



## **LV Capacitors**

**Cylindrical & Box Type**

For Normal Duty & Heavy Duty Applications

**Quality capacitors for Power Factor Correction**

# Quality capacitors for power factory correction

## Design

- CAP-Q series LV Capacitors are available in Cylindrical & Box Type series.
- These capacitors consist of individual and number of wound elements of multilayered heavy edge metallized polypropylene film.
- The metallization is carried out by the “best-in-industry-class” zinc alloy. The elements are wound on state-of-the-art, fully automatic numerically controlled winding machine that ensures no corona discharge or ionization.
- Each winding is encapsulated in thermo setting resin to obtain perfectly sealed element.



## Salient Features

- Simple cost effective solution
- Extended range
- Dry Type design
- Cylindrical & Box type construction
- Pressure sensitive disconnecter
- Robust terminals
- In-Rush current limiting coils
- Very low losses <math><0.5\text{w/ kvar}</math>
- Robust terminals for perfect termination
- Tested at accredited Labs in compliance with IS: 13340/41 & IEC 60831-1&2



# Specification

	<b>Box type</b>	<b>Cylindrical type</b>
<b>Construction</b>	<ul style="list-style-type: none"><li>• Dielectric: Polypropylene film</li><li>• Dry PU resin; non-PCB</li><li>• Container type/finish: MS sheet metal</li><li>• Elements placed inside a heavy duty sheet metal box delta connected internally.</li></ul>	<ul style="list-style-type: none"><li>• Dielectric: Polypropylene film</li><li>• Non PCB, Soft Polyurethane resin</li><li>• Extruded round aluminium can with stud</li><li>• Provided with discharge resistors</li><li>• Overpressure disconnecter</li><li>• Elements inside a extruded round aluminium can and are delta connected internally.</li></ul>
<b>Features</b>	<ul style="list-style-type: none"><li>• Three phase Self-healing technology</li><li>• Naturally air cooled or forced</li><li>• Internal safety fuse</li><li>• Provided with discharge resistor</li></ul>	<ul style="list-style-type: none"><li>• Three phase, delta connected</li><li>• Self-healing technology</li><li>• Naturally air cooled (or forced air cooling)</li><li>• Indoor mounting</li></ul>
<b>Typical applications</b>	For power factor correction	For Power Factor correction

# Range

## Cylindrical – Normal Duty

1 to 5 kVAr 415V & 1 to 5 Kvar in 440V  
Normal Duty is having Fast On Termination.  
6.3 kVAr and above 440V & 415V is having  
Screw Termination.



## Cylindrical -Heavy Duty

1 kVAr Heavy Duty 415V is having Fast On  
terminal, 2 kVAr and above is with Sigut  
Terminal .1 & 2 Kvar 440V is having Fast on  
termination, 3kVAr and above is with Sigut  
Terminal



## Box Type – Normal Duty

Box Type Normal Duty( 440V,415V) 1-4  
kVAr in wire terminal .Box Type Normal  
Duty 6.5 kVAr and above is having stud type  
terminal ( 440V as well 415V)



## Box Type – Heavy Duty

Box Type Heavy Duty , all kvar ratings will  
be having stud type terminal ( 440V as well  
415V)



# Technical data

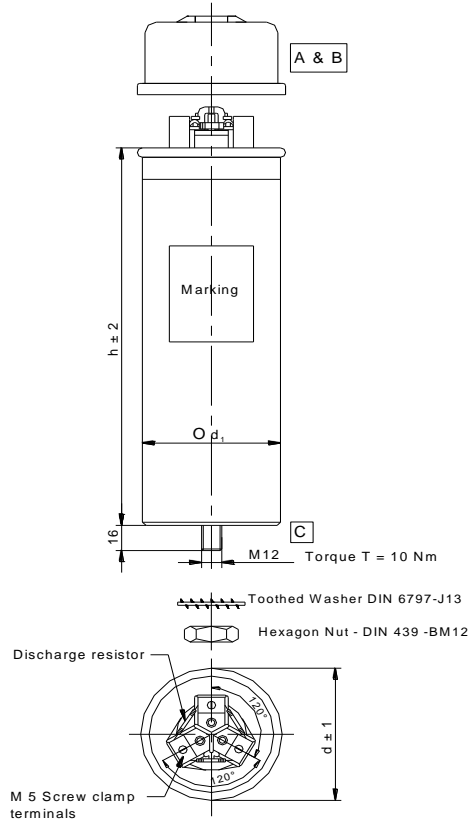
Range	Cylindrical Normal Duty	Cylindrical Heavy Duty	Box Normal Duty	Box Heavy Duty
Voltage V	415/440			
Kvar Range kVAR	1 – 25			
Frequency	50/60 Hz			
Connection	3 phase as standard construction			
Discharge resistors	Inbuilt as part of the capacitor			
Execution	Indoor			
Standards	In compliance to IS: 13340/41 & IEC 60831-1&2			
Tolerance	±2%			
Mounting parts	Threaded stud at bottom of can (max. torque = 4Nm for M8 & 10Nm for M12)		Mounting bracket at rear plate	
Earth	Extruded stud		Earth connection on the enclosure fixation	
Terminals	6.3 mm fast-on terminals for plastic top – 1 to 5 kVAr and screwed terminal for metal top – 7.5 kVAr and above.	6.3 mm fast-on terminal for plastic top and Sigut terminal for metal top	Cu wire	Stud terminals with ceramic bushings
Mean life expectancy	100,000 hours (max. 5000 switching per year)	115,000 hours (max. 6000 switching per year)	100,000 hours (max. 5000 switching per year)	125,000 hours (max. 6000 switching per year)

- **Capacitors to be used under normal conditions, not suitable for harmonic environment**

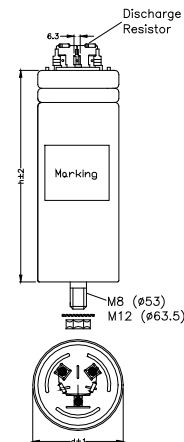
# Dimensions

## Cylindrical Type- Normal Duty

Voltage (V)	Power (Q) kvar	Capacitance (µf)	Rated current (A)	Dimensions (mm) Without cap
	50 Hz		50 Hz	D x H
415	1.0	6.5	1.4	53 x 117
	2.0	12.5	2.8	53 x 117
	3.0	18.5	4.2	63.5 x 129
	4.0	25.0	5.6	63.5 x 152
	5.0	31.0	7.0	63.5 x 152
	6.3	39.0	8.8	78.4 x 195
	7.5	46.5	10.4	78.4 x 195
	10.0	62.0	13.9	88.4 x 195
	12.5	77.0	17.4	88.4 x 270
	15.0	92.5	20.9	88.4 x 270
	20.0	123.5	27.8	88.4 x 345
	25.0	154.0	34.8	88.4 x 345
440	1.0	5.5	1.3	53 x 117
	2.1	11.5	2.8	53 x 117
	3.0	16.5	3.9	63.5 x 129
	4.2	23.0	5.5	63.5 x 129
	5.0	27.5	6.6	63.5 x 152
	6.0	33.0	7.9	78.4 x 195
	7.5	41.0	9.8	78.4 x 195
	10.0	55.0	13.1	88.4 x 195
	12.5	68.5	16.4	88.4 x 270
	15.0	82.5	19.7	88.4 x 270
	20.0	110	26.2	88.4 x 345
	25.0	137.5	32.8	93.5 x 345



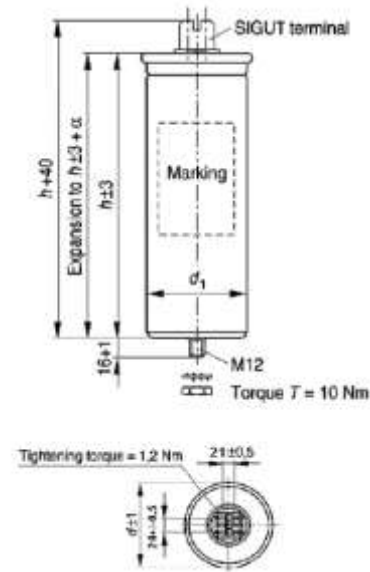
### M5 screw clamp type



### 6.3mm fast-on terminals

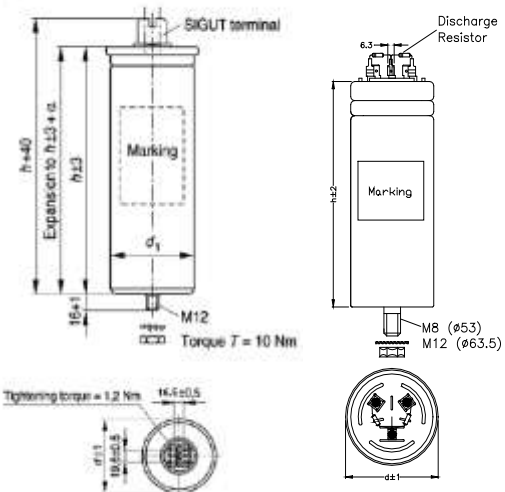
### Cylindrical Type- Heavy Duty

Voltage (V)	Power (Q) kvar	Capacitance (µf)	Rated current (A)	Dimensions (mm)
	50 Hz		50 Hz	D x H
415	1	6.5	1.4	53 x 129
	2	12.5	2.8	78.4 x 195
	3	19	4.2	78.4 x 195
	4	25	5.6	78.4 x 195
	5	31	7.0	88.4 x 195
	8	49.5	11.1	88.4 x 270
	9	55.5	12.5	88.4 x 270
	10	62	13.9	88.4 x 345
	12.5	77	17.4	88.4 x 345
	15	93.5	20.9	93.5 X 348
	20	123.3	27.8	121.5 x 325
	25	154.1	34.8	142 x 325
440	1	5.5	1.3	53 x 117
	2	11	2.6	63.5 x 129
	3	16.5	3.9	78.4 x 195
	4	22	5.2	78.4 x 195
	5	27.5	6.6	78.4 x 195
	6	33	7.8	88.4 x 195
	7.5	41.5	9.8	88.4 x 270
	10	55	13.1	88.4 x 270
	12.5	68.5	16.4	93.5 X 270
	15	82.5	19.7	105.5 X 280
20	109.6	26.3	121.5 x 280	
25	137	32.8	121.5 x 325	



Capacitor with plastic top

Dimensional drawing

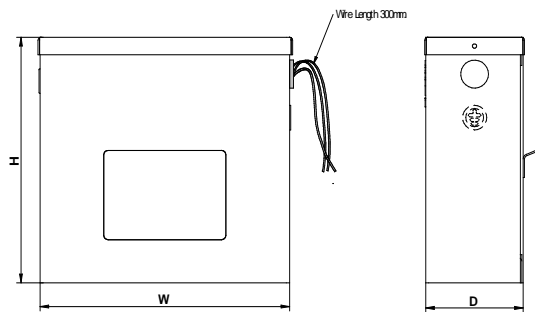


Can diameter upto 90 mm.

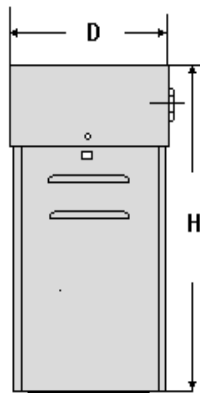
Can diameter above 90 mm

### Box Type- Normal Duty (1-4 Kvar)

Vols V	KV Ar	Capacitance $\mu\text{f}$	Rated Current (A)	Dimension (mm) $\pm 5\text{mm}$		
				H	W	D
415	1.0	6.2	1.4	95	125	45
415	2.0	12.3	2.8	120	125	45
415	3.0	18.5	4.2	120	145	55
415	4.0	24.7	5.6	140	145	55
440	1.0	5.5	1.3	95	125	45
440	2.0	11.0	2.6	120	125	45
440	3.0	16.4	3.9	120	145	55
440	4.0	21.9	5.3	140	145	55



1 – 4 kVAr



5 – 25 kVAr

### Box Type- Normal Duty (5-25 Kvar)

Vols V	KV Ar	Capacitance $\mu\text{f}$	Rated Current (A)	Dimension (mm) $\pm 5\text{mm}$		
				H	W	D
415	5	31	7.0	240	185	60
	6	37.5	8.3	300	240	80
	7.5	46.5	10.4	300	240	80
	10	62	13.9	300	240	80
	12.5	77	17.4	300	240	80
	15	92.5	20.9	300	240	80
	17.5	107.9	24.3	300	240	160
	20	124	27.8	300	240	160
	22.5	138.7	31.3	300	240	160
	25	154	34.8	300	240	160
440	5	27.5	6.6	240	185	60
	6	33	7.9	300	240	80
	7.5	41.5	9.8	300	240	80
	10	55	13.1	300	240	80
	12.5	68.5	16.4	300	240	80
	15	82.5	19.7	300	240	80
	17.5	96.0	23.0	300	240	160
	20	110	26.2	300	240	160
	22.5	123.4	29.5	300	240	160
25	138	32.8	300	240	160	



### Box Type- Heavy Duty

Volts V	KVA r	Capacitance $\mu$ f	Rate d Current (A)	Dimension (mm) $\pm$ 5mm		
				H	W	D
415	1	6.3	1.4	170	125	45
	2	12.5	2.8	170	125	45
	3	19	4.2	215	185	60
	4	25	5.6	215	185	60
	5	31	7.0	215	185	60
	6	37.5	8.3	300	240	80
	7.5	49.5	10.4	300	240	80
	10	62	13.9	300	240	80
	12.5	77	17.4	300	240	80
	15	92	20.9	300	240	80
	17.5	107.9	24.3	300	240	160
	20	124	27.8	300	240	160
	22.5	138.7	31.3	300	240	160
	25	154	34.8	300	240	160
440	1	5.5	1.3	170	125	45
	2	11	2.6	170	125	45
	3	16.5	3.9	215	185	60
	4	22	5.2	215	185	60
	5	27.5	6.6	215	185	60
	6	33	7.9	300	240	80
	7.5	41.5	9.8	300	240	80
	10	55	13.1	300	240	80
	12.5	69	16.4	300	240	80

15	82.5	19.7	300	240	80
17.5	96.0	23.0	300	240	160
20	110	26.2	300	240	160
22.5	123.4	29.5	300	240	160
25	138	32.8	300	240	160

