



## CLZ-FP-23/10-HD

CLZ-FP-23/10-HD, Three-phase tubular power capacitor

Code: R2H51B.

- > Terminal: A
- > Frequency (Hz): 50
- > kvar (220 V): 9,15
- > kvar (230 V): 10
- > Cover (opc.): 7
- > Use voltage (V): 230

### Description

**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** capacitors offer a new refrigeration technology by means of nitrogen gas\*, being a refrigerating system of high benefits, inert and non flammable.

### Application

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.



## CLZ-FP-23/10-HD

Tubular capacitor

Code: R2H51B.

### Specifications

#### AC power supply

Frequency	50 Hz
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#### Electrical characteristics

Losses (W)	Dielectric: < 0,2 W / kvar Total: < 0,4 W / kvar
Discharge resistance	49 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 I <sub>n</sub>
Maximum transient current	1,8 I <sub>n</sub>
Voltage	230 V
Insulation voltage, circuit	3 / 8 kV

#### Mechanical characteristics

Size (mm) width x height x depth	100 x 276 x 100 (mm)
Envelope	Aluminum
Fastening	M12 fastening screws earth conductor
Ventilation	Natural or forced according to cabinet design
Weight (kg)	1,38

#### 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

#### Protection

Circuit breaker type	Dielectric regeneration Expansion system
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#### CLZ-FP HD 50Hz

Three-phase tubular power capacitor (Heavy Duty range)



## CLZ-FP-23/10-HD

Tubular capacitor

Code: R2H51B.

CODE	TYPE	kvar (220 V)	kvar (230 V)	Use voltage (V)	kvar (400 V)	kvar (440 V)	kvar (460 V)	kvar (480 V)	kvar (500 V)	kvar (525 V)	kvar (660 V)	kvar (690 V)
<b>Terminal block, Un = 3 x 230 V / 50 Hz</b>												
R2H516.	CLZ-FP-23/5-HD	4,6	5	230								
R2H517.	CLZ-FP-23/6,25-HD	5,7	6,25	230								
R2H518.	CLZ-FP-23/7,5-HD	6,8	7,5	230								
R2H51B.	CLZ-FP-23/10-HD	9,15	10	230								
R2H51D.	CLZ-FP-23/12,5-HD	11,4	12,5	230								
R2H51E.	CLZ-FP-23/15-HD	13,75	15	230								
<b>Faston terminal, Un = 3 x 440 V / 50 Hz</b>												
R2H541.	CLZ-FPT-44/1,25-HD			400   440	1	1,25						
R2H542.	CLZ-FPT-44/2,5-HD			400   440	2	2,5						
R2H543.	CLZ-FPT-44/3-HD			400   440	2,5	3						
R2H544.	CLZ-FPT-44/3,75-HD			400   440	3	3,75						
R2H546.	CLZ-FPT-44/5-HD			400   440	4	5						
R2H547.	CLZ-FPT-44/6,25-HD			400   440	5	6,25						
R2H848.	CLZ-FPT-44/7,5-HD			400   440	6,25	7,5						
<b>Terminal block, Un = 3 x 440 V / 50 Hz</b>												
R2H54B.	CLZ-FP-44/10-HD			400   440	8	10						
R2H54D.	CLZ-FP-44/12,5-HD			400   440	10	12,5						
R2H54E.	CLZ-FP-44/15-HD			400   440	12,5	15						
R2H54G.	CLZ-FP-44/18,2-HD			400   440	15	18,2						
R2H54J.	CLZ-FP-44/20-HD			400   440	16	20						
R2H54L.	CLZ-FP-44/25-HD			400   440	20	25						
R2H54M.	CLZ-FP-44/28-HD			400   440	23	28						
R2H54N.	CLZ-FP-44/30-HD			400   440	25	30						
R2H54R.	CLZ-FP-44/40-HD			400   440	32	40						
R2H54S.	CLZ-FP-44/50-HD			400   440	40	50						
<b>Faston terminal, Un = 3 x 460 V / 50 Hz</b>												
R2H857.	CLZ-FPT-46/6,25-HD			460		5,7	6,25					
<b>Terminal block, Un = 3 x 460 V / 50 Hz</b>												
R2H55D.	CLZ-FP-46/12,5-HD			460		11,4	12,5					
R2H55E.	CLZ-FP-46/15-HD			460		13,7	15					
R2H55H.	CLZ-FP-46/19-HD			460		17,4	19					
R2H55L.	CLZ-FP-46/25-HD			460		22,9	25					
R2H55N.	CLZ-FP-46/30-HD			460		27,4	30					
R2H55P.	CLZ-FP-46/33,3-HD			460		30,5	33,3					
<b>Faston terminal, Un = 3 x 480 V / 50 Hz</b>												
R2H862.	CLZ-FPT-48/2,5-HD			480			2,3	2,5				
<b>Terminal block, Un = 3 x 480 V / 50 Hz</b>												
R2H56B.	CLZ-FP-48/10-HD			480		9,2	10					
R2H56D.	CLZ-FP-48/12,5-HD			480		11,5	12,5					



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R2H56E.	CLZ-FP-48/15-HD			480			13,8	15				
R2H56J.	CLZ-FP-48/20-HD			480			18,4	20				
R2H56L.	CLZ-FP-48/25-HD			480			23	25				
R2H56M.	CLZ-FP-48/28,2-HD			480			26	28,2				
R2H56N.	CLZ-FP-48/30-HD			480			27,6	30				
R2H56R.	CLZ-FP-48/40-HD			480			36,75	40				
<b>Faston terminal, Un = 3 x 525 V / 50 Hz</b>												
R2H876.	CLZ-FPT-52/5-HD			525					4,5	5		
<b>Terminal block, Un = 3 x 525 V / 50 Hz</b>												
R2H579.	CLZ-FP-52/8-HD			525					7,25	8		
R2H57B.	CLZ-FP-52/10-HD			525					9,1	10		
R2H57D.	CLZ-FP-52/12,5-HD			525					11,3	12,5		
R2H57E.	CLZ-FP-52/15-HD			525					13,6	15		
R2H57J.	CLZ-FP-52/20-HD			525					18,15	20		
R2H57L.	CLZ-FP-52/25-HD			525					22,7	25		
R2H57N.	CLZ-FP-52/30-HD			525					27,2	30		
R2H57P.	CLZ-FP-52/37,5-HD			525					34	37,5		
R2H57R.	CLZ-FP-52/40-HD			525					36,3	40		
R2H57S.	CLZ-FP-52/50-HD			525					45,4	50		
<b>Terminal block, Un = 3 x 690 V / 50 Hz</b>												
R2H598.	CLZ-FP-69/7,5-HD			690							6,9	7,5
R2H59B.	CLZ-FP-69/10-HD			690							9,15	10
R2H59D.	CLZ-FP-69/12,5-HD			690							11,4	12,5
R2H59E.	CLZ-FP-69/15-HD			690							13,7	15
R2H59J.	CLZ-FP-69/20-HD			690							18,3	20
R2H59L.	CLZ-FP-69/25-HD			690							22,9	25
R2H59N.	CLZ-FP-69/30-HD			690							27,5	30
R2H59R.	CLZ-FP-69/40-HD			690							36,6	40
R2H59S.	CLZ-FP-69/50-HD			690							45,75	50

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.



## CLZ-FP-23/10-HD

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## Dimensions

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