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## Description

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CLZ-HD (Heavy duty) capacitor range is composed of capacitors with a tubular casing, of the dry-type, covering a wide range of power and voltage ratings, at 50 and 60 Hz. The CLZ-HD capacitors are designed to be installed in installations with extreme working conditions. The design, manufacturing and testing processes guarantee the production of top quality and long lasting capacitors. Those CLZ-HD capacitors offer a new refrigeration technology by means of nitrogen gas\*, being a refrigerating system of high benefits, inert and non flammable.

## Application

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Its application is based on compensation in installations with static or variable loads (capacitor banks). Especially designed to be installed in roughly environments with the most extreme conditions due to its longer life and high temperature resistance.



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## Specifications

### AC power supply

Frequency	60 Hz
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### Electrical characteristics

Losses (W)	Dielectric: < 0,2 W / kvar Total: < 0,4 W / kvar
Discharge resistance	50 V / 1 min (0,5 - 30 kvar) 75 V / 3 min (33 - 50 kvar)
Surge	10 % 8h in 24 h 15 % up to 30 min in 24 hours 20 % up to 5 min in 24 hours 30 % up to 1 min in 24 hours
Tolerance C	-5 ... +10 %
Maximum phase current	400 x In
Voltage	440 V
Insulation voltage, circuit	3 / 8 kV

### Mechanical characteristics

Size (mm) width x height x depth	116 x 280 x 116 (mm)
Screw type	M5 x 12 / PH2
Envelope	Aluminum
Torque setting	2 ... 2,5 Nm / Earth: 5 Nm máx.
Cable gauge at input and output terminals	25mm <sup>2</sup>
Fastening	M12 fastening screws earth conductor
Ventilation	Natural or forced depending on the cabinet
Weight (kg)	1,78

### Environmental characteristics

Protection class	IP 20 / IP 54 with terminal cover (optional) (for models Ø 85, 100, 116 mm)
Relative humidity (without condensation)	95%
Installation, location, position.	Vertical / Horizontal. Minimum distance between condensers 2 cm.
Working temperature	T <sup>a</sup> class D: Daily average: 45 °C, annual average: 35 °C, maximum: 65 °C, minimum: -50 °C

### Standards

Certifications	VDE 560
Electrical safety, Maximum height (m)	4000
Standards	IEC 60831-1-1/2

### Current measurement circuit

Allowable overload	1,8 In
Permanent overload	1,8 In

### Protection

Circuit breaker type	Dielectric regeneration Expansion system
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All models are of the inert gas type, except for those with a 63.5 mm diameter and 136x355 mm size. The dimensions (dxh) are shown for the tube only. Please consult the dimensions drawing at the end of this section for more information about the actual dimensions. Terminal: maximum cross-section of type A cables: 16 mm<sup>2</sup>, type B: 25 mm<sup>2</sup>, type C: 35 mm<sup>2</sup>, F: Faston 6.3x0.8 mm and 12 A maximum current.



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Dimensions

