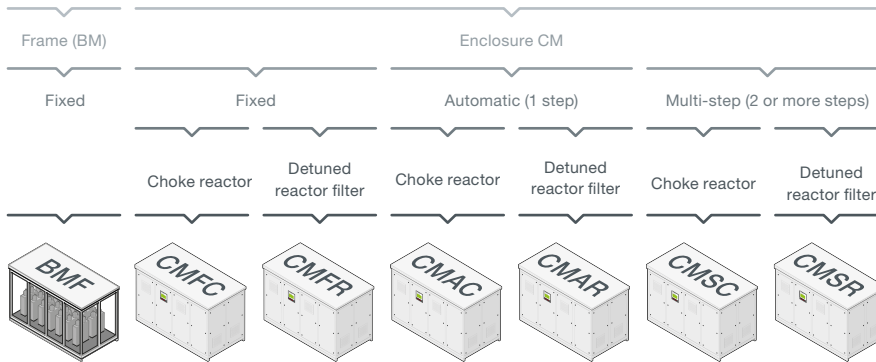


MV Automatic capacitor banks

CIRKAP. Easy to choose complete products

Selection of capacitor banks

CIRKAP capacitor banks are divided in two main groups: Capacitor banks in a **CM** frame and capacitor banks in open **BM** frames.



References for CIRKAP BM

Code											
B	M	X	X	X	X	X	X	X	X	X	X
		↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Fixed (step 1)	F										
Without choke reactor	-										
With choke reactor	C										
Number of steps (1)			n°								
Rated voltage (3 figures) 3.3 kV											033
Rated voltage (3 figures) 4.2 kV											042
Rated voltage (3 figures) 5.5 kV											055
Rated voltage (3 figures) 6.0 kV											060
Rated voltage (3 figures) 6.3 kV											063
Rated voltage (3 figures) 6.6 kV											066
Rated voltage (3 figures) 11 kV											110
Rated voltage (3 figures) 13.2 kV											132
Rated voltage (3 figures) 15 kV											150
Rated voltage (3 figures) 16.5 kV											165
Rated voltage (3 figures) 22 kV											220
Rated voltage (3 figures) 33 kV											330
Nominal capacitor bank power in kvar (5 figures)											n°

References for CIRKAP CM

Code											
C	M	X	X	X	X	X	X	X	X	X	X
		↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Fixed (step 1)	F										
Automatic (1 step)	A										
Multistep	S										
Without choke reactor	-										
With choke reactor	C										
With detuned filter	R										
Number of steps (1...9)				n°							
Rated voltage (3 figures) 3.3 kV											033
Rated voltage (3 figures) 4.2 kV											042
Rated voltage (3 figures) 5.5 kV											055
Rated voltage (3 figures) 6.0 kV											060
Rated voltage (3 figures) 6.3 kV											063
Rated voltage (3 figures) 6.6 kV											066
Rated voltage (3 figures) 11 kV											110
Rated voltage (3 figures) 13.2 kV											132
Rated voltage (3 figures) 15 kV											150
Rated voltage (3 figures) 16.5 kV											165
Rated voltage (3 figures) 22 kV											220
Rated voltage (3 figures) 33 kV											330
Nominal capacitor bank power in kvar (5 figures)											n°

Application examples



Water treatment installation

Automatic multi-step capacitor bank with detuned filter, model **CMSR**, 2250 kvar at 6,6 kV, 50 Hz, 5x650 kvar composition, tuned to 189 Hz (p:7%), outdoor installation and IP44 protection degree. Details of the step with fuse protection, vacuum contactor, filtering reactor and three-phase capacitor.



Paper industry

Automatic multi-step capacitor bank with detuned filter, model **CMSR**, 6750 kvar at 22 kV, 50 Hz, 750+4x1500 kvar composition, tuned to 189 Hz (p:7%), outdoor installation and IP54 protection degree. Voltage presence indicator, ON/OFF step, manual or automatic step selection, reactive energy regulator with three-phase measurement and overcurrent, short-circuit and step offset protection relays.



Road infrastructures

Automatic multi-step capacitor banks with detuned filter, model **CMAR**, 100 kvar at 3.3 kV, 50 Hz, 1x100 kvar composition, indoor installation and IP23 protection degree, tuned to 189 Hz. Details of the structure adapted to the space available in the tunnel and corporate colour requested by the client.

Additional components of MV capacitor banks



Pressure switch

Disconnects the step/capacitor bank with the pressure generated after a serious fault inside a capacitor, in order to prevent greater damage. It enables the power circuit to be disconnected and signals the fault when the pressure reaches the maximum value.



Voltage presence indicator

A unit that lights up permanently when the power circuit is powered to provide greater safety during operations carried out on the unit.



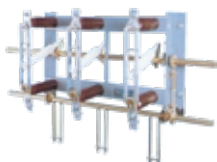
Smoke detector

Smoke detectors are devices that warn about the possibility of internal combustion in the capacitor bank and that send a signal to activate an alarm (in the unit or at the discretion of the user), disconnecting the of the battery if necessary.



Electric circuit with opening delay for doors

For units that are ordered with doors in the power modules, Circuitor offers the possibility of including a solenoid electrical interlock system in order to prevent access to the capacitor bank's interior if the necessary time has not elapsed.



SVacuum off-load and/or earthing switch

The cut-off and/or earthing switch enables the unit to be visually disconnected and isolated at the capacitor bank input.



Ventilation

In the case of capacitor banks installed in environmental conditions where natural convection cooling is insufficient, an auxiliary thermostat-controlled forced air system is essential for evacuating the internal heat of the capacitor bank.



Anti-condensation heating resistors

These are used to avoid condensation due to temperature gradients during the day, under saline environmental conditions, high relative humidity and low temperatures. Heating resistors controlled by thermostat and/or hygrometer.

Step dimensions

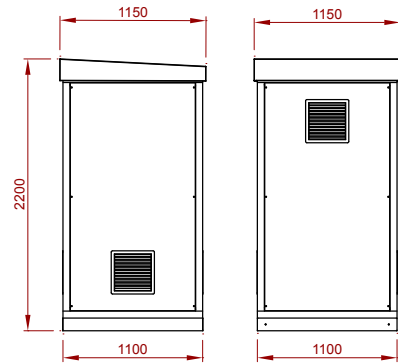
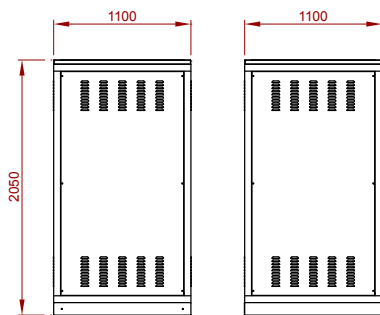
Power	7,2 kV	12 kV	24 kV	36 kV
≤250 kvar	A	A	B	C
21-500 kvar	A	A	B	C
501-750 kvar	A	B	B	C
751-1000 kvar	A, B	B	B	C
1001-1500 kvar	B	B	C	C
1501-2000 kvar	B	B	C	C
201-2500 kvar	B	B	C	C
2501-3000 kvar	B	C	C	C
3001-4000 kvar	C	C	C	C
4001-5000 kvar	C	C	C	
5001-6000 kvar	C	C	C	
6001-7000 kvar	C	C	C	

Dimensions are approximate and may differ depending on the specifications for each team.

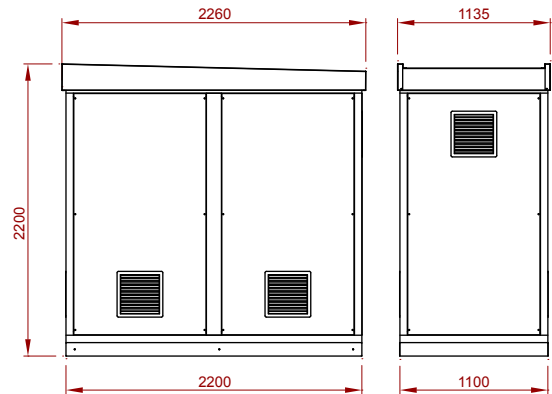
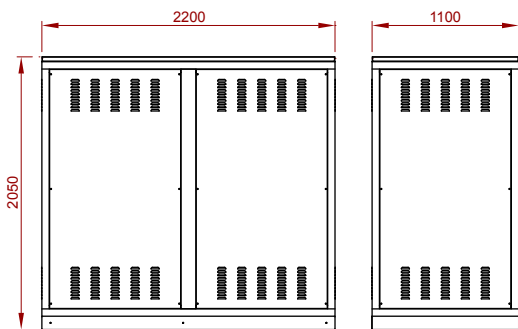
INDOOR

OUTDOOR

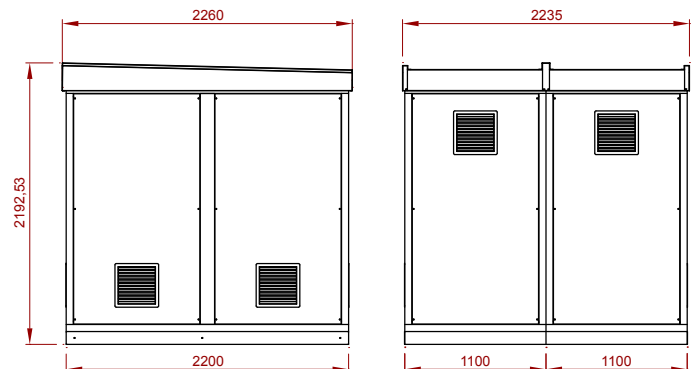
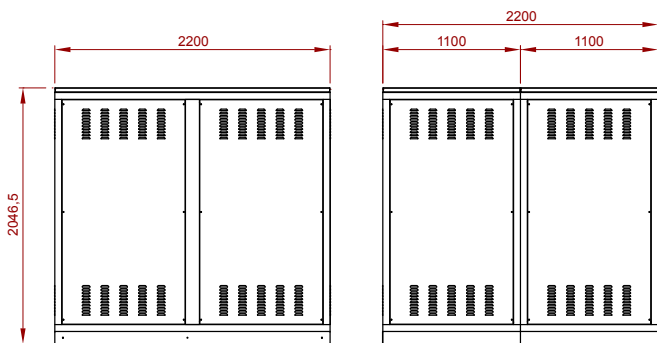
A



B



C



Delivery time: [*] immediate
 [x] working weeks
 [c] consult