

2000 Series

For networks with low/medium harmonic distortion
< 30% THD in current [200 – 800Kvar / 440V 50Hz]



The 2000 series is an automatic capacitor bank with main characteristics of rated power (for large facilities), built into a very reduced cabinet by an innovative manufacturing system using our exchangeable modules 1000 series, which also allow the possibility to extend the automatic capacitor bank, to a larger power rating, at a later stage and as required.

In addition to that, and thanks to the mentioned innovation system, the 2000 series can be optionally equipped according to the needs of each customer. We can highly emphasize its easy installation and maintenance.

Hospitals, big supermarkets, malls, sports stadiums, Industrial factories, single buildings, airports, ports, golf fields, etc are the kind of facilities that usually adopt AENER's automatic capacitor banks of the 2000 series.

Technical specifications

- Rated voltage: **440V – 50Hz.**
- Admissible working voltage range: **380 – 440V.**
- Maximum admissible current: **1,3 IN.**
- Tolerance of capacitance: **0 + 10 %.**
- Insulation test:
 - **MAIN POWER CIRCUIT:**
Operating voltage (U): **440V.**
Testing voltage: **2.500V** between terminals and terminals to case
 - **AUXILIAR CIRCUIT:**
Testing voltage: **2 x U + 1.000V**, but not less than **1.500V** between terminals and terminals to case.
- Temperature range inside the equipment:
 - Maximum Temperature: **45° C.**
 - Max. average over 24 hrs: **35° C.**
 - Max. average over 365 days: **25° C.**
 - Minimum Temperature: **- 5° C.**
- Life expectancy:
 - Capacitors: **> 120.000 h.**
 - Capacitor Duty Contactors: **> 200.000 times.**
- Auto-transformer: **440V / 230V integrated.**
- Protection level: **IP31.**
- Colour: **RAL 7032.**
- Standards:
 - CE Conformity:
 - **73/23/CEE Directive**, about safety (and following amendments).
 - **89/336/CEE Directive**, about electromagnetic compatibility (and following amendments)
 - Above mentioned product is made according to the following harmonization standards:
 - **IEC 60439-1:1999 (UNE-EN 60439-1:2001)**, Low-voltage switchgear

and control-gear assemblies - Part 1: Type-tested and partially type-tested assemblies.

- **IEC 61921:2003 (UNE-NE 61921:2003)**, Power capacitors - Low-voltage power factor correction banks.

Moreover, all capacitors used are manufactured and tested according to established regulations in the standards:

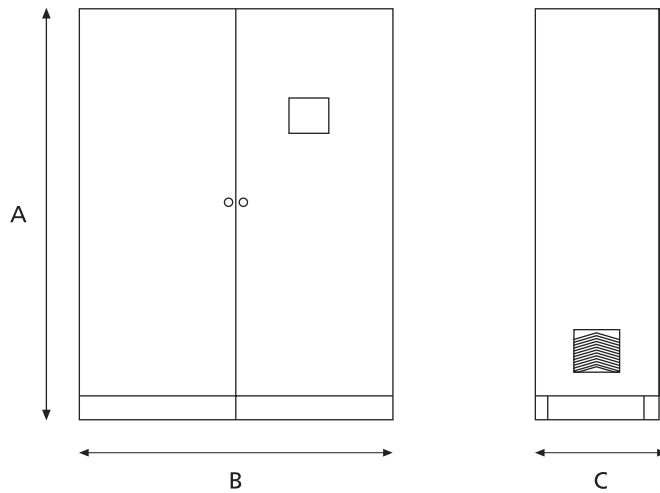
CEI 60831-1:1995 (UNE-EN 60831-1: 1998).
CEI 60831-2:1995 (UNE-EN 60831-2: 1998).

Standard equipment

- New generation of reactive energy controller V650 with a powerful microprocessor.
- Capacitor duty contactors.
- Three-phase capacitors of TR30 series with internal safety system.
- Step protection fuses.
- Halogen free internal wiring.
- Copper-plated busbars.
- Built in fan for a better refrigeration of the bank.
- Equipment manufactured using exchangeable modules 1000 series, easy to access and maintenance.
- Top quality metal cabinet.

Optional equipment

- Three-pole on-load circuit breaker with protection fuses HRC.
- Automatic thermo- magnetic circuit breaker MCCB (Mini Circuit Contact Breaker).
- ELCB Residual current circuit breaker.
- Specially protected cabinets for outdoor installation (polyester, stainless steel, etc.).
- Cabinets with other protection levels (IP54, IP55, etc.).
- Special colours.



2000 Series

Code	Power (Kvar)	Voltage (V)	Steps	Dimensions			Weight (Kg)
				A	B	C	
MA200440	200	440	2 x 25 + 3 x 50	1700	600	500	170
MA225440	225	440	25 + 4 x 50	1700	600	500	170
MA250440	250	440	5 x 50	1700	600	500	175
MA275440	275	440	25 + 5 x 50	1700	600	500	175
MA300440	300	440	6 x 50	1700	600	500	180
MA325440	325	440	25 + 6 x 50	1700	600	500	192
MA350440	350	440	7 x 50	1700	600	500	195
MA375440	375	440	25 + 5 x 50 + 100	1700	600	500	188
MA400440	400	440	4 x 50 + 2 x 100	1700	600	500	200
MA425440	425	440	25 + 50 + 50 + 3 x 100	1700	1200	500	315
MA450440	450	440	3 x 50 + 3 x 100	1700	1200	500	320
MA475440	475	440	25 + 50 + 4 x 100	1700	1200	500	330
MA500440	500	440	50 + 50 + 4 x 100	1700	1200	500	340
MA525440	525	440	25 + 50 + 50 + 4 x 100	1700	1200	500	345
MA550440	550	440	3 x 50 + 4 x 100	1700	1200	500	345
MA575440	575	440	25 + 50 + 5 x 100	1700	1200	500	350
MA600440	600	440	50 + 50 + 5 x 100	1700	1200	500	350
MA625440	625	440	25 + 50 + 50 + 5 x 100	1700	1200	500	362
MA650440	650	440	3 x 50 + 5 x 100	1700	1200	500	365
MA675440	675	440	25 + 50 + 6 x 100	1700	1200	500	368
MA700440	700	440	50 + 50 + 6 x 100	1700	1200	500	371
MA725440	725	440	25 + 50 + 50 + 6 x 100	1700	1200	500	383
MA750440	750	440	50 + 7 x 100	1700	1200	500	386
MA800440	800	440	50 + 50 + 7 x 100	1700	1200	500	392

► Other power ratings, voltages, steps or frequencies available upon request
It's recommended before choosing equipment to analyse the net.
For Harmonics value > 2,5 % THDV, please refer to our Technical Department.



Halogen Free



Not Spread Flame



Safety System



Technical Service