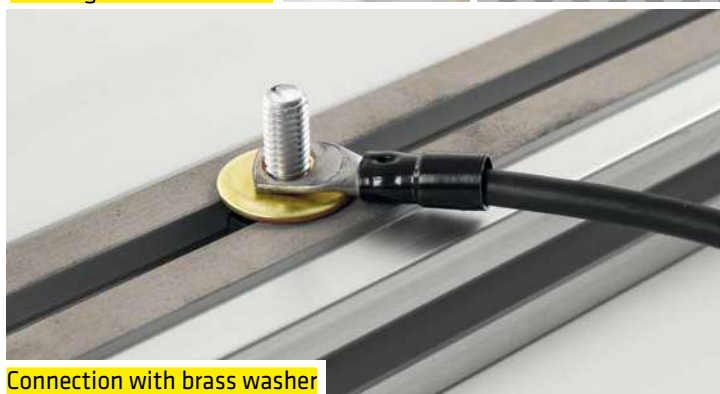
Very fast installation and reduced use of mounting tools.



Rectangular-head screws



Modular circuit breakers connection



Connection with brass washer



Busbars alignment system



Phases and neutral identification



SMART ENERGY*plus*

Universal aluminium busbar system
up to 6300 A



Economic, innovative, flexible.

SMART ENERGY^{plus}
ALUBAR

Main characteristics

- Busbar holders made of self-extinguishing PA6 polyamide, class V0 IEC 60695-11-10.
- Anodized aluminium profiles with a nickel contact surface Linear system placeable.
- Linear system with the option to be installed in the cable compartment, in rear and upper zone.

- Maximum easiness and speed in wiring with hammer-head screws and Lafer accessories.
- Simple coupling and junction between bars.
- Certified system according to norm 61439-1 / 61439-2.
- Short-circuit Certification up to 105 kA.

Main characteristics

- Connection system in tin-plated aluminium up to 6300 A.
- Innovative system designed to be shaped to the connections.
- System certified according to norm 61439-1 / 61439-2.
- Short circuit Certification up to 105 kA.

Smart-Energy plus can be used in Lafer cabinets and in those of other brands as well.

Certifications

CESI
IPH
BERLIN

IEC 61439-1	test n. B5002265	resistance to short circuit $I_n=6300\text{ A e } I_{cc}=105\text{ kA for 1 sec.}$ <ul style="list-style-type: none"> • seal test for short circuit. • masses connection test equipment and protection circuit.
IEC/TR 61641 CEI 17-86	test n. B5014994	arc conditions due to internal fault 105 kA for 300 msec.
IEC 61439-1	test n. 02472-15-0378	overtemperature limit testing. <ul style="list-style-type: none"> • verification of the dielectric properties: Pulse tests at industrial frequency. • clearance and creepage distance verification.



SMART ENERGY *plus*

A specific bar for every power

Anodized aluminium profiles with applied nickel contact surface.

Bars available in two lengths 1750 mm and 2325 mm.



BA10P
1000A
30x60 mm



BA12P
1250A
30x60 mm



BA16P
1600A
30x80 mm



BA20P
2000 A
30x100 mm



BA20P/5
2000 A (neutral 50%)
30x100 mm



BA25P
2500 A
30x120 mm



BA25P/5
2500 A (neutral 50%)
30x120 mm



BA32P
3000 A
30x150 mm



BA32P/5
3000 A (neutral 50%)
30x150 mm



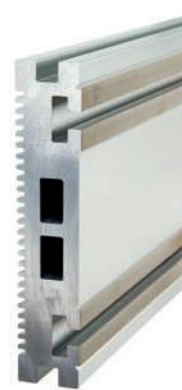
BA40P
4000A
30x180 mm



BA40P/5
4000A (neutral 50%)
30x180 mm



BA50P
5000A
50x180 mm



BA50P/5
5000A (neutral 50%)
30x180 mm



Rear area



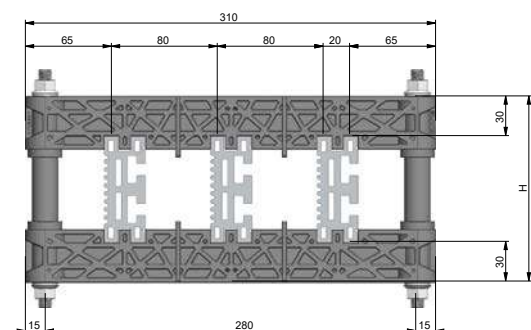
Upper area



Maximum speed and ease of installation

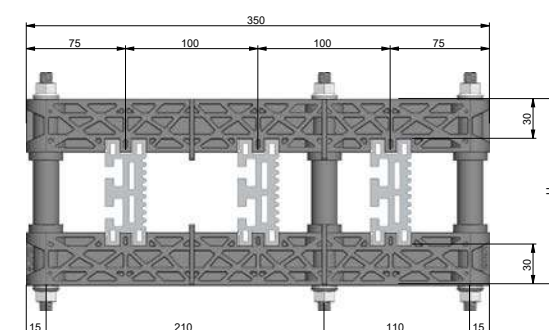
3-pole busbar holders

Different configurations for applications **from 630 A up to 6300 A**.



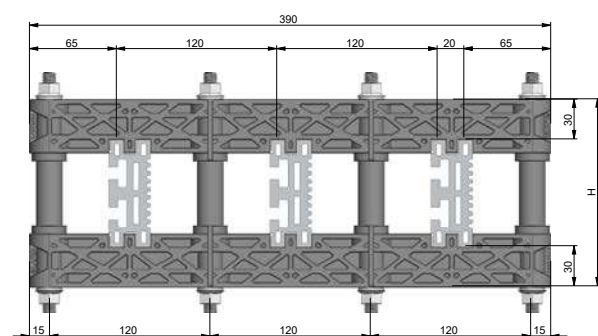
interaxis 80 mm

In (A)	H
630/800/1000	110
1250	120
1600	140



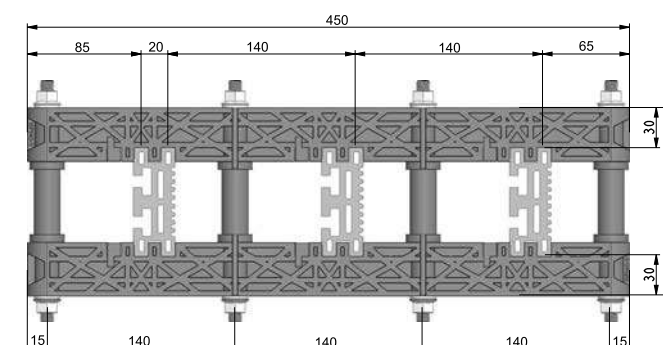
interaxis 100 mm

In (A)	H
630/800	110
1000/1250	120
1600	140
2000	160
2500	180
3200	210



interaxis 120 mm

In (A)	H
630/800/1000	110
1250	120
1600	140
2000	160
2500	180
3200	210
4000	240

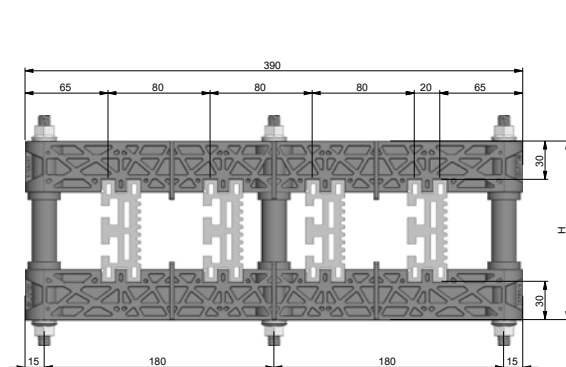


interaxis 140 mm

In (A)	H
630/800/1000	110
1250	120
1600	140
2000	160
2500	180
3200	210
4000	240
5000	240

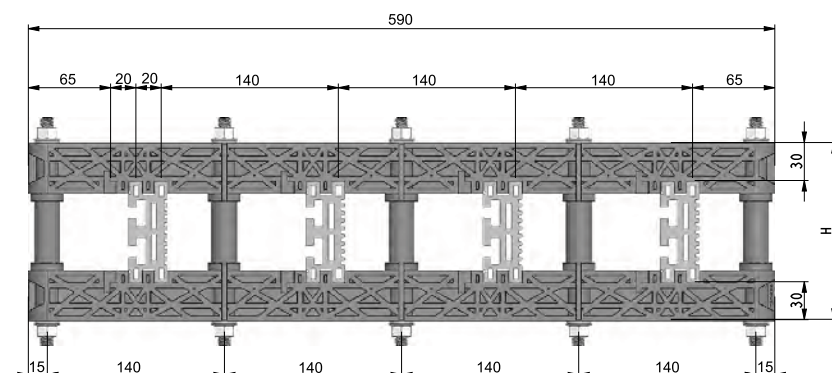
4-pole busbar holders

Different configurations for applications **from 630 A up to 6300 A**.



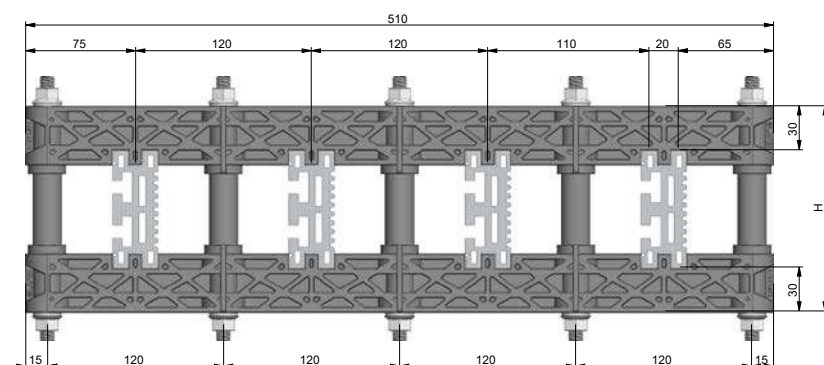
interaxis 80 mm

In (A)	H
630/800/1000	110
1250	120
1600	140



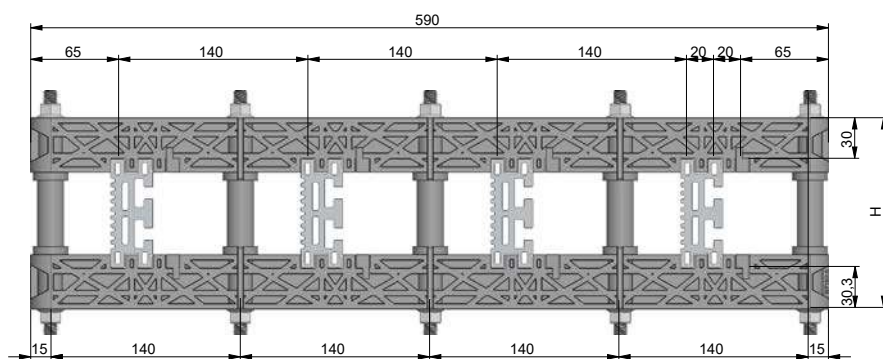
interaxis 100 mm

In (A)	H
630/800/1000	110
1250	120
1600	140
2000	160
2500	180
3200	210



interaxis 120 mm

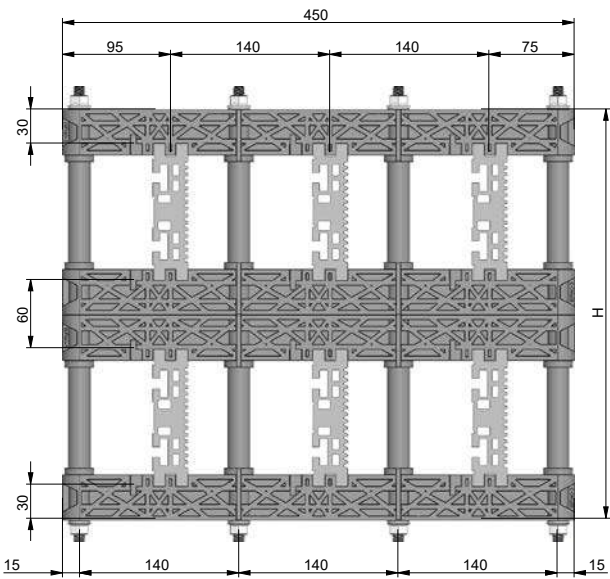
In (A)	H
630/800/1000	110
1250	120
1600	140
2000	160
2500	180
3200	210
4000	240



interaxis 140 mm

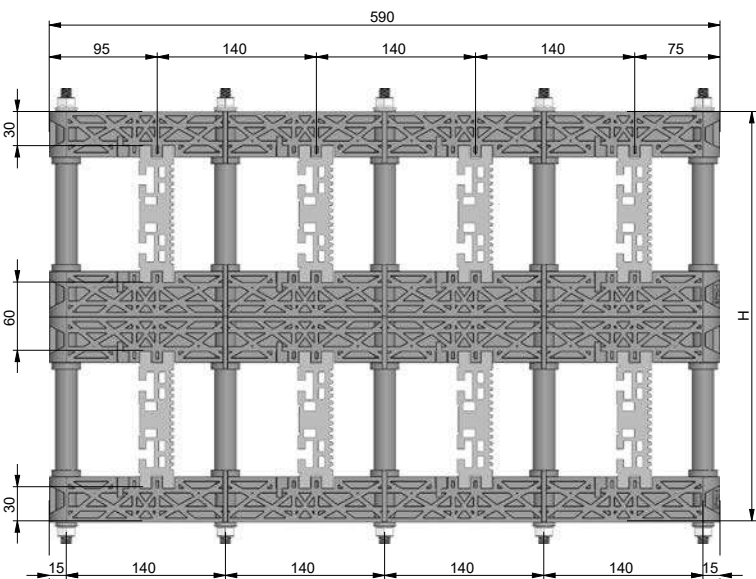
In (A)	H
630/800/1000	110
1250	120
1600	140
2000	160
2500	180
3200	210
4000	240
5000	240

Double-line busbar holder - 6300A



3 poles - interaxis 140 mm

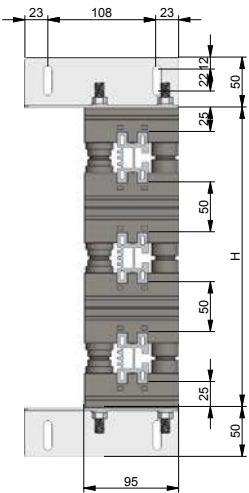
In (A)	H
6300	420



4 poles - interaxis 140 mm

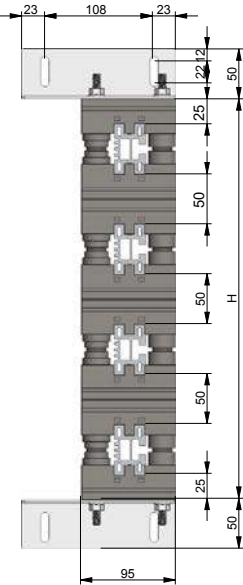
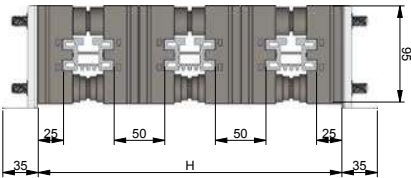
In (A)	H
6300	420

Back busbar holder



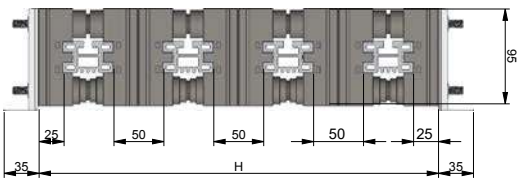
3-pole busbar holder
Vertical/ Horizontal
for applications
from 800 A up to 4000 A

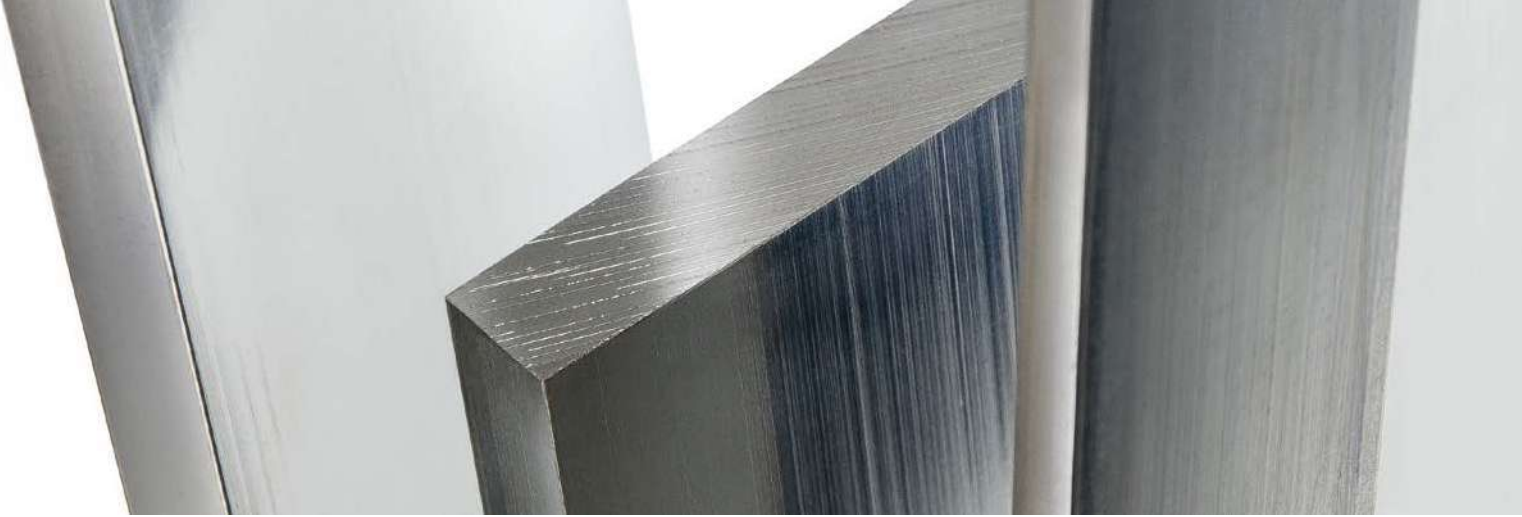
In (A)	H
630/800	300
1000/1250	330
1600	390
2000	450
2500	510
3200	600
4000	690



4-pole busbar holder
Vertical/ Horizontal
for applications
from 800 A up to 4000 A

In (A)	H
630/800	400
1000/1250	440
1600	520
2000	600
2500	680
3200	800
4000	920





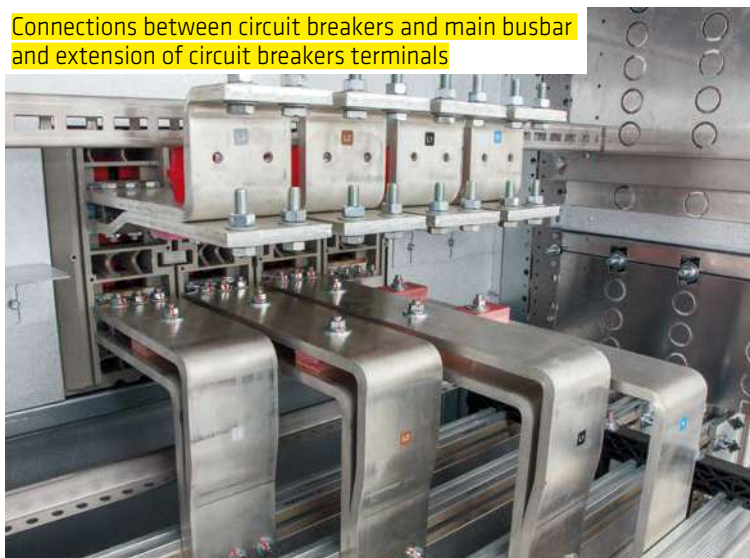
ALUBAR

Suitable for all connections

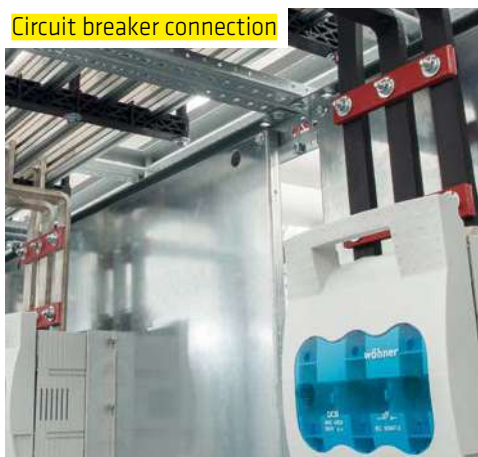
Connection system with tin-plated aluminium busbars from 250 to 4000 A.



Circuit breaker connection to vertical busbars



Connections between circuit breakers and main busbar and extension of circuit breakers terminals



Circuit breaker connection



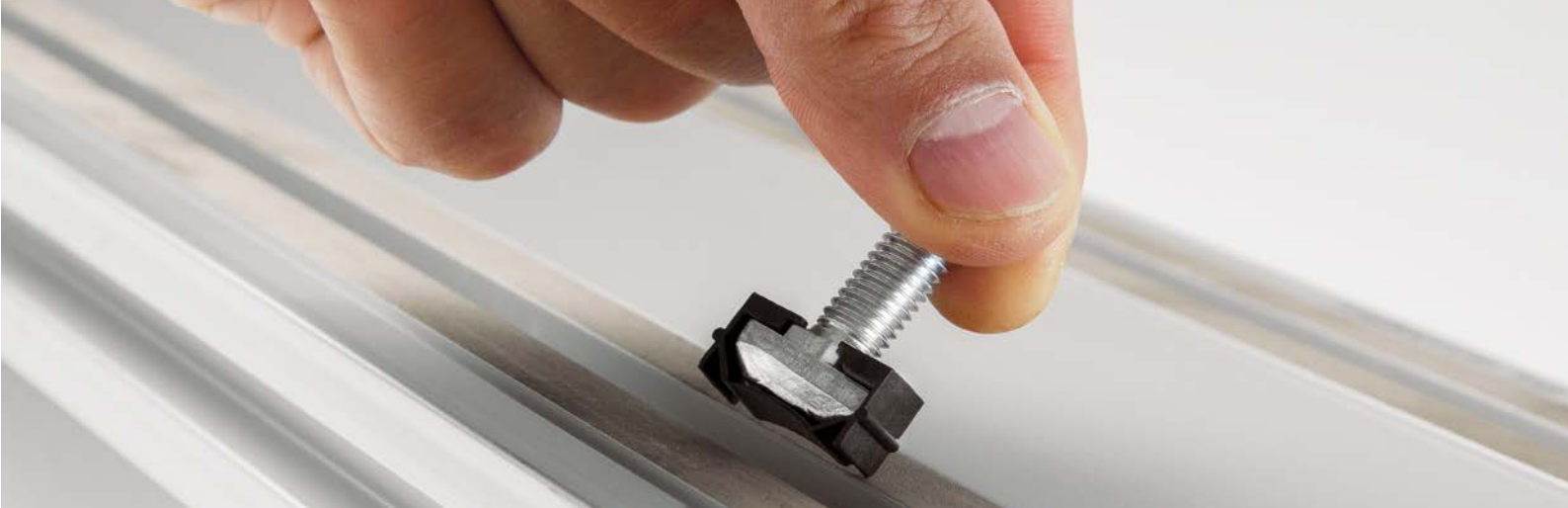
Busbars connections



Extension of the connection between busbar system and terminal unit



Circuit breakers terminals extension

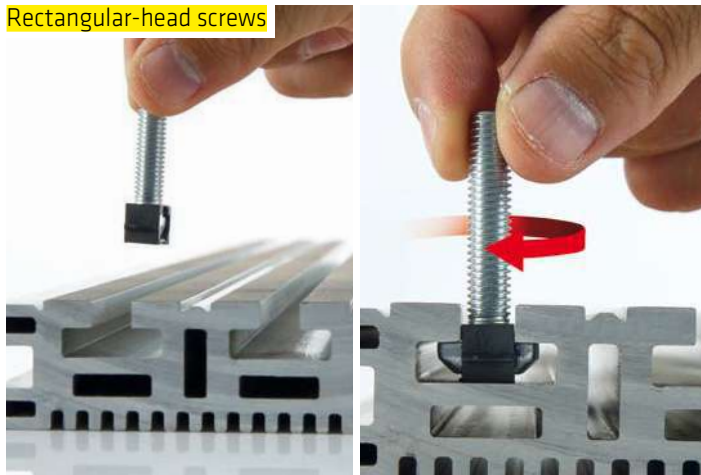


Accessories

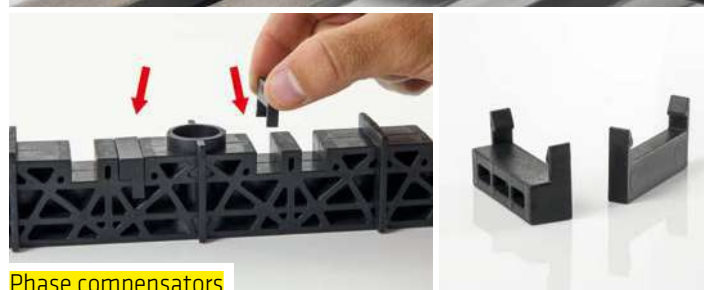
Comfort close at hands

Very fast installation and reduced use of mounting tools.

Rectangular-head screws



Connection with brass washer

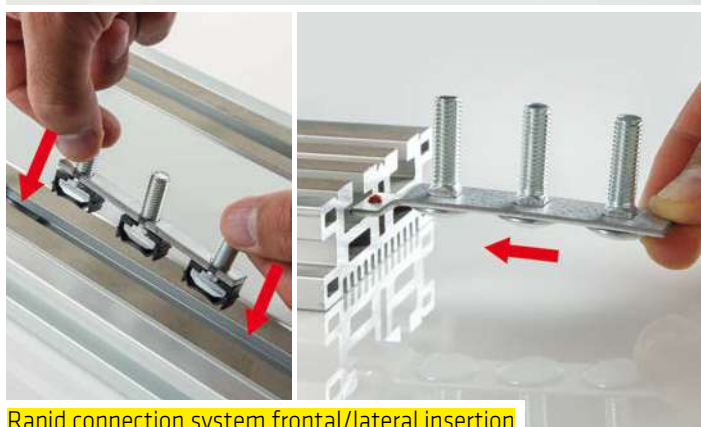


Phase compensators

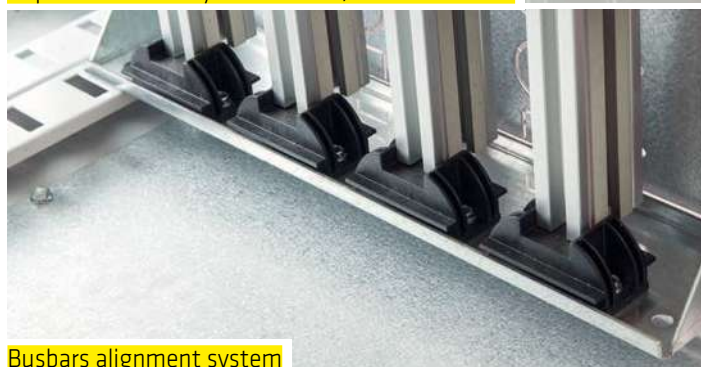


Phases and neutral identification

Modular circuit breakers connection



Rapid connection system frontal/lateral insertion

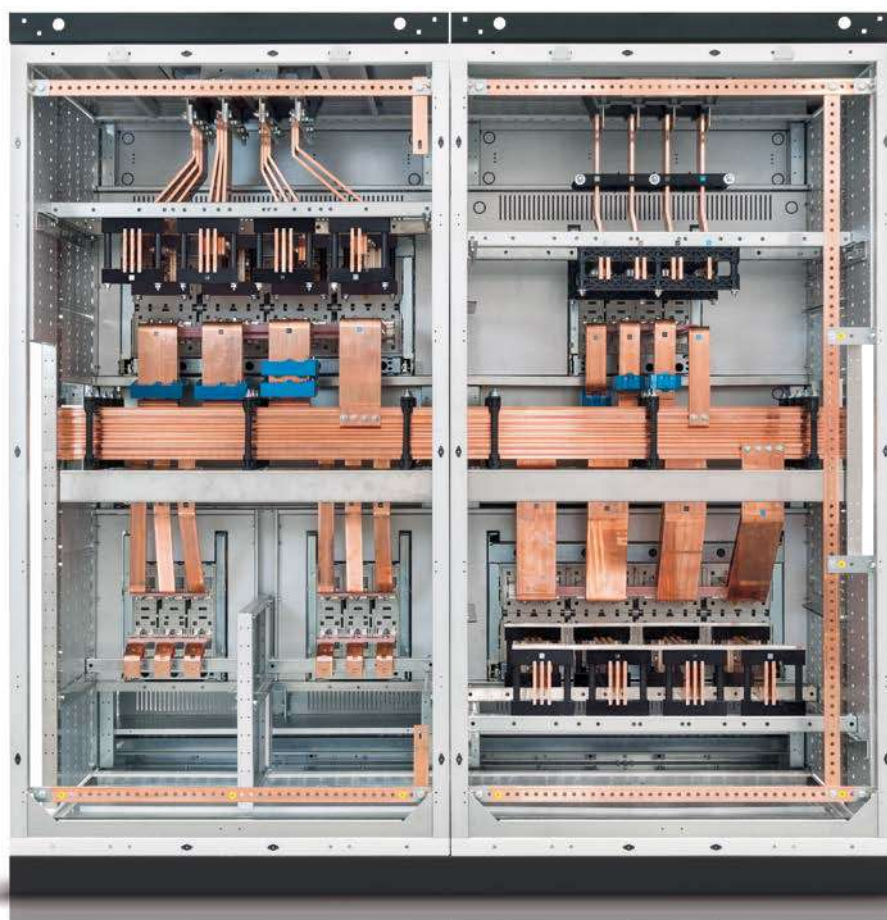


Busbars alignment system



SMART ENERGY*copper*

Universal copper busbar system
up to 6300 A



Universal copper busbar system up to 6300 A. A cost-effective, cutting-edge system.

Main characteristics

- Double-grooved copper profiles
- Busbar holders made of self-extinguishing PA6 polyamide, class V0 IEC 60695-11-10.
- Busbar system up to 6300 A and $I_{cc} = 105 \text{ kA}$.
- System easily placeable in the cable compartment, in the rear and or the upper zone of the cabinet.
- Simple installation and wiring thanks to hammer-head screws and Lafer accessories.
- Simple coupling and junction between bars.
- Maximum ease of installation of all electrical equipments.

Smart-Energy copper can be used in Lafer cabinets and in those of other brands as well.

Certifications



IEC 61439-1	test n. B5002265	resistance to short circuit $I_n=6300 \text{ A}$ e $I_{cc}=105 \text{ kA}$ for 1 sec. <ul style="list-style-type: none"> • seal test for short circuit. • masses connection test equipment and protection circuit.
IEC/TR 61641 CEI 17-86	test n. B5014994	arc conditions due to internal fault 105 kA for 300 msec.
IEC 61439-1	test n. 02472-15-0378	overtemperature limit testing. <ul style="list-style-type: none"> • verification of the dielectric properties: Pulse tests at industrial frequency. • clearance and creepage distance verification.



SMART ENERGY *copper*

A specific bar for every power

Double-grooved copper profiles. Bars available in three lengths: 1830 mm, 2030 mm and 2325 mm.



BR8P
800A
15X50 mm



BR12P
1250A
30x50 mm



BR8P
1250 A (neutral 50%)
15X50 mm



BR16P
1600 A
30X50 mm



BR8P
1600 A (neutral 50%)
30X50 mm



BR20P
2000A
30X80 mm



BR20P/5
2000 A (neutral 50%)
15X80 mm



BR25P
2500A
30X100 mm



BR25P/5
2500 A (neutral 50%)
15X100 mm



BR32P
3200A
30X120 mm



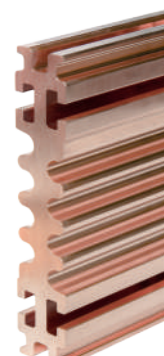
BR32P/5
3200 A (neutral 50%)
15X120 mm



BR40P
4000A
30X150 mm



BR40P/5
4000A (neutral 50%)
15X150 mm



BR50P
5000A
35X180 mm



**INSULATED
SMART-ENERGY
COPPER PROFILE**
Copper bar treated
with protective
coat and equipped
with plastic shutter

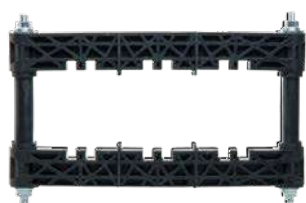


**TIN-PLATED OR
NICKEL-PLATED
SMART ENERGY
COPPER PROFILE**
Tin-plated or
nickel-plated
copper bar

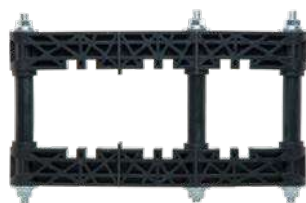
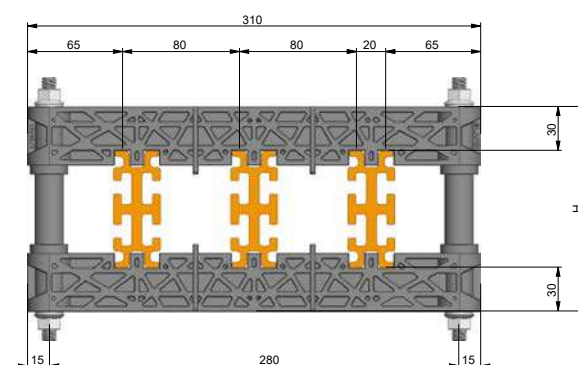


Maximum speed of installation 3-pole busbar holders

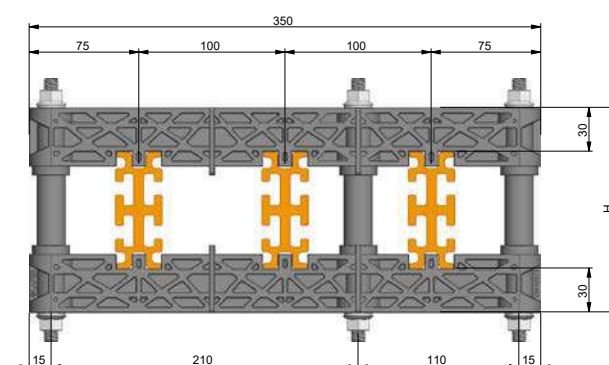
Different configurations for applications **from 630 A up to 6300 A**.



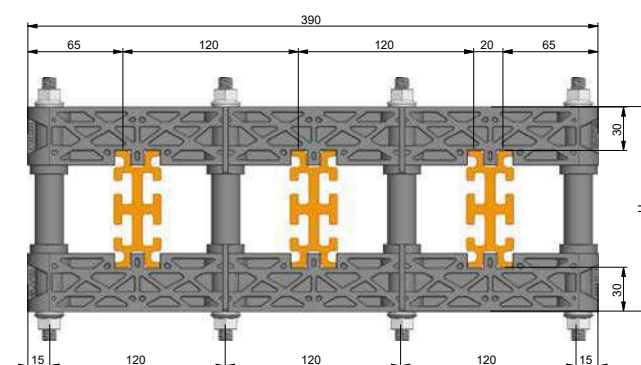
In (A)	H
800 - 1000/1250 - 1600	110

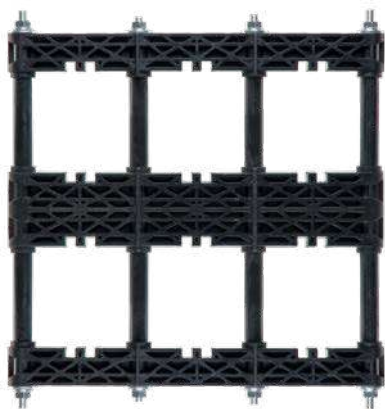


In (A)	H
630/800 - 1000/1250 - 1600	110
2000	140
2500	160
3200	180

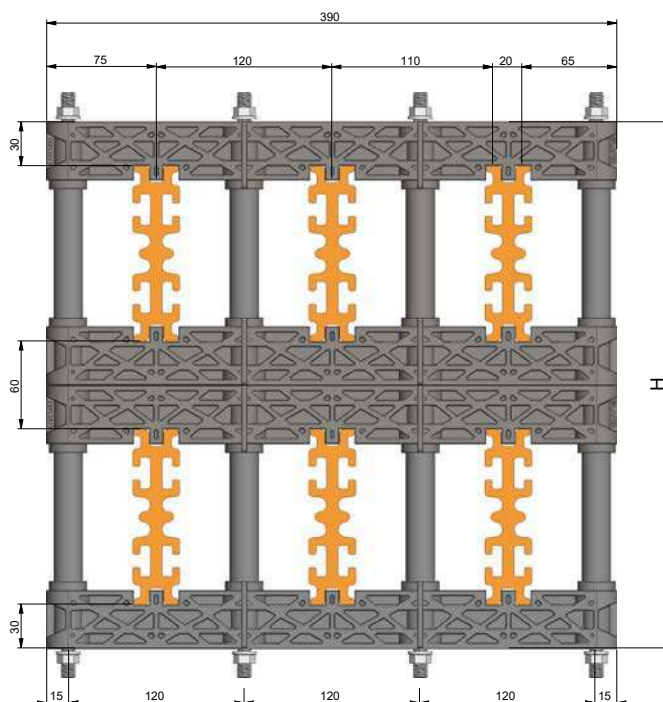


In (A)	H
800 - 1250 - 1600	110
2000	140
2500	160
3200	180
4000	210



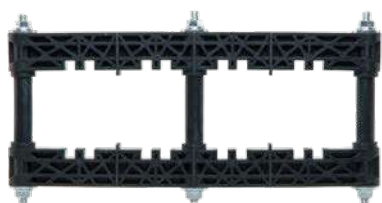


In (A)	H
5000	320
6300	360

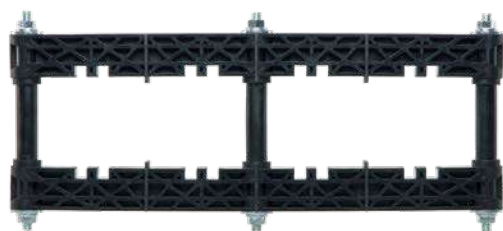
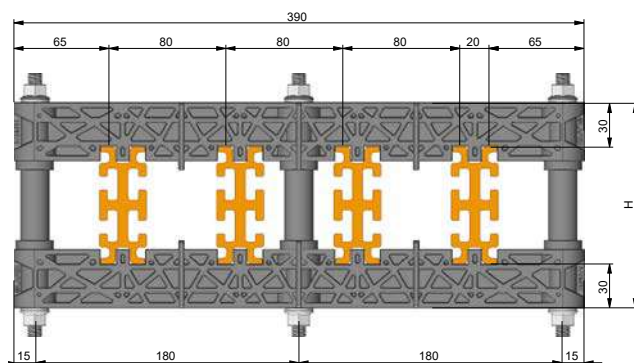


4-pole busbar holders

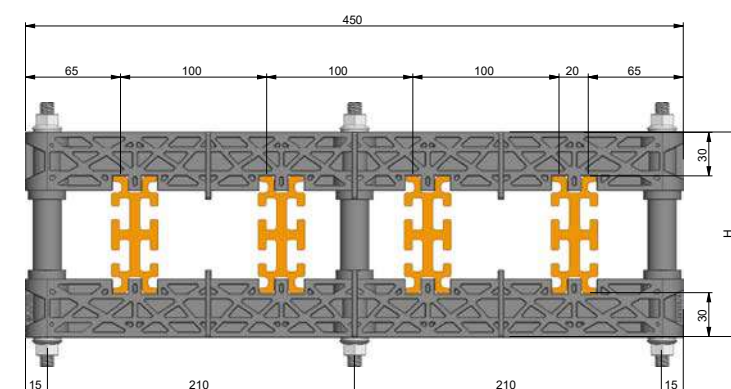
Different configurations for applications **from 630 A up to 6300 A**.

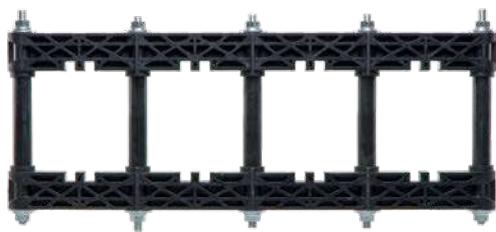


In (A)	H
800 - 1000/1250 - 1600	110

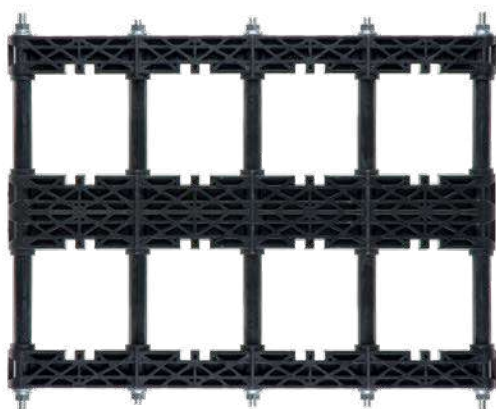


In (A)	H
630/800 - 1000/1250 - 1600	110
2000	140
2500	160
3200	180

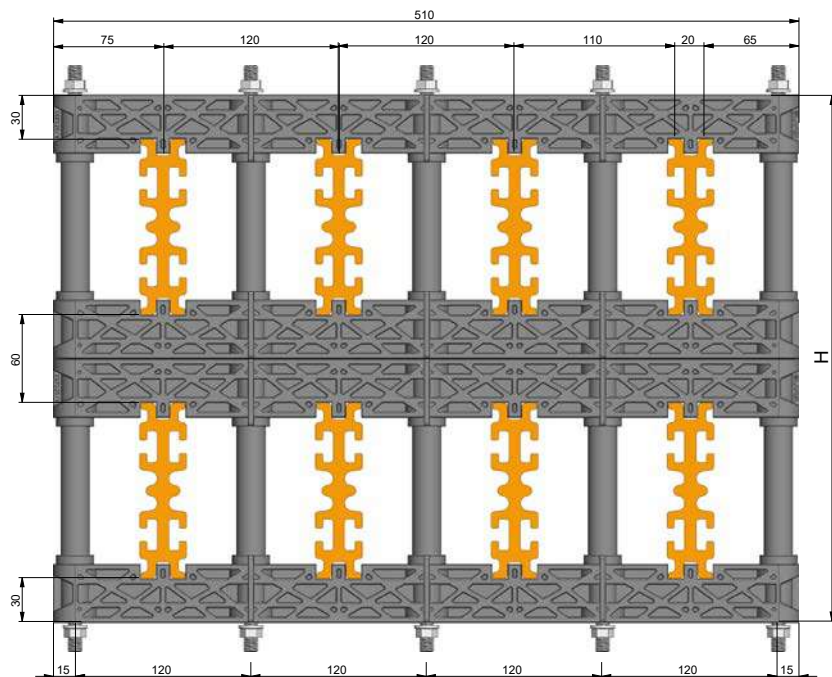
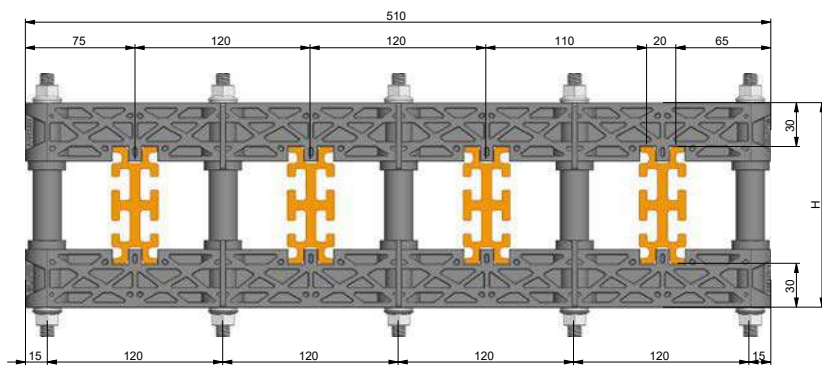




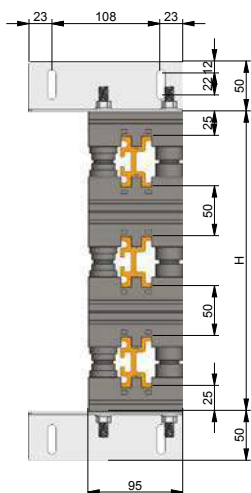
In (A)	H
800 - 1000 / 1250 - 1600	110
2000	140
2500	160
3200	180
4000	210



In (A)	H
5000	320
6300	360

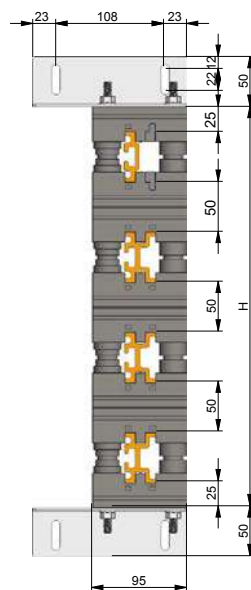
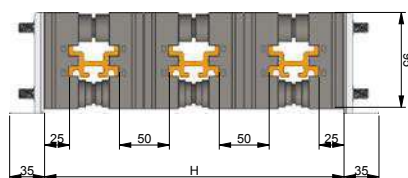


Back busbar holder



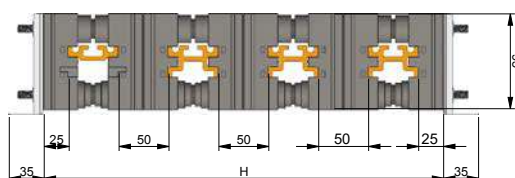
3-pole busbar holder
Vertical/ horizontal
for applications
from 800 A up to 4000 A

In (A)	H
800 - 1000/1250 - 1600	300
2000	390
2500	450
3200	510
4000	600



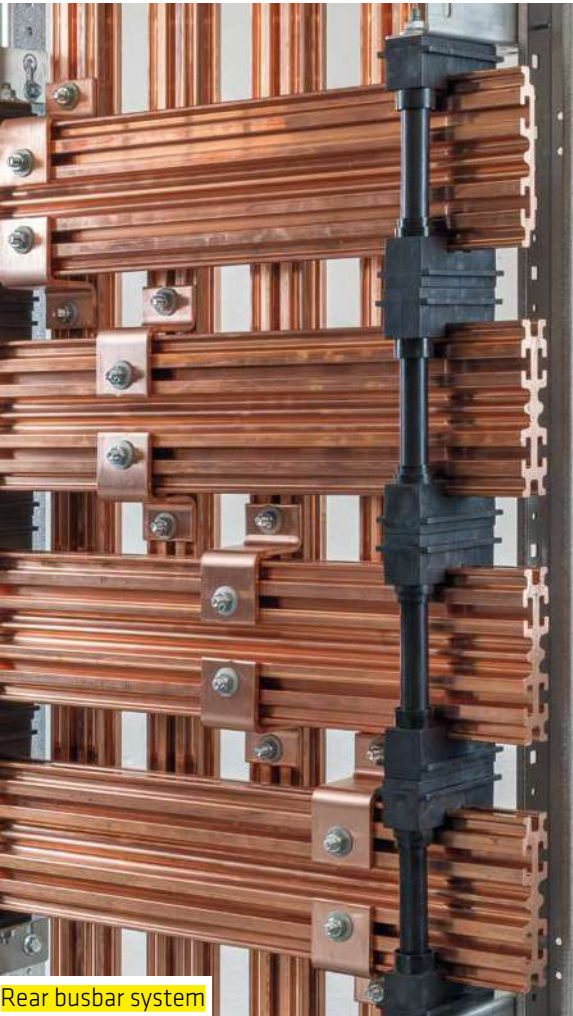
4-pole busbar holder
Vertical/ horizontal
for applications
from 800 A up to 4000 A

In (A)	H
800 - 1000/1250 - 1600	400
2000	520
2500	600
3200	680
4000	800

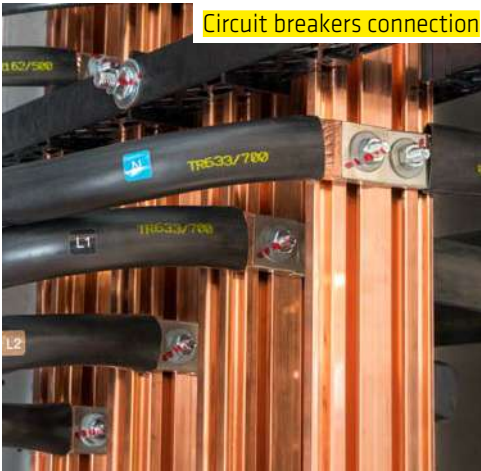




Smart Energy Copper Busbar system installation



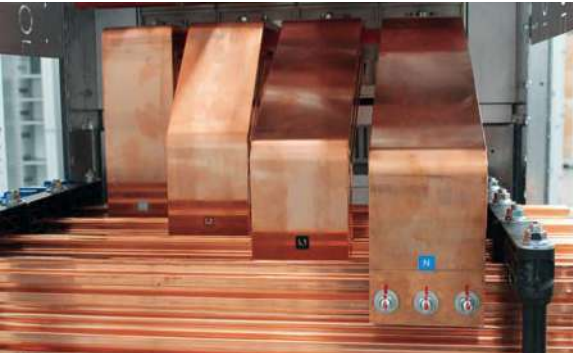
Rear busbar system



Circuit breakers connection



Busbars connections



Horizontal busbar system

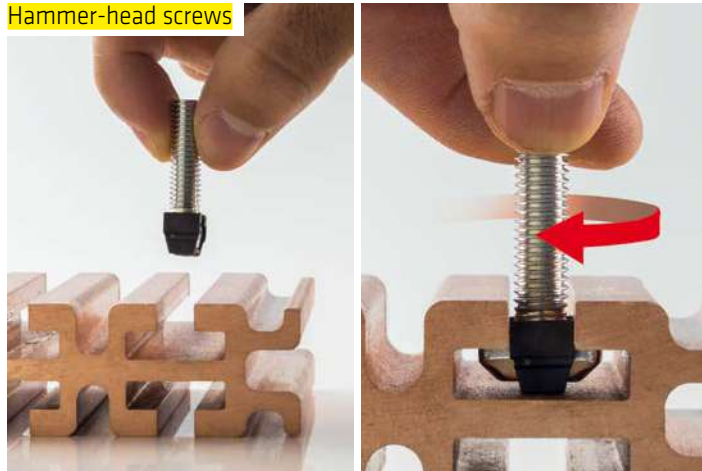


Accessories

Comfort close at hands

Very fast installation and reduced use of mounting tools.

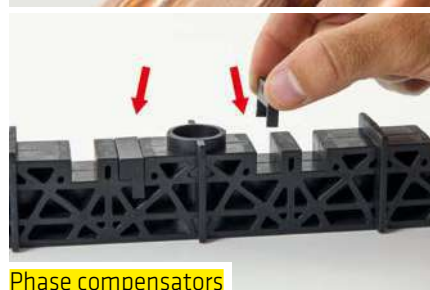
Hammer-head screws



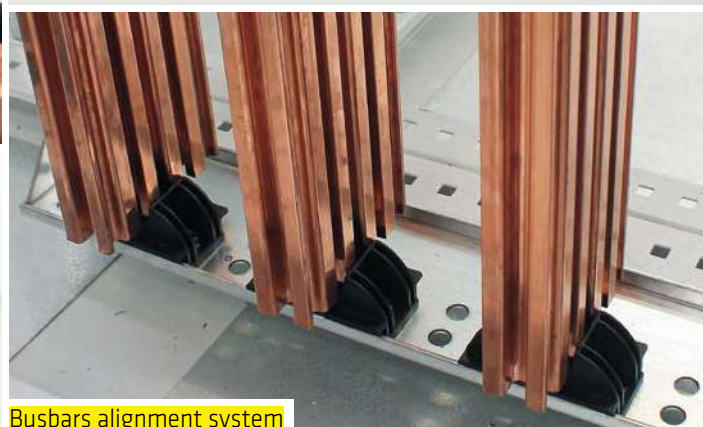
Connection with brass washer



Modular circuit breakers connection



Phase compensators



Busbars alignment system



Phases and neutral identification





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