

LOW VOLTAGE POWER CAPACITORS



Low Voltage Power Capacitors

The power range from 2.5 to 75Kvar compatible with the electrical system, 1-phase and 3-phase, depending on the needs of corporate clients. Winsonic dry type capacitor is especially intended for Power factor correction in industry and semi-industry. The capacitors are manufactured using Metalized Polypropylene film as the dielectric and housed in cylindrical aluminum case. The three-phase capacitor is composed of the single-phase delta element stacks. The electrodes are connected by metal spraying the face ends of the winding elements. The winding elements are encapsulated in cylindrical aluminum case hermetically sealed either by a press-rolled metal lid or plastic disk with fast-on terminal.

Type	Dry Cylinder Type	Dry Box (Unit) Type
Voltage Range	220V to 1,000V	220V to 1,000V
Frequency	50Hz , 60Hz	50Hz , 60Hz
Power Range	2.5Kvar to 50Kvar	5Kvar to 75Kvar
Capacitor Loss	Total 0.45W/Kvar	Total 0.45W/Kvar
Capacity Tolerance	-5% ~ 10% (at 20oC)	-5% ~ 10% (at 20°C)
Max Overvoltage	Un + 10% [up to 8 hours daily] Un + 15% [up to 30 mins daily] Un + 20% [up to 5 mins monthly] Un + 30% [up to 1 mins monthly]	Un + 10% [up to 8 hours daily] Un + 15% [up to 30 mins daily] Un + 20% [up to 5 mins monthly] Un + 30% [up to 1 mins monthly]
Max Overcurrent	1.3 x In	1.3 x In
Withstand Voltage	2.15 x Un (10 seconds)	2.15 x Un (10 seconds)
Connection	3 Phase (Single phase on request)	3 Phase (Single phase on request)
Insulation level	3/15Kv	3/15Kv
Dielectric	Polypropylene	Polypropylene
Ambient Temp	-25oC ~ 55oC	-25°C ~ 55°C
Discharge	Internal / External discharge module	External discharge module
Cooling	Natural forced	Natural forced
Impregnation	Epoxy resin	Epoxy resin
Safety	Self-healing technology Overpressure disconnecter	Self-healing technology Overpressure disconnecter
Installation Place	Indoor	Indoor / Outdoor
Applicable Standards	IEC60831-1,2	IEC60831-1,2



LOW VOLTAGE POWER CAPACITOR DRY TYPE (CYLINDER)

Part No.	Rated (Kvar)	Cn (uF)	Current In (Amp)	Dimensions D * H (mm.)	Stud Screw
Dry type capacitor_Cylinder (1 Phase , 50Hz)					400 VAC
RMC-405050KS	5	99.5	12.5	86*140	M12
RMC-405075KS	7.5	149.2	18.8	86*170	M12
RMC-405100KS	10	198.9	25	86*230	M12
RMC-405125KS	12.5	248.7	31.3	86*230	M12
RMC-405150KS	15	298.4	37.5	86*275	M12
Dry type capacitor_Cylinder (3 Phase , 50Hz)					400 VAC
RMC-405050KT	5	99.5	7.2	86*140	M12
RMC-405075KT	7.5	149.2	10.8	86*170	M12
RMC-405100KT	10	198.9	14.4	86*230	M12
RMC-405125KT	12.5	248.7	18	86*230	M12
RMC-405150KT	15	298.4	21.7	86*275	M12
RMC-405200KT	20	397.9	28.9	86*350	M12
RMC-405250KT	25	497.4	36.1	96*350	M16
RMC-405300KT	30	596.8	43.3	96*350	M16
Dry type capacitor_Cylinder (3 Phase , 50Hz)					440 VAC
RMC-445050KT	5	82.2	6.6	86*140	M12
RMC-445075KT	7.5	123.3	9.8	86*170	M12
RMC-445100KT	10	164.4	13.1	86*170	M12
RMC-445125KT	12.5	205.5	16.4	86*230	M12
RMC-445150KT	15	246.6	19.7	86*230	M12
RMC-445200KT	20	328.8	26.2	86*275	M12
RMC-445250KT	25	411	32.8	86*350	M12
RMC-445300KT	30	493.2	39.4	96*350	M16
Dry type capacitor_Cylinder (3 Phase , 50Hz)					480 VAC
RMC-485050KT	5	69.1	6	86*140	M12
RMC-485075KT	7.5	103.6	9	86*170	M12
RMC-485100KT	10	138.2	12	86*230	M12
RMC-485125KT	12.5	172.7	15	86*230	M12
RMC-485150KT	15	207.2	18	86*275	M12
RMC-485200KT	20	276.3	24.1	86*350	M12
RMC-485250KT	25	345.4	30.1	96*350	M16
Dry type capacitor_Cylinder (3 Phase , 50Hz)					525 VAC
RMC-525025KT	2.5	28.9	2.7	63*135	M12
RMC-525050KT	5	57.7	5.5	86*140	M12
RMC-525075KT	7.5	86.6	8.2	86*170	M12
RMC-525100KT	10	115.5	11	86*230	M12

LOW VOLTAGE POWER CAPACITOR DRY TYPE (UNIT)

Part No.	Rated (Kvar)	Cn (uF)	Current In (Amp)	Dimensions W*L* H (mm.)	Stud Screw
Dry type capacitor_Unit (3 Phase , 50Hz)					400 VAC
IMB-405050KT	5	99.5	7.2	155*185*320	M6
IMB-405075KT	7.5	149.2	10.8	155*185*320	M6
IMB-405100KT	10	198.9	14.4	155*185*320	M6
IMB-405125KT	12.5	248.7	18	155*185*320	M6
IMB-405150KT	15	298.4	21.7	155*185*320	M6
IMB-405200KT	20	397.9	28.9	155*185*320	M6
IMB-405250KT	25	497.4	36.1	155*185*320	M6
IMB-405300KT	30	596.8	43.3	155*355*400	M8
IMB-405400KT	40	795.8	57.7	155*355*400	M8
IMB-405450KT	45	895.2	65	155*355*400	M8
IMB-405500KT	50	994.7	72.2	155*355*400	M8
IMB-405600KT	60	1193.7	86.6	230*355*400	M10
IMB-405750KT	75	1492.1	108.3	230*355*400	M10
Dry type capacitor_Unit (3 Phase , 50Hz)					440 VAC
IMB-445050KT	5	82.2	6.6	155*185*320	M6
IMB-445075KT	7.5	123.3	9.8	155*185*320	M6
IMB-445100KT	10	164.4	13.1	155*185*320	M6
IMB-445125KT	12.5	205.5	16.4	155*185*320	M6
IMB-445150KT	15	246.6	19.7	155*185*320	M6
IMB-445200KT	20	328.8	26.2	155*185*320	M6
IMB-445250KT	25	411	32.8	155*185*320	M6
IMB-445300KT	30	493.2	39.4	155*355*400	M8
IMB-445400KT	40	657.7	52.5	155*355*400	M8
IMB-445450KT	45	739.9	59	155*355*400	M8
IMB-445500KT	50	822.1	65.6	155*355*400	M8
IMB-445600KT	60	986.5	78.7	230*355*400	M10
IMB-445750KT	75	1233.1	98.4	230*355*400	M10
Dry type capacitor_Unit (3 Phase , 50Hz)					480 VAC
IMB-485050KT	5	69.1	6	155*185*320	M6
IMB-485075KT	7.5	103.6	9	155*185*320	M6
IMB-485100KT	10	138.2	12	155*185*320	M6
IMB-485125KT	12.5	172.7	15	155*185*320	M6
IMB-485150KT	15	207.2	18	155*185*320	M6
IMB-485200KT	20	276.3	24.1	155*185*320	M6
IMB-485250KT	25	345.4	30.1	155*185*320	M6
IMB-485300KT	30	414.5	36.1	155*355*400	M8
IMB-485400KT	40	552.6	48.1	155*355*400	M8
IMB-485450KT	45	621.7	54.1	155*355*400	M8
IMB-485500KT	50	690.8	60.1	155*355*400	M8
IMB-485600KT	60	828.9	72.2	230*355*400	M10
IMB-485750KT	75	1036.2	90.2	230*355*400	M10
Dry type capacitor_Unit (3 Phase , 50Hz)					525 VAC
IMB-525050KT	5	57.7	5.5	155*185*320	M6
IMB-525075KT	7.5	86.6	8.2	155*185*320	M6
IMB-525100KT	10	115.5	11	155*185*320	M6
IMB-525125KT	12.5	144.4	13.7	155*185*320	M6
IMB-525150KT	15	173.2	16.5	155*185*320	M6
IMB-525200KT	20	231	22	155*185*320	M6
IMB-525250KT	25	288.7	27.5	155*185*320	M6
IMB-525300KT	30	346.5	33	155*355*400	M8
IMB-525400KT	40	461.9	44	155*355*400	M8
IMB-525450KT	45	519.7	49.5	155*355*400	M8
IMB-525500KT	50	577.4	55	155*355*400	M8
IMB-525600KT	60	692.9	66	230*355*400	M10
IMB-525750KT	75	866.1	82.5	230*355*400	M10

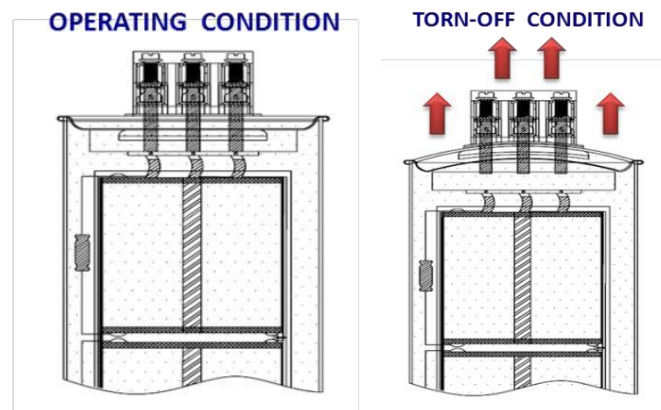
LOW VOLTAGE POWER CAPACITOR DRY TYPE (OUTDOOR)

Part No.	Rated (Kvar)	Cn (uF)	Current In (Amp)	Dimensions W*L*H (mm.)	Supporting (mm.)
Dry type capacitor_Outdoor (1 Phase , 50Hz)					230 VAC
EMB-235050KS	5	300.9	21.7	100*220*370	200
EMB-235075KS	7.5	451.3	32.6	100*220*370	200
EMB-235100KS	10	601.7	43.5	100*220*370	200
EMB-235125KS	12.5	752.2	54.3	100*220*370	200
EMB-235150KS	15	902.6	65.2	100*220*370	200
Dry type capacitor_Outdoor (3 Phase , 50Hz)					400 VAC
EMB-405050KT	5	99.5	7.2	100*220*370	200
EMB-405100KT	10	198.9	14.4	100*220*370	200
EMB-405150KT	15	298.4	21.7	100*220*370	200
EMB-405200KT	20	397.9	28.9	150*220*370	200
EMB-405250KT	25	497.4	36.1	150*220*370	200
EMB-405300KT	30	596.8	43.3	150*220*370	200
EMB-405450KT	45	895.2	65	110*210*570	200
EMB-405500KT	50	994.7	72.2	110*210*570	200
EMB-405600KT	60	1193.7	86.6	110*310*570	200
EMB-405750KT	75	1492.1	108.3	110*310*570	200
Dry type capacitor_Outdoor (3 Phase , 50Hz)					415 VAC
EMB-415050KT	5	92.4	7	100*220*370	200
EMB-415100KT	10	184.8	13.9	100*220*370	200
EMB-415150KT	15	277.2	20.9	100*220*370	200
EMB-415200KT	20	369.6	27.8	150*220*370	200
EMB-415250KT	25	462.1	34.8	150*220*370	200
EMB-415300KT	30	554.5	41.7	150*220*370	200
EMB-415450KT	45	831.7	62.6	110*210*570	200
EMB-415500KT	50	924.1	69.6	110*210*570	200
EMB-415600KT	60	1108.9	83.5	110*310*570	200
EMB-415750KT	75	1386.2	104.3	110*310*570	200



Protection of the capacitor

In order to prevent damage caused by defective electrical systems or as the capacitor itself, due to failure of the capacitor, the capacitor will cause the gas inside the capacitor. This pressure will cause the top of capacitor cover swelling. (Because they were designed to be the thinnest point) when the lid was swollen. Will draw the connection of electricity sent to capacitor deficiency resulting from the circuit cut off.



Operating temperature

Capacitor has been classified by the temperature used as an indicator. Each category is assigned a letter and the with the numbers below A[+40°C], B[+45 °C], C[+50 °C], D[+55 °C] The letter refers to a class that displays the temperature of use and the number refers to the temperature used of the capacitor. Which is the temperature, use the tag to the product details (Name plate) on all products.

Installation Place

1. Ambient temperature shall not exceed -25 °C to +55 °C (average temperature per day shall be less than 45 °C)
2. Installation place shall be dry and well ventilated. Avoid the places such as where corrosive gases or dust are much or agitation occurs. Capacitor rack shall be installed on the base of concrete and tightened with bolt.
3. Use twisted wire for connecting to capacitor. The square of wire shall be more than 1.35 times of rated current of capacitors.
4. Capacitor has been produced with built in discharge resistance so that when it is opened from the circuit, the residual voltage can be reduced to less than 75V within 3 mins. If the switch is turn on again when the residual voltage is not discharge enough, DC voltage becomes double and can be the cause of damage to capacitor. When it is turn on/off within short time (within 5 seconds), employment of discharging coil is desirable.

Check Points

1. Allowable over voltage is within 110% of rated voltage. Confirm of the equilibrium on each phase. Phase be careful of circuit voltage rise in slight load at night. If over voltage is applied to capacitor continuously, Kvar quantity is increased relative to 2 square voltage rise which results in the increase of loss and rise of temperature leading to shortening of lifetime.
2. Confirm that current of capacitor is within 130% of rated current.
3. When more than 120% of rated current flows on capacitor, phase check the current wave form with oscilloscope to know which harmonics current is the cause and install series reactor to contain harmonics.
4. The temperature of capacitor case is designed to be less than 55°C in mid summer (ambient temperature 45 °C)
5. Always check the current and voltage of capacitor circuit (3phase equilibrium) Cleaning of other bushing : more than once per 6 months (according to the state of contamination). Capacity and insulation resistance : measure once a year. for measurement of insulation resistance, confirm that DC mega measurement shall be more than 1000MΩ.
6. Check the connection part of electronic switch used in capacitor circuit once a year to a minimum. If the connection is not perfect, single phase operation or harmonics agitation voltage may be applied to the capacitor and it can lead to shortening of lifetime.
7. Open the capacitor from the circuit when leading power factor in slight load at night.