

# Medium-Voltage Power Capacitors

(Standard, Heavy, Extra, and Ultra Heavy Duty)

bree




## Application


Bree Medium-Voltage Power Capacitors are highly reliable and easy to handle and are recommended for installation in capacitor banks or harmonic filters, aiming to meet the following electrical system needs:

- Power factor correction / elimination of penalties;
- Series or shunt compensation of reactive power to improve the voltage profile in electrical circuits;
- Mitigation of harmonic voltage and current distortions by means of passive harmonic filters;
- Reduction of technical losses in systems.

## Fully Tested Equipment

 Bree has its own laboratory that allows it to conduct the routine, type, and special tests set out in international standards (IEEE 18, IEC 60871, and IEC 60143).

 Bree's own manufacturing plant has ISO 9001, ISO 14001, and ISO 45001 certification.

 Bree is the nation's largest 100% Brazilian manufacturer of capacitors. The BR in our name stands for Brazil.

## Design Features

All Bree Capacitors are manufactured as per the following technical specifications:

- "All-film" technology (dielectric with a polypropylene film) with an aluminum foil and a folded margin;
- Nominal voltage of 2,400V to 24,940V (design variations may exist);
- Nominal power of 25-900kvar; (call us for other values)
- Impregnation with WEMCOL II biodegradable oil, providing excellent operation at different temperatures;
- Vitrified porcelain bushings as insulators, welded directly to the tank;
- Capacitance tolerance of -0% to +10%, as per the IEEE standards;
- Discharge resistor for 50V in 5 min. or 75V in 10 minutes; (call us for other values and times)
- Installation altitude up to 1,000 AMSL; (call us for higher altitudes)
- PCB-free equipment.



# Medium-Voltage Power Capacitors

## Specifications

All in all, four capacitor models are available:

### 1. Standard-Duty (SD)

Standard-Duty capacitors are developed to withstand system voltage fluctuations in industrial/commercial, transmission, and distribution applications.

*Ratings:*

- 110% overvoltage in a contingency (12 every 24 hours of operation);
- Operating temperature from -40 °C to +55 °C. (call us for other temperatures)

### 2. Heavy-Duty (HD)

Heavy-Duty capacitors are designed to operate at 110% overvoltages on a continuous basis.

*Ratings:*

- 110% overvoltage on a continuous basis;
- Operating temperature from -40 °C to +55 °C. (call us for other temperatures)

### 3. Extra Heavy-Duty (EHD)

Extra Heavy-Duty capacitors operate at overvoltages as high as 125% on a continuous basis.

*Ratings:*

- 125% overvoltage on a continuous basis;
- Operating temperature from -40 °C to +55 °C. (call us for other temperatures)

### 4. Ultra Heavy-Duty (UHD)

Capacitors designed to withstand an overvoltage as high as 140% on a continuous basis. These are indicated for environments with an extreme harmonic influence.

*Ratings:*

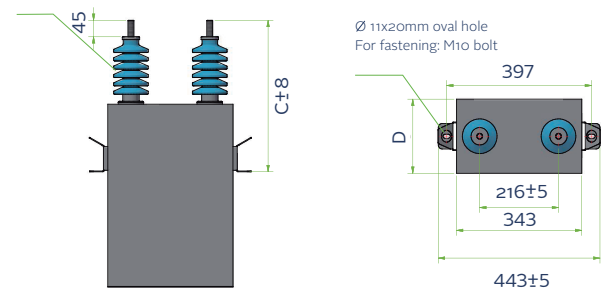
- 140% overvoltage on a continuous basis;
- Operating temperature from -50 °C to +55 °C. (call us for other temperatures)

## Technical Information

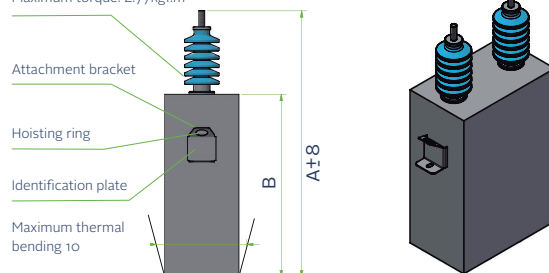
POWER (KVAR)	VOLTAGE (Vrms)	DIMENSIONS (mm)				
		A	B	C	D	E
25	2.700 to 7.200	270	110	225	105	200
	7.620 to 14.400	340	110	295	105	385
50	2.700 to 7.200	302	142	257	130	200
	7.620 to 14.400	372	142	327	130	385
100	2.700 to 7.200	390	230	345	130	200
	7.620 to 14.400	450	220	405	130	385
	17.200 to 24.940	560	250	405	130	630
150	3.810 to 7.200	460	300	405	130	200
	7.620 to 14.400	530	300	405	130	385
	17.200 to 24.940	640	330	405	130	630
200	3.810 to 7.200	490	330	405	153	200
	7.620 to 14.400	560	330	405	153	200
	17.200 to 24.940	660	350	405	153	385
300	3.810 to 7.200	620	460	405	153	200
	7.620 to 14.400	690	460	405	153	385
	17.200 to 24.940	790	480	405	153	630
400	3.810 to 7.200	620	460	405	203	200
	7.620 to 14.400	690	460	405	203	385
	17.200 to 24.940	790	480	405	203	630
500	3.810 to 7.200	738	578	405	203	200
	7.620 to 14.400	808	578	405	203	385
	17.200 to 24.940	888	578	405	203	630
600	3.810 to 7.200	830	670	405	203	200
	7.620 to 14.400	900	670	405	203	385
	17.200 to 24.940	980	670	405	203	630

## Standard Commercial Capacitor

Light-gray vitrified porcelain (or epoxy) bushing.  
Creepage distance: E



M16 pin with 2-mm thread pitch  
Connector for 1 or 2 wires 6 sqmm to 50 sqmm  
Maximum torque: 2.77kgf.m



### Notes:

- Dimensions subject to changes without prior notice.
- Upon prior request, other voltages, powers, and capacitances may be considered.
- Size "C" may be changed at the client's request so as to adjust the attachment of the capacitor to the existing fastening structure.
- Capacitors with a nominal voltage above 7,200V may be supplied upon a prior request with the desired dimensions.
- Alternatively, epoxy resin bushings may be supplied, which provide superior mechanical rigidity and consequentially increased resistance against insulating liquid leaks. Dimensions must be verified.

