Power Factor Correction
and Harmonic Filtering

CSB

State-of-the-art Prismatic Capacitors

CIRCUTOR

Technology for energy efficiency

CSB

State-of-the-art Prismatic Capacitors

Innovation within your reach

The application of new technologies and the use of printed circuit boards to manufacture prismatic capacitors have allowed **CIRCUTOR** to reinvent the classic **CS** capacitor, manufactured for over 35 years.

The spirit of innovation and proprietary technology used during the design of the new **CSB** capacitor have increased the lifespan of traditional prismatic capacitors by over 60%.

This new series has improved all aspects of the previous models, offering our customers a longer-lasting, safer and more profitable capacitor.

CIRCUTOR Guarantees

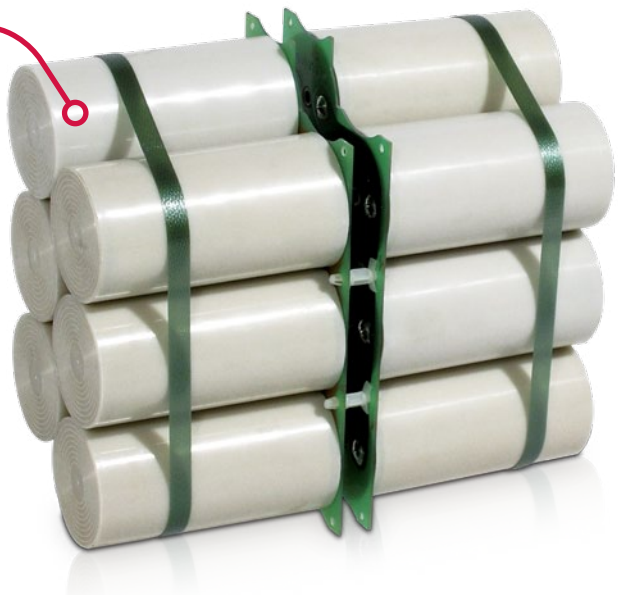
"Through constant innovation we are able to continue improving our products, making them safer, more durable and more cost-effective for our customers."

Durability guarantee:
- Top quality polypropylene with a European origin guarantee.
- Dielectric thickness designed to offer a greater capacitor durability.

Continuity of the service guarantee:
- Self-regeneration technology that guarantees the minimum loss of the capacity.
- Internal individual fuse that guarantees the disconnection exclusively of the damaged element

Safety guarantees:
- Over-pressure disconnection, isolating the damaged element.
- Anti-deflagration system, by means of compacting coils with inert and fireproof materials.

+60%
Lifespan



The use of the PCB collector plate guarantees the minimum losses.

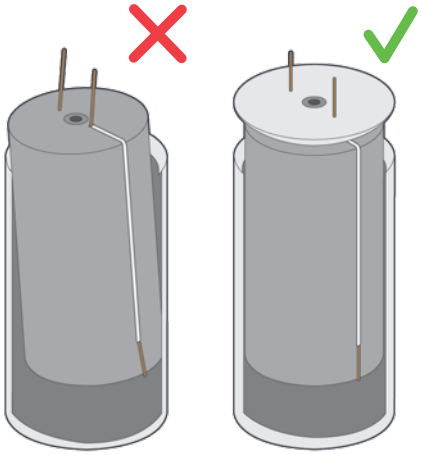
Innovative processes

Manufactured in a fully automated assembly line, with processes that have been designed to eliminate the most critical aspects that affect the capacitor lifespan, such as the contact with damp environments and extreme temperatures.

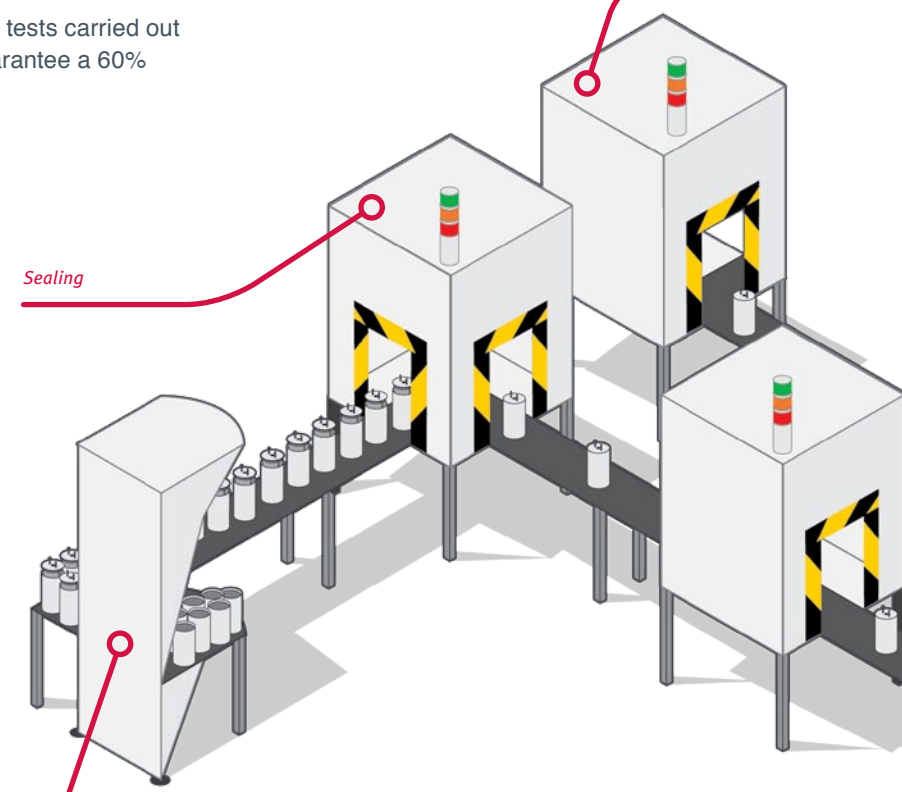
The assembly processes and intermediate tests carried out with the new series of **CSB** capacitors guarantee a 60% longer lifespan.

Polymerisation of the resin, offering the perfect compactness of the element

Sealing



Symmetrical centring with a hermetic over-pressure membrane that isolates the internal element from humidity and allows a homogeneous thermal dissipation.



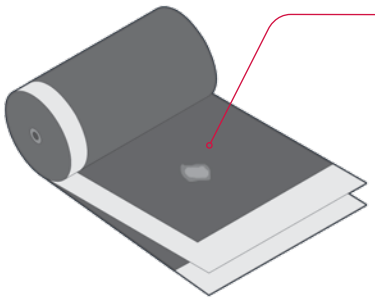
Individually marked with a bar code, for the rigorous monitoring of quality controls.

Innovative project, recognised as such by the **EU**

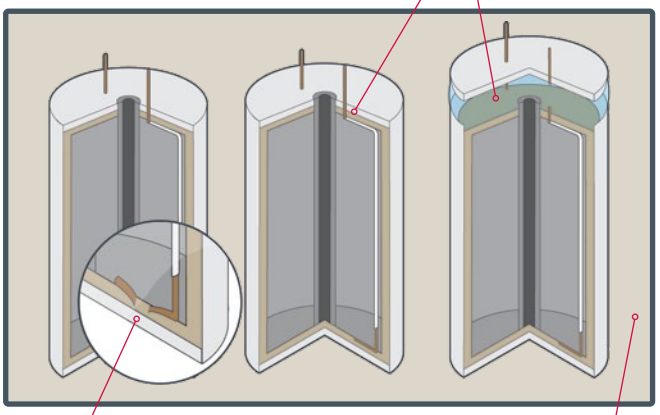
The project developed for the creation of this serialised production of **CSB** capacitors has been co-financed by the **European Fund for technological development**. This reinforces the importance of this project in terms of the innovation involved.

4 levels of protection

1 ***Self-regeneration***
Minimum capacity losses (exclusive use of European polypropylene)

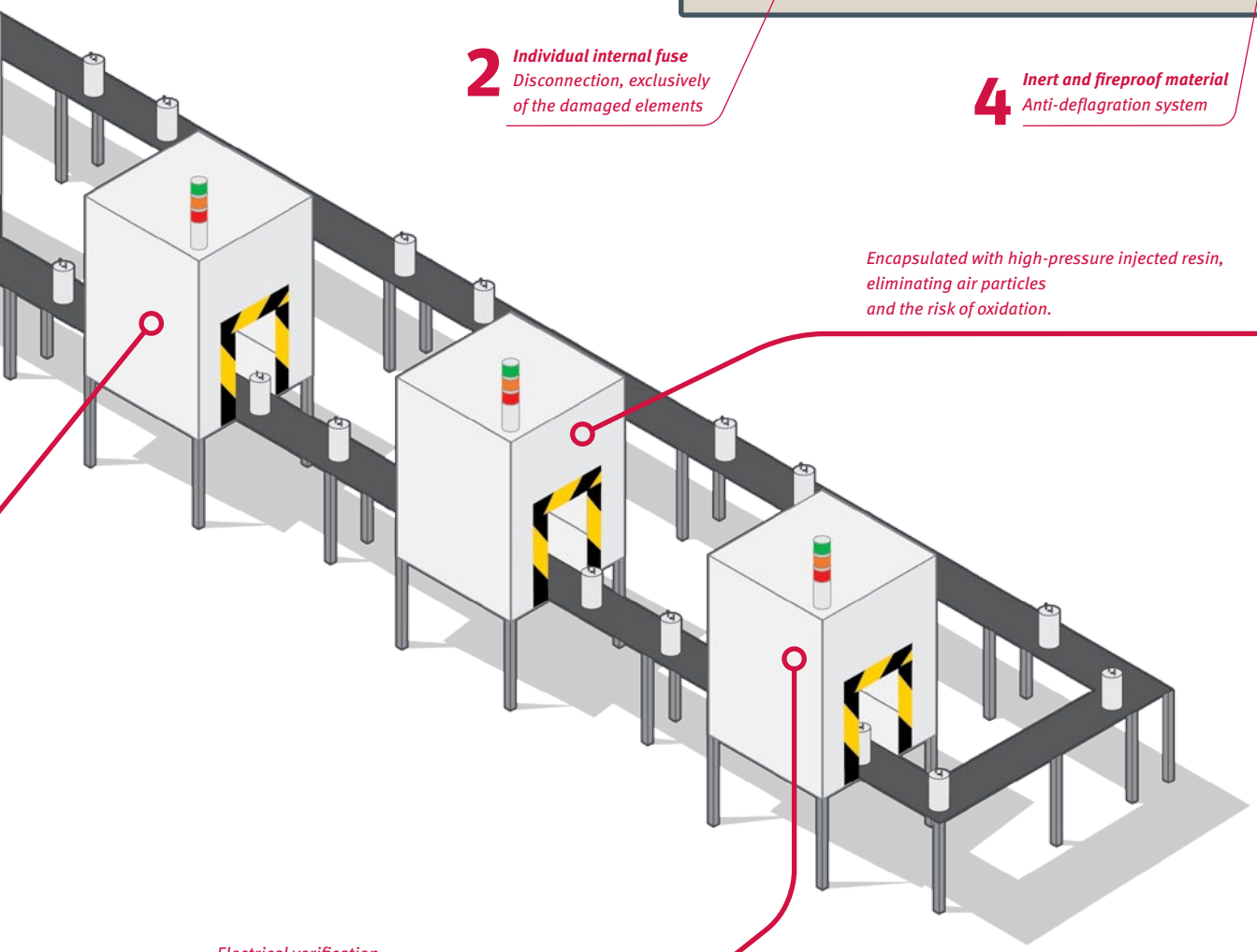


3 ***Over-pressure system***
Evacuation of gases



2 ***Individual internal fuse***
Disconnection, exclusively of the damaged elements

4 ***Inert and fireproof material***
Anti-deflagration system



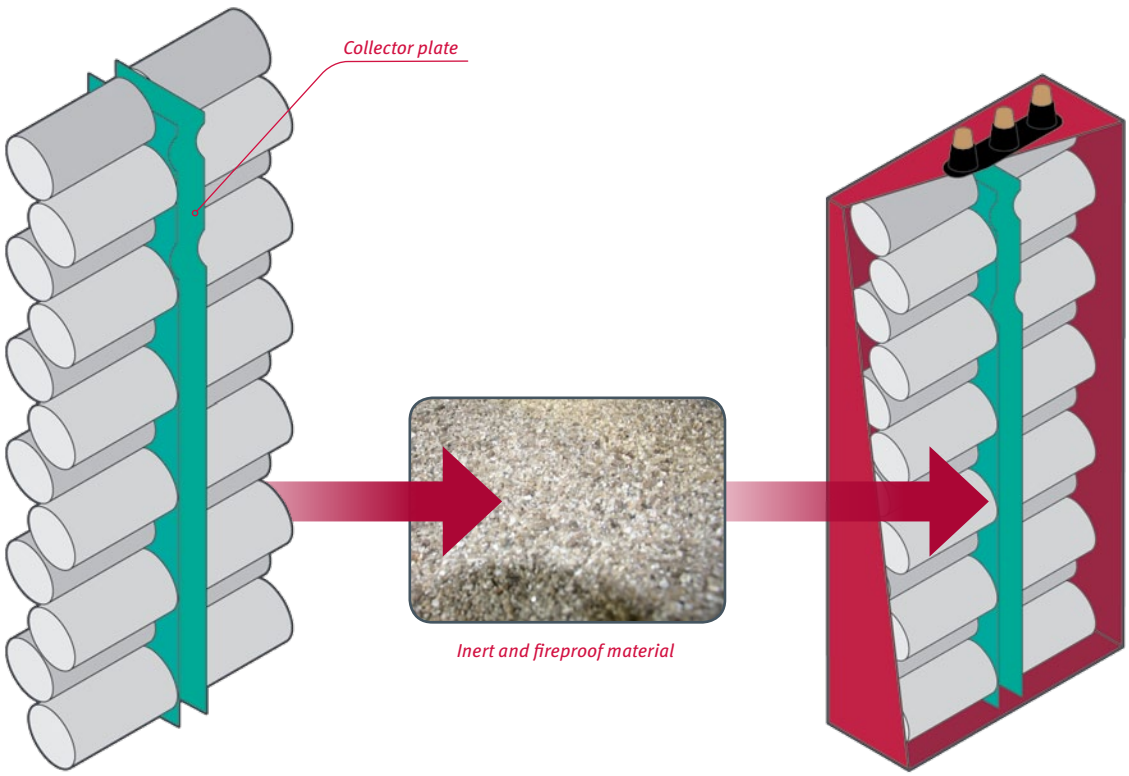
Encapsulated with high-pressure injected resin, eliminating air particles and the risk of oxidation.

Electrical verification
Verification and individual recording of the test values, in compliance with the international regulations ***(IEC 60831)****.*

Use of collector plates

The new assembly method of capacitive elements is based on a collector plate that is similar to the kind of technology used in power electronics, which offers a number of significant advantages over the usual cable-based connection method, such as:

- *Uniform arrangement of capacitive elements inside the metal casing, guaranteeing a totally homogeneous thermal dissipation, thus increasing the lifespan of the capacitor.*
- *Full elimination of interconnection cabling, thus reducing total losses (higher efficiency) and reducing the assembly time, while minimising the potential problems caused by hot spots.*
- *Shorter metal casings than those used to date for the same power levels. This reduces the weight and, therefore, the transport and space required, for both capacitors and automatic capacitor banks equipped with these capacitors.*



Technical features

	CSB prismatic capacitors
Features	
Overload	1.3 times the rated current
Overvoltage	10% 8 over 24 hours 15%, up to 15 minutes over 24 hours 20%, up to 5 minutes over 24 hours 30%, up to 1 minute over 24 hours
Insulation level	3 / 15 kV
Power ratings	5 kvar to 120 kvar
Voltage	230 V to 1100 V
Power tolerance	-5 ... +15%
Discharge resistance	75 V/3 min
Frequency	50 ... 60 Hz
Losses:	
Dielectric	< 0.2 W / kvar
Total	< 0.5 W / kvar
Protections	Dielectric regeneration Internal fuse Over-pressure system Vermiculite
Construction features	
Enclosure	Treated and painted steel, colour RAL 3005
Terminals:	
Power	M10
Earth	M6
Torque value	15 Nm
Protection degree	IP 42 with terminal cover
Environmental conditions	
Class D temperature:	
Daily average	45 ºC
Annual average	35 ºC
Maximum	55 ºC
Minimum	-40 ºC
Relative humidity	80%
Maximum altitude	2000 m
Assembly conditions	
Type of assembly	Vertical / Horizontal
Ventilation	Natural or forced, depending on the design of the cabinet
Distance between capacitors	Minimum: 4 cm
Standards	
CEI 60831-1, UNE - EN 60831-1	

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prismatic capacitors

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