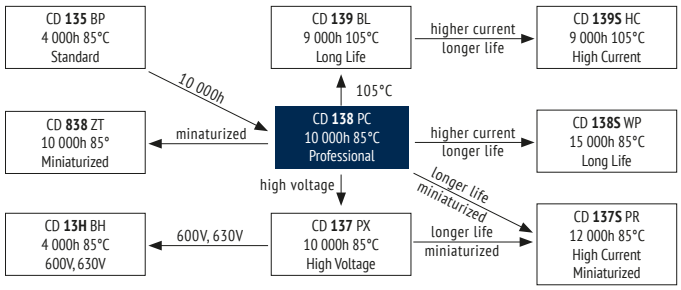
Jianghai
CAPACITOR COMPETENCE
since 1958

ALUMINUM ELECTROLYTIC CAPACITORS · SCREW TYPE

CD **138** PC SERIES

10 000h at 85°C

- Long Life
- High Reliability
- High Currents for High Professional Applications and High Power Inverter



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	1 000 ~ 18 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0,7$ $C_{-40°C} / C_{+20°C} \geq 0,6$
Fast Charge-Discharge	Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

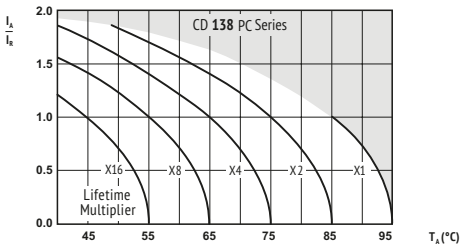
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	10 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R $1,4 \times I_R$ 40°C	U_R I_R 85°C	U_R $I_R = 0$ 85°C IEC 60384	$U_R = 0$ $I_R = 0$ 85°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 141.					
Optional	Self-extinguishing Electrolyte on request					

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

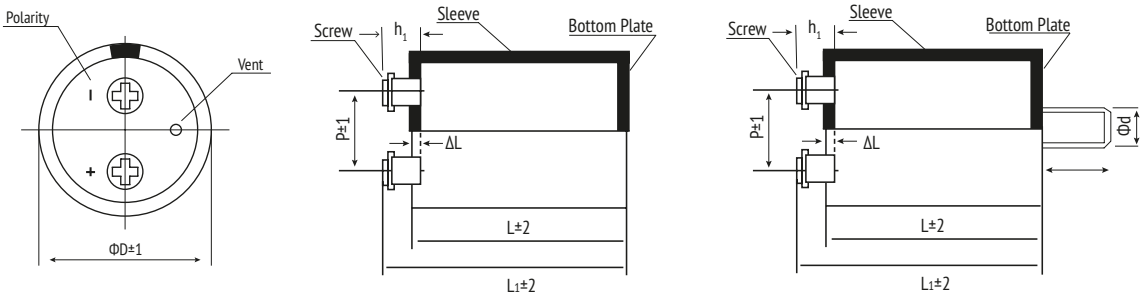
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 4
350 (400) 2V	1200	215	67	0,15	4,2	5,5	51 x 83	ECG2VPC122M◊C083ΔΔΔΔ
	1500	172	55	0,15	5,0	6,1	51 x 83	ECG2VPC152M◊C083ΔΔΔΔ
	1800	143	43	0,15	5,0	7,4	51 x 96	ECG2VPC182M◊C096ΔΔΔΔ
	2200	117	30	0,15	5,0	8,2	51 x 96	ECG2VPC222M◊C096ΔΔΔΔ
	3300	78	23	0,15	5,0	11,3	51 x 130	ECG2VPC332M◊C130ΔΔΔΔ
	3900	66	19	0,15	5,0	12,8	64 x 115	ECG2VPC392M◊D115ΔΔΔΔ
	4700	55	16	0,15	5,0	14,8	64 x 130	ECG2VPC472M◊D130ΔΔΔΔ
	5600	46	14	0,15	5,0	16,3	77 x 115	ECG2VPC562M◊E115ΔΔΔΔ
	6800	38	13	0,15	5,0	18,8	77 x 130	ECG2VPC682M◊E130ΔΔΔΔ
	8200	31	11	0,15	5,0	22,1	77 x 155	ECG2VPC822M◊E155ΔΔΔΔ
	10000	26	10	0,15	5,0	25,9	90 x 157	ECG2VPC103M◊F157ΔΔΔΔ
	12000	22	8	0,15	5,0	28,4	90 x 157	ECG2VPC123M◊F157ΔΔΔΔ
	15000	17	6	0,15	5,0	34,6	90 x 196	ECG2VPC153M◊F196ΔΔΔΔ
	18000	14	4	0,15	5,0	41,4	90 x 236	ECG2VPC183M◊F236ΔΔΔΔ
400 (450) 2G	1000	215	82	0,15	4,0	5,0	51 x 83	ECG2GPC102M◊C083ΔΔΔΔ
	1200	179	70	0,15	4,8	5,5	51 x 83	ECG2GPC122M◊C083ΔΔΔΔ
	1500	143	50	0,15	5,0	6,7	51 x 96	ECG2GPC152M◊C096ΔΔΔΔ
	1800	119	40	0,15	5,0	7,4	51 x 96	ECG2GPC182M◊C096ΔΔΔΔ
	2200	98	28	0,15	5,0	9,2	51 x 130	ECG2GPC222M◊C130ΔΔΔΔ
	2700	80	23	0,15	5,0	9,9	64 x 96	ECG2GPC272M◊D096ΔΔΔΔ
	3300	65	21	0,15	5,0	11,8	64 x 115	ECG2GPC332M◊D115ΔΔΔΔ
	3900	55	19	0,15	5,0	13,5	64 x 130	ECG2GPC392M◊D130ΔΔΔΔ
	4700	46	15	0,15	5,0	14,9	77 x 115	ECG2GPC472M◊E115ΔΔΔΔ
	5600	39	14	0,15	5,0	17,0	77 x 130	ECG2GPC562M◊E130ΔΔΔΔ
	6800	32	13	0,15	5,0	20,2	77 x 155	ECG2GPC682M◊E155ΔΔΔΔ
	8200	26	12	0,15	5,0	23,5	90 x 157	ECG2GPC822M◊F157ΔΔΔΔ
	10000	22	10	0,15	5,0	25,9	90 x 157	ECG2GPC103M◊F157ΔΔΔΔ
	12000	18	8	0,15	5,0	31,0	90 x 196	ECG2GPC123M◊F196ΔΔΔΔ
	15000	14	6	0,15	5,0	37,5	90 x 236	ECG2GPC153M◊F236ΔΔΔΔ
450 (500) 2W	1000	215	93	0,15	4,5	5,0	51 x 83	ECG2WPC102M◊C083ΔΔΔΔ
	1200	179	69	0,15	5,0	6,0	51 x 96	ECG2WPC122M◊C096ΔΔΔΔ
	1500	143	56	0,15	5,0	7,2	51 x 115	ECG2WPC152M◊C115ΔΔΔΔ
	1800	119	45	0,15	5,0	8,3	51 x 130	ECG2WPC182M◊C130ΔΔΔΔ
	2200	98	35	0,15	5,0	9,0	64 x 96	ECG2WPC222M◊D096ΔΔΔΔ
	2700	80	30	0,15	5,0	10,7	64 x 115	ECG2WPC272M◊D115ΔΔΔΔ
	3300	65	24	0,15	5,0	12,4	64 x 130	ECG2WPC332M◊D130ΔΔΔΔ
	3900	55	20	0,15	5,0	13,6	77 x 115	ECG2WPC392M◊E115ΔΔΔΔ
	4700	46	16	0,15	5,0	15,6	77 x 130	ECG2WPC472M◊E130ΔΔΔΔ
	5600	38	13	0,15	5,0	18,3	77 x 155	ECG2WPC562M◊E155ΔΔΔΔ
	6800	32	11	0,15	5,0	21,4	90 x 157	ECG2WPC682M◊F157ΔΔΔΔ
	8200	26	10	0,15	5,0	23,5	90 x 157	ECG2WPC822M◊F157ΔΔΔΔ
	10000	22	9	0,15	5,0	28,3	90 x 196	ECG2WPC103M◊F196ΔΔΔΔ
	12000	18	8	0,15	5,0	33,6	90 x 236	ECG2WPC123M◊F236ΔΔΔΔ

ORDER CODE SCREW TYPE

EC	G	2G	BP	102	M	B	E	160	A771	-	JExxxxx
Techno-logy	Terminal Type	Rated Voltage Code	Series Code	Capacitance Code	Capacitance Tolerance	Mounting	Diameter	Length	For Terminal Code see tables on the right	Material Code	for Specials only
EC = Electrolytic Capacitor	Screw G	10 1A 16 1C 25 1E 35 1V 40 1G 50 1H 63 1J 80 1K 100 2A 200 2D 250 2E 350 2V 400 2G 420 2X 450 2W 500 2H 550 2Y 575 2Z 600 J2	CD 135 BP CD 136 PK CD 137 PX CD 137S PR CD 138 PC CD 138S WP CD 139 BL CD 139S HC CD 13H BH CD 838 ZT	100 101 1 000 102 10 000 103	**±20% M** ±10% K +30/-10% Q +20/-0% R +20/-10% V +50/-10% T **= preferred**	Bolt B Flat bottom, no bracket, single sleeve N Flat bottom, no bracket, full double sleeve D Flat bottom incl. 2 stoppers bracket I Flat bottom incl. 3 stoppers bracket Y Details of Sleeving see table on the right	**36 A** 40 B 51 C 64 D 77 E 90 F 101 G	53 053 65 065 96 096 100 100 115 115 236 236		- - PVC V PET E Polyolefin O Standard: PVC Sleeve	

TECHNICAL SPECIFICATION



in mm

LENGTH

$L_1 = L + h_1 - \Delta L$
L_1 = Total Capacitor Length
L = Capacitor Case Length (see Capacitor Table)
h_1 = Terminal Length (see Terminal Code)
ΔL = Housing Correction (see Case & Mounting Style)

CASE & MOUNTING STYLE

Order Code	Mounting Style	Sleeving Style (typical design)	Housing Correction ΔL (in mm)
B	Bolt	Single Sleeve	0,8
N	Flat bottom, no bracket	Single Sleeve	0,8
D	Flat bottom, no bracket	Full length Double Sleeve	0,4
I	I-Type Bracket	**Diameter 36:** Single Sleeve **Diameter 51-101:** Ur < 350V: ½ length Double Sleeve Ur ≥ 350V: full length Double Sleeve Other Sleeve Versions on request	0,8 0,6 0,4
Y	Y-Type Bracket	**Ur < 350V:** ½ length Double Sleeve **Ur ≥ 350V:** full length Double Sleeve Other Sleeve Versions on request	0,6 0,4

Bolt:	Ø D	Ø d	l (mm)	Max. Torque (Nm)
	Ø 36	M8	12	4
	≥ Ø 51	M12	16	12,5

SCREW TERMINAL (Hexagon Head)

Dimension	Min. Thread Depth (mm)	Max. Torque (Nm)	Max. Ripple Current (A)
M5 x 10	8,5	3	60
M6 x 12	8,5	4	100
M8 x 16	8,5	6	100

CAPACITOR POSITION

Screw capacitors need to be mounted into an upright position. If a horizontal position is needed please ensure the safety vent is located on the highest position (12 o'clock).

TERMINAL CODE

Terminal Code	ØD	Screw	Pitch P	d_1	d_2	h_1	h_2
A361	36	M5	12,7	8	11	6,8	1,8
A511	51	M5	21,8	10	13,0	6,8	1,8
D511	51	M5	21,8	10	13	5,5	0
A512	51	M5	21,8	10	13	7,14	0
A641	64	M5	28,2	10	15,5	7,3	2,3
C641	64	M5	28,5	13	0	7,2	0
C642	64	M6	28,6	13	0	5,5	0
D641	64	M5	28,2	13	15	6,4	0
D642	64	M6	28,2	13	15	6,4	0
E641/E642	64	M5	28,2	10	15,5	6,3	1,3
A771	77	M5	31,4	10	15,5	6,3	1,3
A772	77	M6	31,4	10	15,5	6,3	1,3
B771	77	M6	31,4	17,2	0	3,17	0
B772	77	M6	31,4	17,2	0	6,4	0
B774/B776	77	M5	31,4	17,2	0	6,4	0
C771	77	M5	31,4	17,2	0	3,5	0
C772	77	M6	31,4	17,2	0	3,5	0
C774	77	M5	31,4	17,2	0	6,4	0
C775	77	M6	31,4	17,2	0	6,4	0
C779	77	M6	31,4	13	0	5,5	0
D771	77	M5	31,4	13	15	6,4	0
E772	77	M5	31,4	10	15,5	6,3	1,3
E774	77	M5	31,4	13	17,5	5,5	3,5
F771	77	M6	31,4	13	15	6,4	0
F772	77	M5	31,4	13	15	6,4	0
A901	90	M5	31,4	10	15,5	6,3	1,3
B901	90	M6	31,4	17,2	0	6,4	0
B902	90	M5	31,4	17,2	0	6,4	0
C901/C905	90	M5	31,4	17,2	0	6,4	0
C902	90	M6	31,4	17,2	0	6,4	0
C904	90	M8	31,4	17,2	0	6,4	0
D902	90	M5	31,4	13	15	6,4	0
D903	90	M6	31,4	13	15	6,4	0
E901	90	M6	31,4	15	20	8,6	2,4
E902	90	M5	31,4	10	15,5	6,3	1,3
F901	90	M6	31,4	13	15	6,4	0
A101	101	M8	41,5	17,2	21,5	11	6

= preferred

Other forms on request, especially non-symmetrical layout, watercooling or laser welded terminals.

Terminal A101 = A991

Terminal A, B and F include a potting mass filling, Terminal C, D and E use a middle pin fixation without glue.

Extended Cathode designs only available with Terminal C, D and E.

Some series of the catalogue might only be available with Terminal C,D and E.

Per visualizzare il catalogo completo siete invitati ad effettuare il login sul sito oppure ad effettuare la registrazione gratuita.