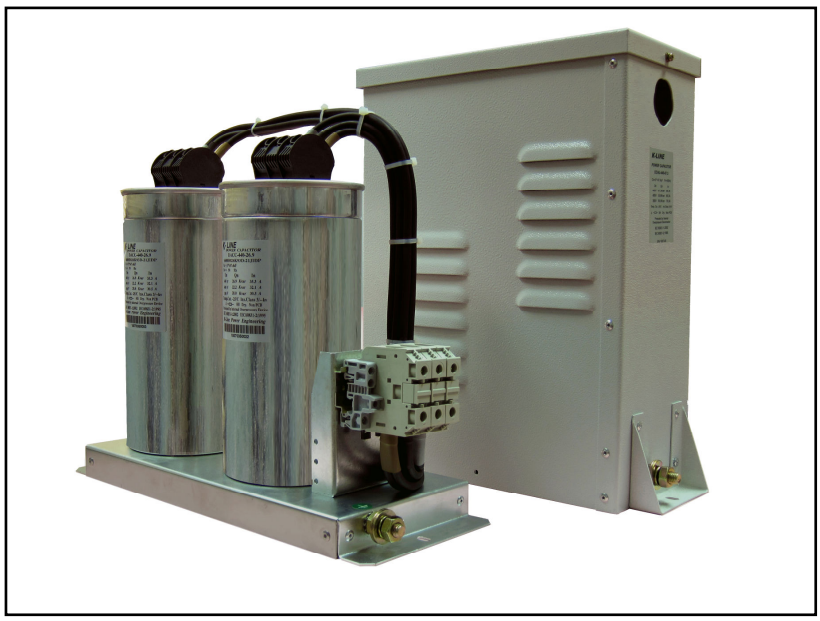
K – LINE Power Capacitors

- Fully comply with IEC 60831-1:2002 and IEC 60831-2:1995
- Dry type, self-healing and fitted with internal overpressure disconnector
- Designed for a rated voltage of 440V, offering an extra safety factor when used on 380V network

Cylindrical
Capacity Unit



Open Type Capacitor Assembly
and Enclosed Capacitor Unit

Technical Data		IEC 60831-1:2002 and IEC 60831-2:1995 Requirement
Rated Voltage : U_n = 440V (50Hz)		
Permissible Voltage :	1.10 U_n (8 hours in every 24 hours)	
	1.35 U_n (1 minute)	1.3 U_n (1 minute)
Permissible Current :	1.3 I_n (continuously, I_n = rated current)	
	2.0 I_n (accidentally)	1.5 I_n (accidentally)
Discharge Resistor : Discharging to less than 50V within 1 minute		Discharging to less than 75V within 3 minutes
Capacitance Tolerance : -5% to +10% (100 Kvar or below)		-5% to +15%
Loss : ≤ 0.4 Watt/Kvar (with discharge resistors)		
Working Temperature : -25°C to + 50°C		

K-Line capacitors are renowned for the following features:

Safe and Environment-friendly

Dry type, all materials used are non-toxic and do not contain liquid impregnants.

Self-healing

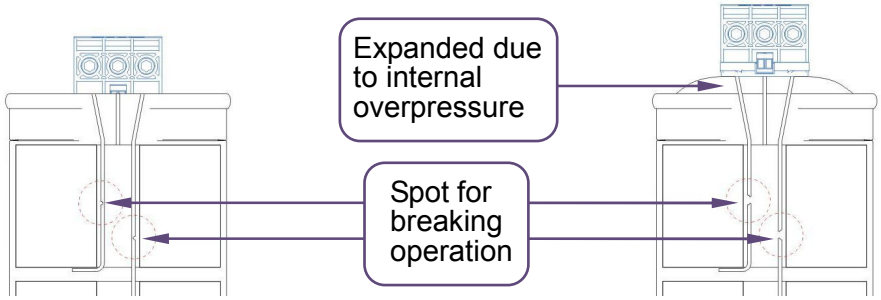
The metallized polypropylene film possesses an inherent self-healing property. Any breakdown on weak spot of dielectric vaporizes the adjacent metal layer thereby regenerating the initial insulation conditions. The capacitor then continues to its normal operation without any noticeable changes in characteristics of the capacitor.

Low losses:

The low loss polypropylene film provides an extremely low dissipation factor and high dielectric strength thus bringing the losses to a very low level.

Overpressure Disconnection:

Each capacitor is equipped with an overpressure disconnector, giving the ultimate protection against any possible electrical fault. In case of fault, dangerous overload or at the end of the lifetime of the capacitor, the increase in pressure as a result of gas produced inside will force the can to lengthen upwards and to break the internal electrical connections. The principle of the overpressure disconnector is shown in the figure below.



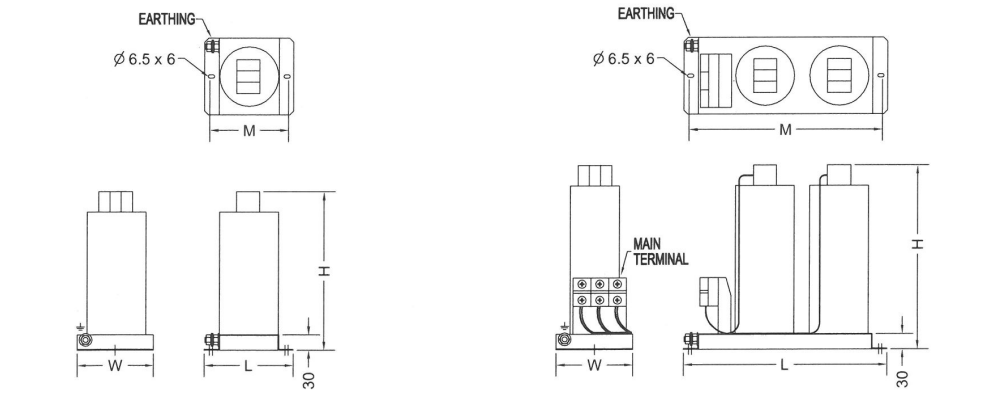
Before Operation

After Operation

Cylindrical Capacitor Units

Model	Capacitance per Phase, μF	Rated Power and Current						Weight kg	Dimensions (Excluding Terminal) mm
		380V		400V		440V			
		Kvar	Amp	Kvar	Amp	Kvar	Amp		
DACC-440-13.5	74.0	10.0	15.3	11.2	16.1	13.5	17.7	1.3	Φ86x240–M12x16
DACC-440-16.8	92.1	12.5	19.0	13.9	20.1	16.8	22.0	1.4	
DACC-440-20.2	110.7	15	22.9	16.7	24.1	20.2	26.5	1.7	Φ96x240–M16x25
DACC-440-26.9	147.4	20	30.5	22.2	32.1	26.9	35.3	2.2	Φ116x240–M16x25
DACC-440-33.5	183.7	25	38.0	27.7	40.0	33.5	44.0	2.5	Φ116x285–M16x25

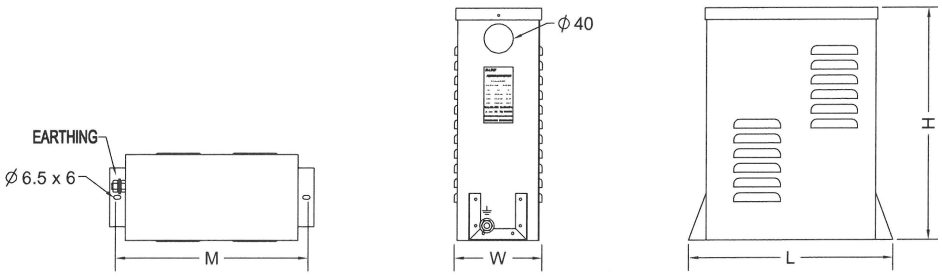
Open Type Capacitor Assemblies



UCAU-440-20.2 UCAU-440-26.9 UCAU-440-33.5 UCAU-440-40.4 UCAU-440-53.8 UCAU-440-67.0

Model	Consisting of Cylindrical Capacitor Units	Capacitance per Phase, μF	Rated Power and Current						Dimensions mm			
			380V		400V		440V					
			Kvar	Amp	Kvar	Amp	Kvar	Amp	W	L	M	H
UCAU-440-20.2	1 x DACC-440-20.2	110.7	15	22.9	16.7	24.1	20.2	26.5	150	175	155	310
UCAU-440-26.9	1 x DACC-440-26.9	147.4	20	30.5	22.2	32.1	26.9	35.3				
UCAU-440-33.5	1 x DACC-440-33.5	183.7	25	38.0	27.7	40.0	33.5	44.0				360
UCAU-440-40.4	2 x DACC-440-20.2	221.4	30	45.8	33.4	48.2	40.4	53.0	150	400	380	310
UCAU-440-53.8	2 x DACC-440-26.9	294.8	40	61.0	44.4	64.2	53.8	70.6				
UCAU-440-67.0	2 x DACC-440-33.5	367.4	50	76.0	55.4	80.0	67.0	88.0				360

Enclosed Capacitor Units



Model	Consisting of Cylindrical Capacitor Units	Capacitance per Phase, μF	Rated Power and Current						Dimensions mm			
			380V		400V		440V					
			Kvar	Amp	Kvar	Amp	Kvar	Amp	W	L	M	H
ECAU-440-20.2	1 x DACC-440-20.2	110.7	15	22.9	16.7	24.1	20.2	26.5	150	200	180	395
ECAU-440-26.9	1 x DACC-440-26.9	147.4	20	30.5	22.2	32.1	26.9	35.3				
ECAU-440-33.5	1 x DACC-440-33.5	183.7	25	38.0	27.7	40.0	33.5	44.0				435
ECAU-440-40.4	2 x DACC-440-20.2	221.4	30	45.8	33.4	48.2	40.4	53.0	150	350	330	395
ECAU-440-53.8	2 x DACC-440-26.9	294.8	40	61.0	44.4	64.2	53.8	70.6				
ECAU-440-67.0	2 x DACC-440-33.5	367.4	50	76.0	55.4	80.0	67.0	88.0				435

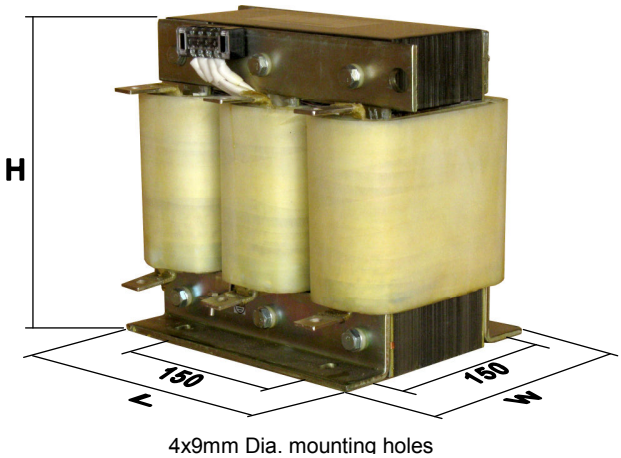
Reactors for Detuned Harmonic Filters

Rated Voltage : 380V

Rated Frequency : 50Hz

Detuning Factor : P=7%

Resonance Frequency : 189Hz



Reactor Data

Standards : IEC 60076-6:2007

Design : Dry Type

Class of Insulation : F

Protection Degree : IP 00

Loss : 3.5 – 6 W per Kvar output of the combination

Overcurrent : 135% of rated current continuously

Overheat Protection: By built-in overheat cutout

Power Frequency Withstand Voltage : 3 Kv for 1 min

Rated Power and Current of the Combination at 380V		Capacitors			Reactor					
		Model	Total Capacitance	Rated Power Kvar at 380V	Model	Inductance	Rated Power	Dimensions mm		
Kvar	A		μF			mH	Kvar	L	W	H
21.57	32.8	1 x DACC-440-26.9	3 x 147.4	20	HFR-20-P7	1.604	1.62	290	205	210
26.88	40.8	1 x DACC-440-33.5	3 x 183.7	25	HFR-25-P7	1.287	2.02	290	210	220
32.40	49.2	2 x DACC-440-20.2	3 x 221.4	30	HFR-30-P7	1.067	2.44	290	220	225
43.14	65.5	2 x DACC-440-26.9	3 x 294.8	40	HFR-40-P7	0.802	3.25	290	230	250
53.76	81.7	2 x DACC-440-33.5	3 x 367.4	50	HFR-50-P7	0.644	4.05	315	240	260

Class H insulation or other detuned or tuned harmonic filters are available on request.

Rickson Engineering Ltd.
21/F, Sun Hing Ind. Building,
46 Wong Chuk Hang Road, Hong Kong.

利信機電有限公司
香港黃竹坑道 46 號
新興工業大廈 21 字樓

Tel: (852) 3120 7500 Fax: (852) 3120 7511

Email: General@rickson.com.hk

URL: http://www.rickson.com.hk