



VR PAINÉIS
ENERGIA SOB CONTROLE

MCLAD line



Switchgear Metalclad *Medium-voltage*

Voltage class 7,2kV / 17,5kV / 24kV - 25kA / 31,5kA



SWITCHGEAR METALCLAD MEDIUM-VOLTAGE

The Medium-Voltage Metalclad Switchgear is composed of air-insulated modular sets with metal-clad compartments, shielded from each other. They are intended for the protection, maneuvering and control of loads or medium-voltage motors for voltage class up to 24kV.

These sets are assembled and tested in the factory in compliance with the requirements of the NBR IEC 62271-200 standard, undergoing the following type tests:

- Electric Arc due to Internal Fault;
- Short circuit withstand capability;
- Temperature Elevation Limits;
- Applied Voltage (TAF);
- Atmospheric Impulse withstand voltage (NBI);
- Mechanical operation;
- Degree of Protection (Ipxx).

The structure of the set is composed of folded and screwed plates with highlighted internal compartments distinguished from the other switchgear:

- Low voltage housing;
- Circuit Breaker/contactor housing;
- TP, CT and cables housing;
- Busbar compartment.

The Medium-Voltage Metalclad Switchgear is rated according to NBR IEC 62271-200 standards: LSC2B, PM, IAC and AFLR.

LSC2B Service Continuity Class - informs the continuity of service of the set and the number of internal compartments; the metallic divisions avoid the propagation of the arc to the other compartments.

PM Partitioning class - informs about the type of material used in the divisions, internal compartments and guillotines.

IAC Internal Arc Class - informs whether or not the assembly has been tested to resistance of the internal arc (designation of a Metal Clad set resistant to the internal

arc with full accessibility).

AFLR Accessibility Class - informs about the accessibility allowed around the set. On which side of the set is allowed to circulate people safely if an internal arc occurs.

The Metalclad Switchgear line is designed to be used in the various branches of the electrical installations, its main applications are:

- Chemical and petrochemical industries;
- Cement industries;
- Textile industries;
- Steel mills;
- Mining;
- Water and sewage treatment plants;
- Infrastructures in general (ports, airports, subway, etc.).
- Sugar and alcohol plants.



Circuit Breaker/Contactor Housing.



Rear view with housing of the TPs and housing of the cables and Tcs.



Low voltage housing.



Bus compartment.

ELECTRICAL CHARACTERISTICS



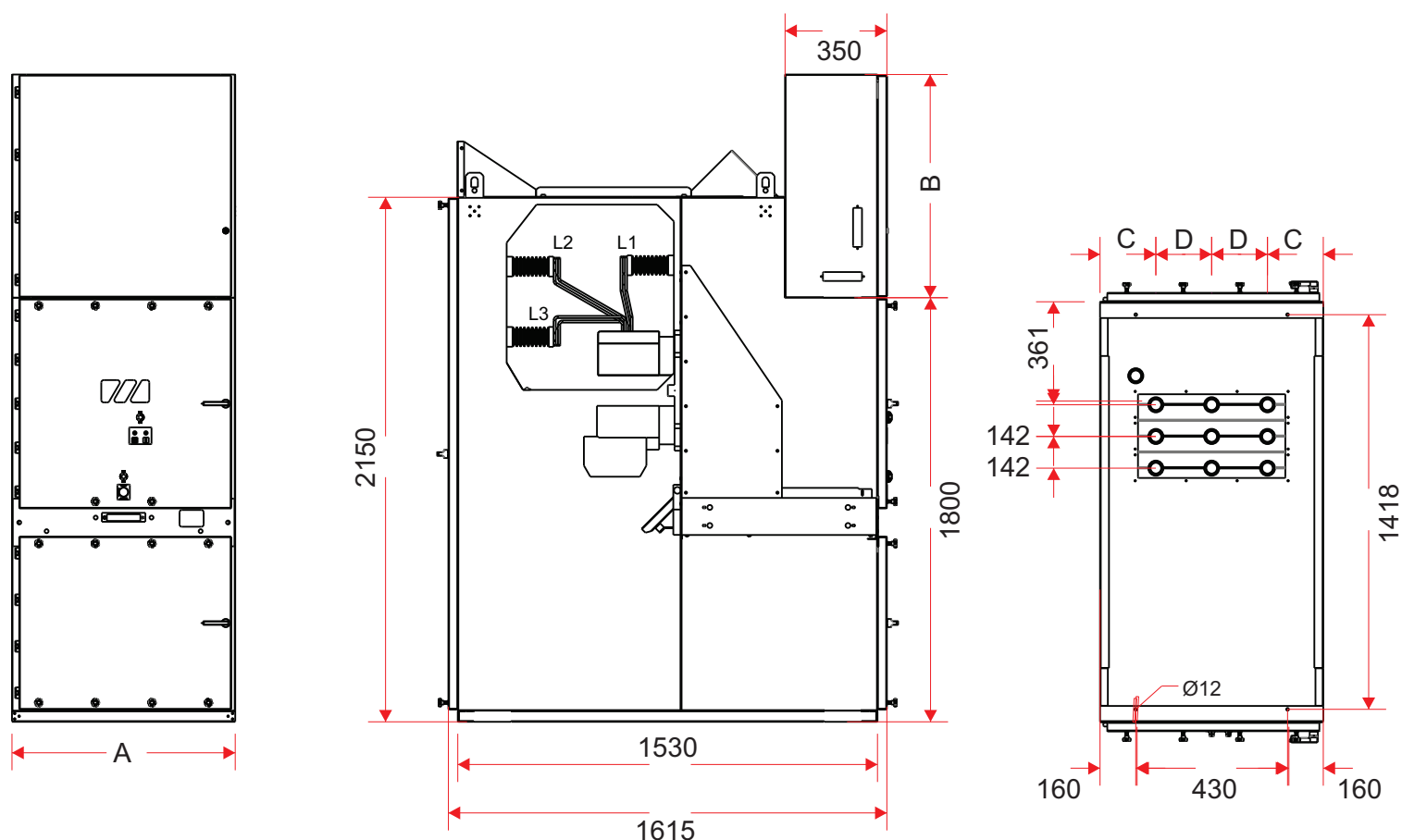
Medium-Voltage Metalclad Switchgear, front view with table for removal of the circuit breaker.

Switchgear Metalclad Medium-Voltage - Mclad Line

Rated voltage	kV	7,2	17,5	24
Applied voltage to industrial frequency 60Hz 1Min (TAF)	kV	20	38	50
Atmospheric Impulse withstand voltage (NBI)	kV	60	95	125
Nominal frequency	Hz	50-60		
Maximum rated current of the general busbar	A	3150	2500	
Rated currents in leads	A	630	630	
		1250	1250	
		1600	1600	
		2000	2000	
		2500	2500	
Short withstand current	kA-s	3150	2500	
		25-1s	25-1s	
		31,5-1s		
Peak value	kA	65	65	
		81,9		
Internal arc resistance	kA-s	31,5kA-1s	25kA-1s	
Degree of internal/external protection	IP	2X/3X		
Altitude	m	≤ 1000		
Room temperature	°C	-5÷40		

MECHANICAL CHARACTERISTICS

7,2-17,5kV - Switchgear with circuit breaker

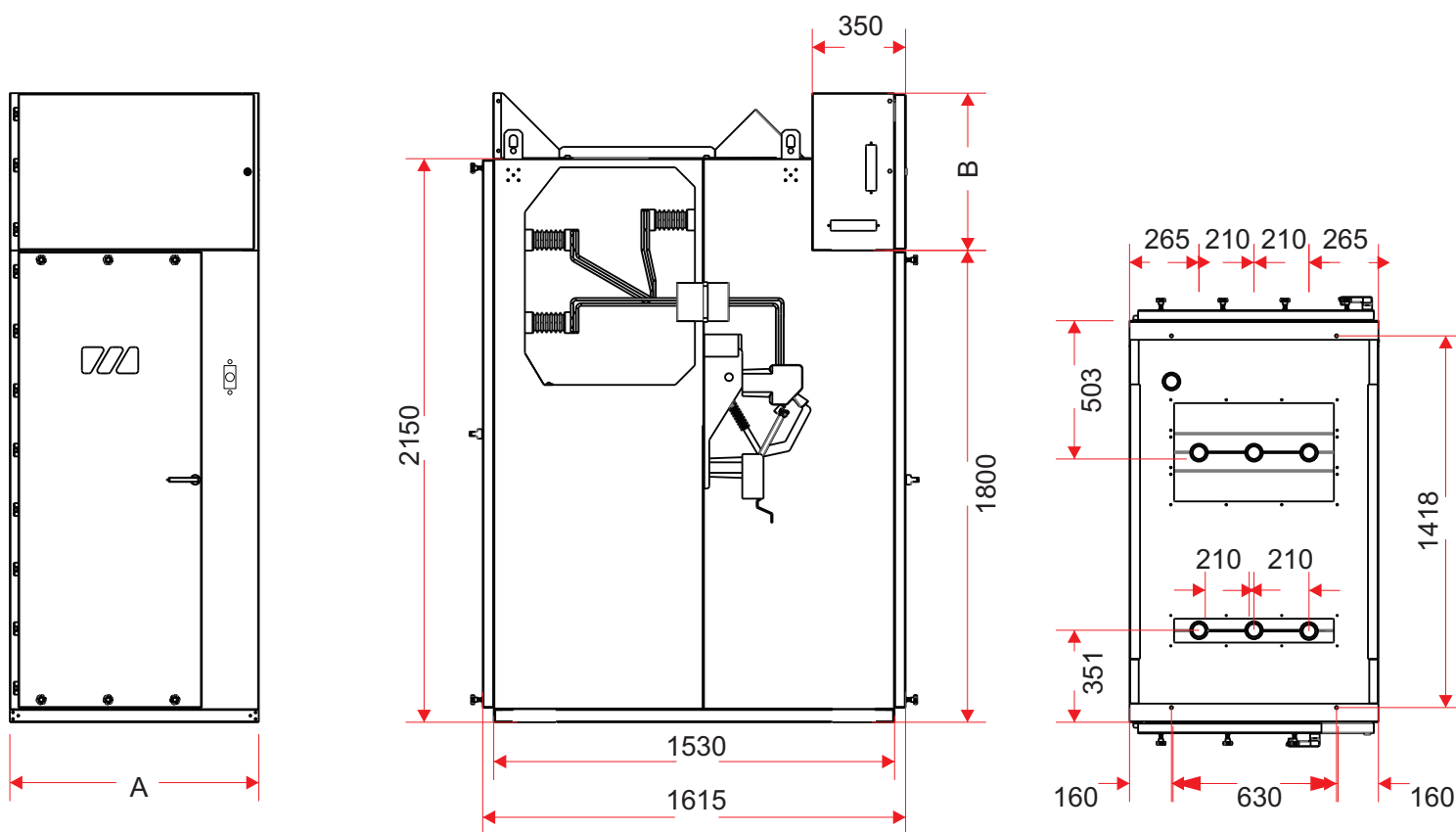


Dimensions

kV	Current (In)	mm			
		A	B	C	D
7,2kV / 17,5kV	1. 630 - 1250A	750	600, 800 e 1000	178	195
	2. 2000A	950	600, 800 e 1000	265	210
	3. 2500A e 3150A	1000	600, 800 e 1000	250	250
Weight (kg)	1. 550-600				
	2. 700-750				
	3. 850-900				

MECHANICAL CHARACTERISTICS

7,2-17,5kV - Switchgear with Switch-disconnector

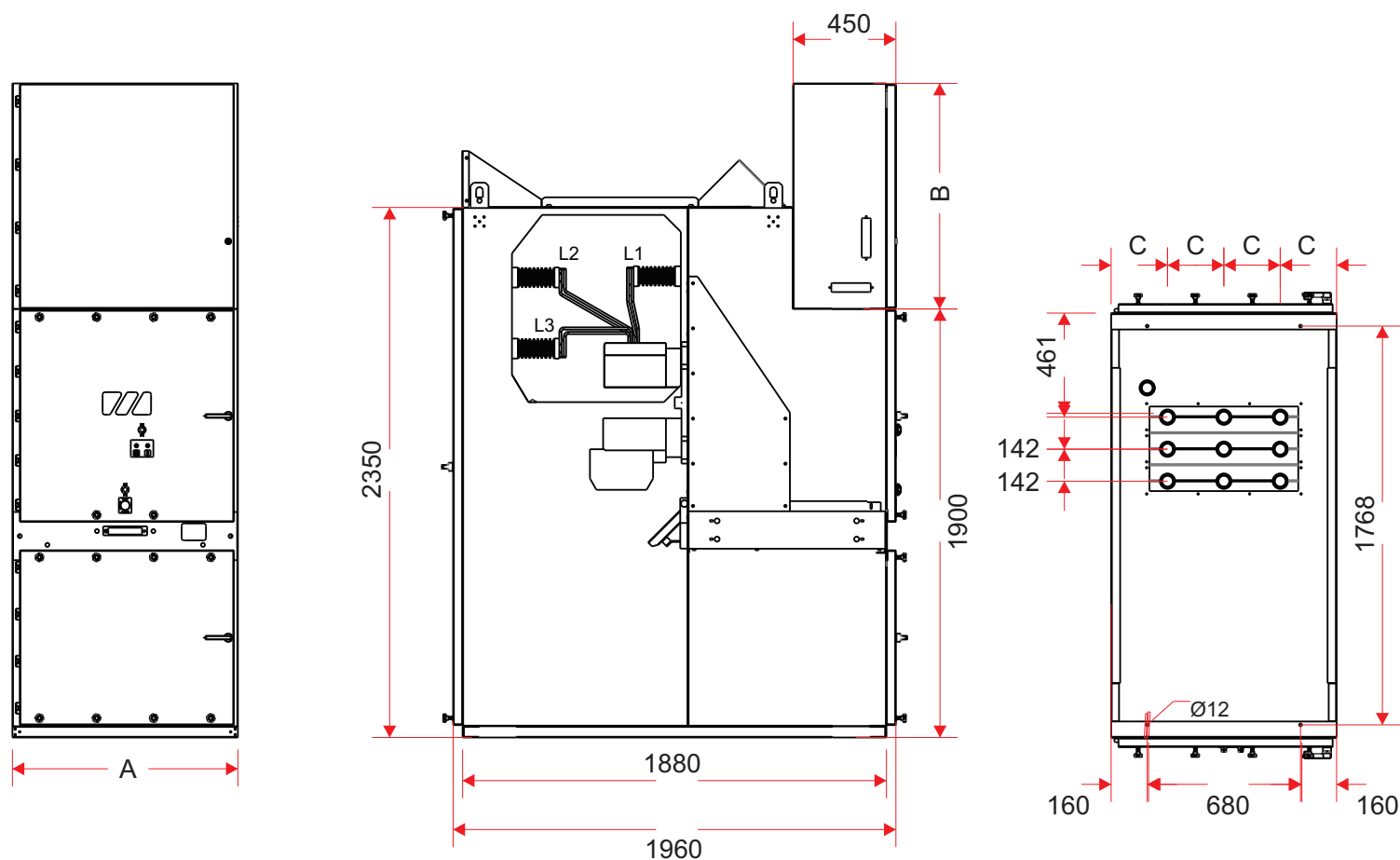


Dimensions

kV	Current (In)	mm	
		A	B
7,2kV / 17,5kV	630	950	600, 800 e 1000

Weight (kg): 550

24kV - Switchgear with circuit breaker



Dimensions

kV	Current (In)	mm		
		A	B	C
24kV	630-1250A	1000	600, 800 e 1000	250
	1600-2000-2500A			

Weight (kg): 900