

# AUTOMATION

Electrical cabinets for  
industrial automation up  
to 4000 A



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Simple ideas for great projects | GROUP

# AUTOMATION

## Electrical cabinets for industrial automation up to 4000 A

(IP30 – IP55, from FORM 1 to FORM 2).

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

#### Automation standard

- 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.



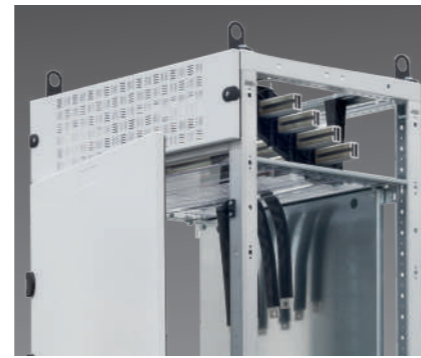
## Typology



**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.



**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.

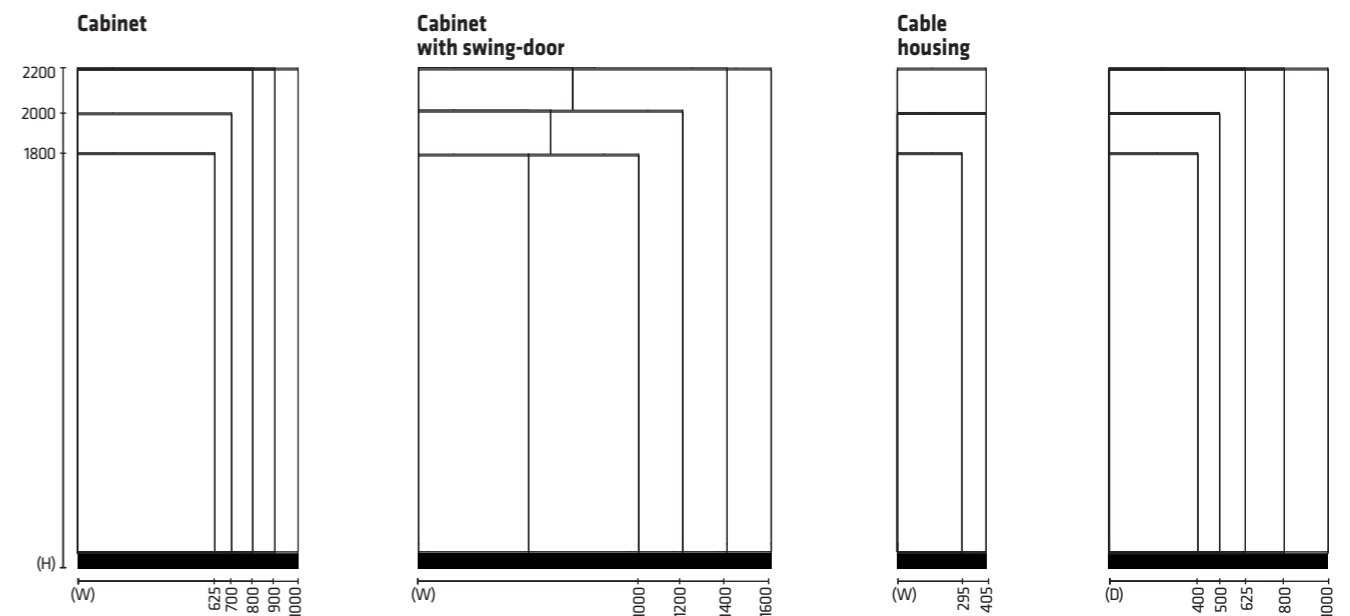


**Inox:** on request, stainless steel cabinet.

## Technical specifications Automation Standard

	Width (W) mm	Height (H) mm	Depth (D) mm	
<b>Cabinet</b>	625	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)	
	700			
	800			
	900			
	1000			
<b>Cabinet with swing-door</b>	1000	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)	
	1200			
	1400			
	1600			
<b>Cable housing</b>	300	1800 / 2000 / 2200 (usable space = H - 200)	400 / 500 / 625 / 800 / 1000	
	400			
<b>Electrical data</b>		Rated insulation voltage (U <sub>i</sub> )	690 V	
		Rated operational voltage (U <sub>e</sub> )	400 V	
	Voltage ratings		Rated impulse withstand voltage (U <sub>imp</sub> )	6 / 8 / 12 kV
			Rated frequency (f <sub>n</sub> )	50 / 60 Hz
			Rated current (I <sub>n</sub> )	Up to 4000 A
	Current ratings		Rated short-time withstand current for 1 sec. (I <sub>cw</sub> )	75 kA
<b>Mechanical characteristics</b>	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 - 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 cover. Lafer shall not be held liable for any damage resulting from the non-observance of these guidelines.



# Certifications

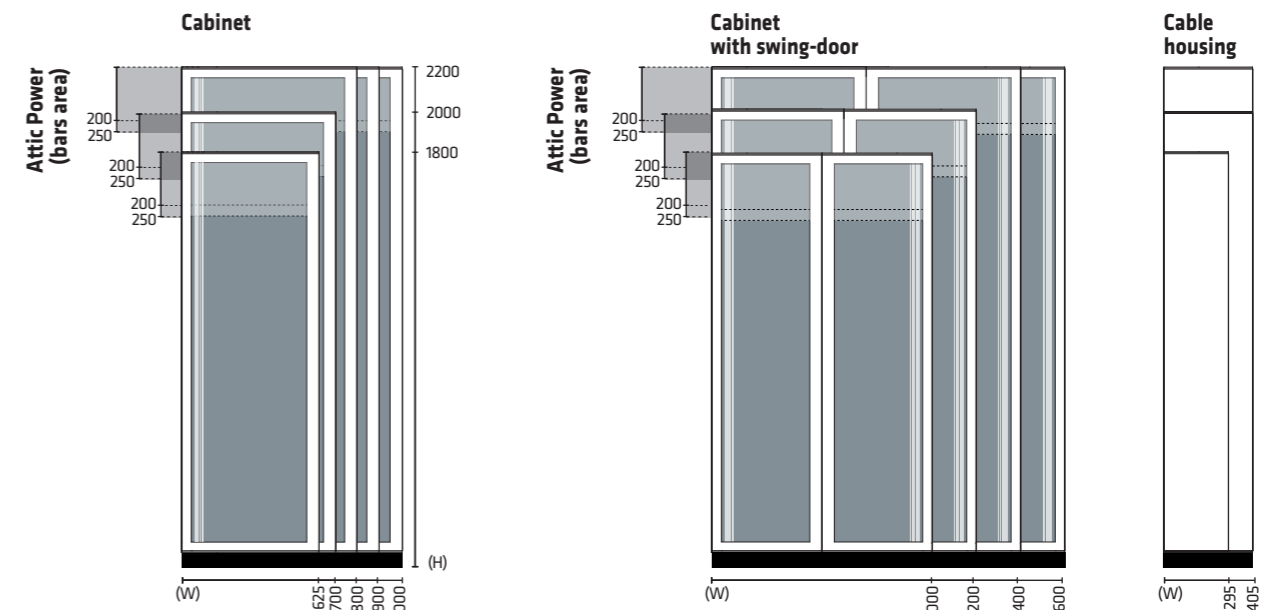


Characteristics to be verified	Clause/Subclause	Design verification method	Test report n°
Degree protection of the assembly of enclosures	10.3	IP30	By test EPT16AVM033754359 EUROFINs
		IP55	By test B0011835 CESI
Mechanical impacts (IK)	10.2.6	IK9	By test EPT16AVM034154359 EUROFINs
		IK10	By test EPT16AVM033854359 EUROFINs
Temperature rise limits	10.10.4.2	Single-compartment assemblies with rated current not higher than 630 A	Verification by calculation according to the method of power losses
	10.10.4.3	Single or multiple compartment assemblies with rated current not higher than 1600A	Verification by CEI 17-43
	Appendix of the norm (subclause 7.2 point 3)	Single or multiple compartment assemblies with rated current 1600 A <math>A < I_{na} < 3150 A</math>	Verification by CEI 17-43 with confrontation with proved cabinet
Clearances	10.4		By test Lafer quality control protocol
Creepage distances	10.4		By test Lafer quality control protocol
Verification of the short-circuit withstand of the protection circuit	10.5.3	Flat copper 60 kA	- By test - By comparison with a reference design B0015061 CESI
		Extruded aluminium 60 kA	- By test - By comparison with a reference design B7001848 CESI
		Flat aluminium 60 kA	- By test - By comparison with a reference design B6004584 CESI
Verification of the short-circuit withstand strength	10.11	Smart Energy 35 kA	- By test - By comparison with a reference design B3012744 CESI
		Smart Energy 70 kA	- By test - By comparison with a reference design B3013956 CESI
		Flat copper 60ka	- By test - By comparison with a reference design B0015061 CESI
		Flat copper 80 kA	- By test - By comparison with a reference design A6018748 CESI
		Flat copper 150 kA	- By test - By comparison with a reference design A6018747 CESI
		Smart Energy Plus Smart Energy Copper 75A	- By test - By comparison with a reference design B8020497 CESI
		Smart Energy Copper 105 kA	- By test - By comparison with a reference design B8020496 CESI
		Smart Energy Plus 105 kA	- By test - By comparison with a reference design B6004584 CESI
		Smart Energy Plus 105 kA	- By test - By comparison with a reference design B5002265 CESI
		Seismic test	
1 g	By test B3020327 CESI		

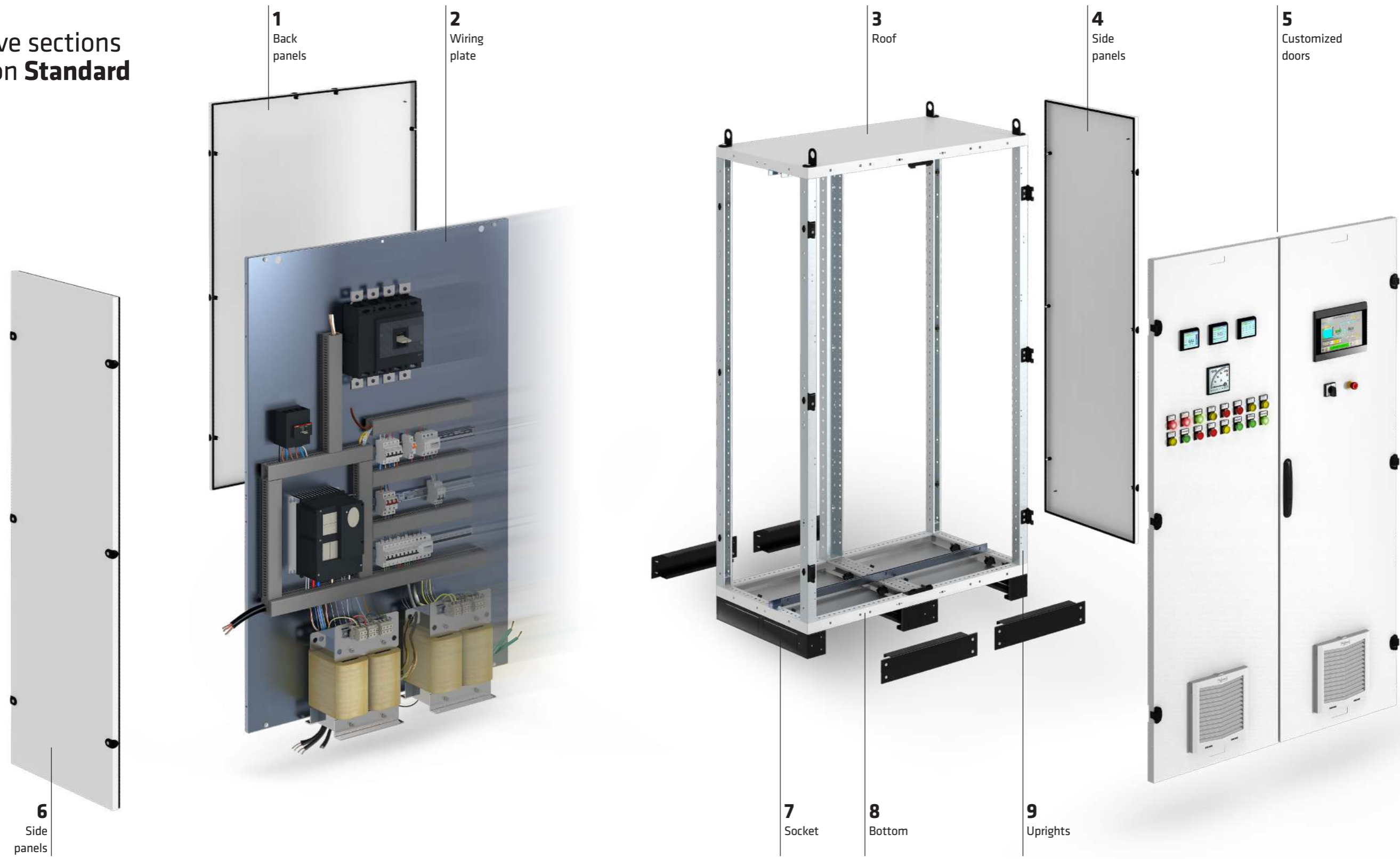
# Technical specifications Automation Attic Power

	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625		
	700		
	800	1800 (200/250 bars positioning)	400 / 500 / 625 / 800 / 1000 (usable space = P - 100)
	900	2000 (200/250 bars positioning)	
	1000	2200 (200/250 bars positioning)	
Cabinet with swing-door	1000		
	1200	1800 (200/250 bars positioning)	400 / 500 / 625 / 800 / 1000 (usable space= P - 100)
	1400	2000 (200/250 bars positioning)	
	1600	2200 (200/250 bars positioning)	
Cable housing	300	1800 (200/250 bars positioning)	400 / 500 / 625 / 800 / 1000
	400	2000 (200/250 bars positioning) 2200 (200/250 bars positioning)	
Electrical data		Rated insulation voltage (U <sub>i</sub> )	690 V
	Voltage ratings	Rated operational voltage (U <sub>e</sub> )	400 V
Rated impulse withstand voltage (U <sub>imp</sub> )		6 / 8 / 12 kV	
Rated frequency (f <sub>n</sub> )		50 / 60 Hz	
Rated current (I <sub>n</sub> )		Up to 4000 A	
Current ratings		Rated short-time withstand current for 1 sec. (I <sub>cw</sub> )	75 kA
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	
	Execution	Form 2	
	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		

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# Constructive sections Automation **Standard**



## Automation series

Design and buy your Lafer panel online thanks to our free planning configurator Fast-One. Discover our technical catalogue.



## Wiring modality



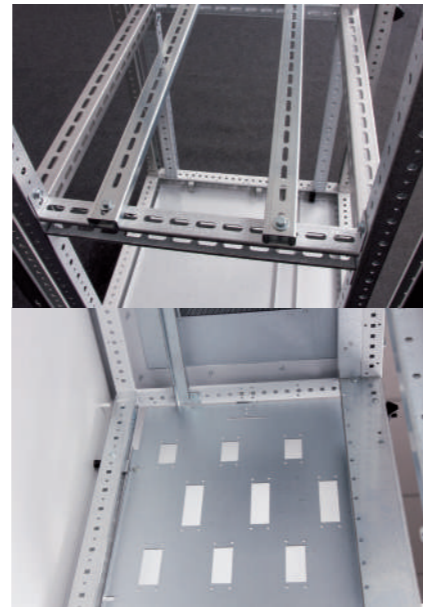
**Side insertion:** a new system that enables to use the whole width of the wiring plate.

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

**Internal supports:** supports for heavy loads.



**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.

## Detailles



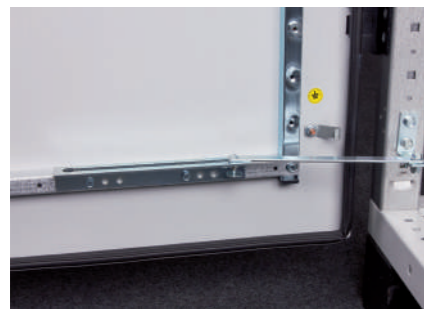
**Customization:** it is possible to customize the carpentry with the customer's logo.



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



**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



## Busbar systems



**Inclined or linear Smart-Energy basic:** busbar system up to 1600 A.



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



**Sistema sbarre Smart-Energy Copper:** copper profile up to 4000 A.



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



Made in Italy



**LAFER GROUP S.P.A.**

Via A. Santurro, 3 - 36040 Meledo di Sarego (Vicenza) Italy

T. +39 0444 490562 - lafer@lafer.com

**[www.lafer.com](http://www.lafer.com)**

