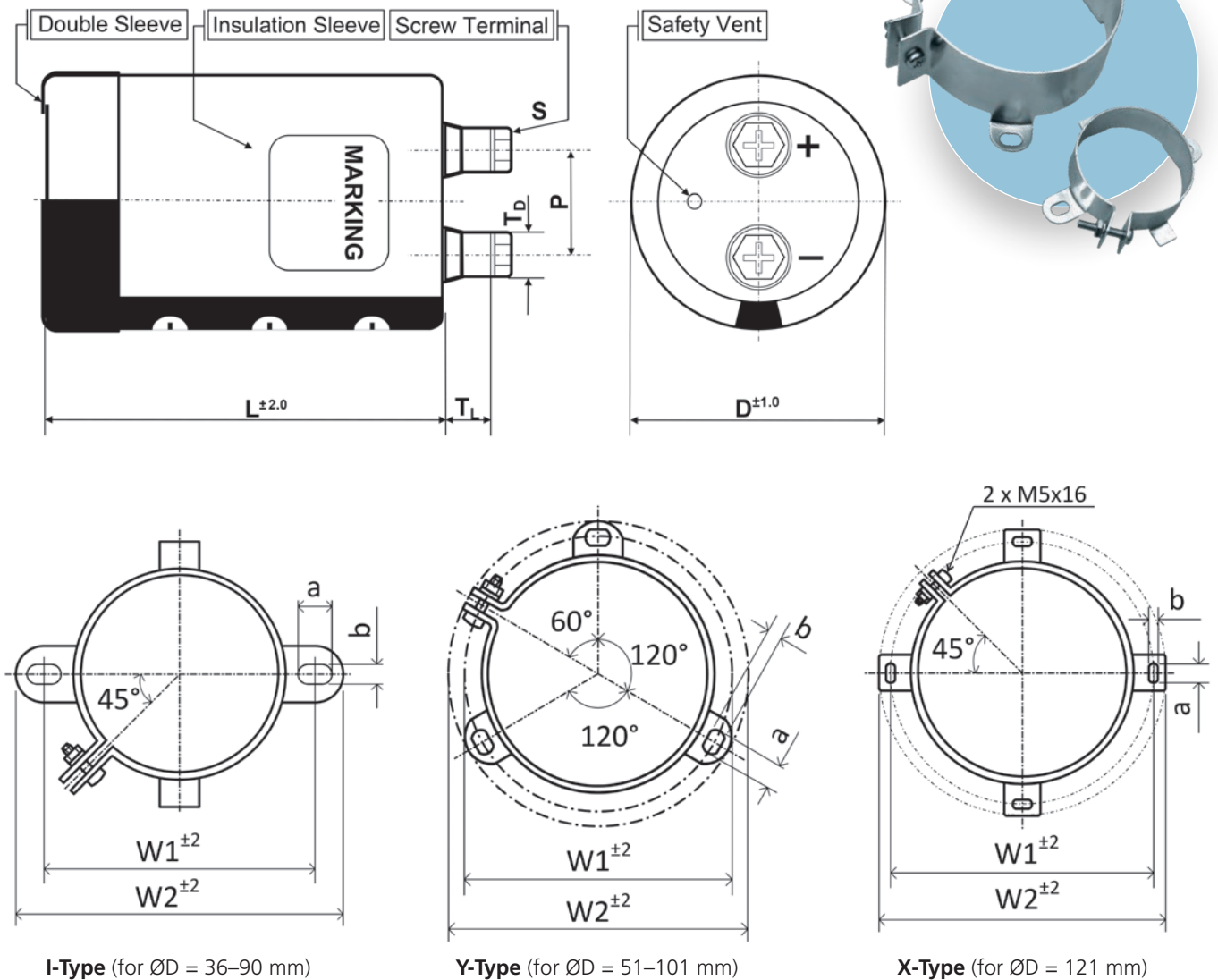


# Mounting · Befestigung

## > Bracket mounting · Schellenbefestigung

Capacitor fixing symbol code „Y“, „I“ or „X“



For bracket mounting there is free of charge delivery of a metal bracket including capacitor.

Bei Schellenbefestigung wird die Metallschelle kostenlos mit dem Kondensator geliefert.

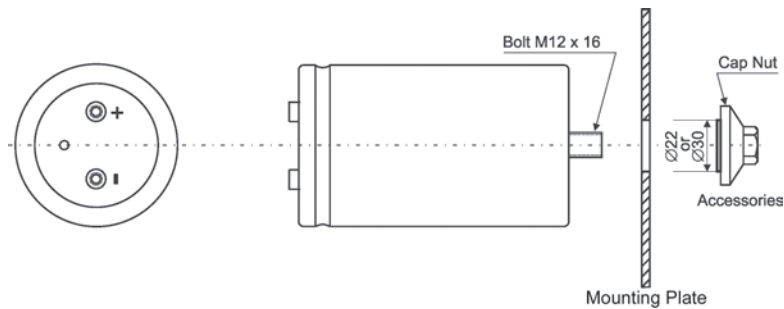
## > Case size & dimensions · Bauformen

Capacitor	I-Bracket				Y-Bracket				X-Bracket			
ØD	W1	W2	a	b	W1	W2	a	b	W1	W2	a	b
36	48.0	58.0	6.0	3.5								
51	68.0	80.0	6.0	4.5	63.5	73.0	7.0	4.5				
64	81.0	93.0	6.0	4.5	76.2	85.1	7.0	4.5				
77	93.5	106.0	6.0	4.5	88.9	98.4	7.0	4.5				
90	108.0	120.5	7.0	5.0	101.6	111.1	7.0	4.5				
101					115.0	127.0	8.0	5.5				
121									145.0	158.0	8.0	6.0

Size in mm

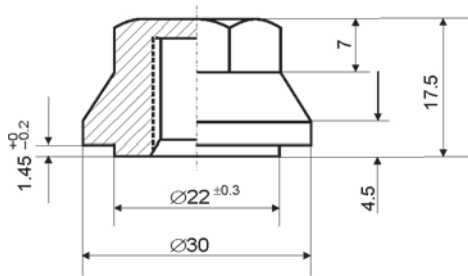
## > Stud bolt mounting accessories · Zubehör Bolzenbefestigung

Capacitor fixing symbol code „B“

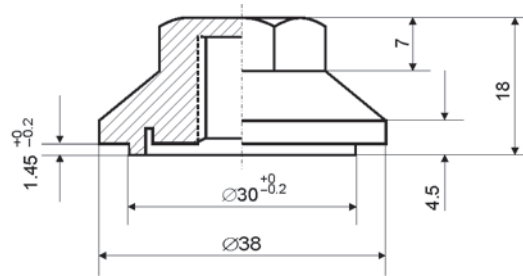


## > Reinforced cap nut of nylon for screw-thread M12

Verstärkte Hutmutter aus Nylon für Gewinde M12



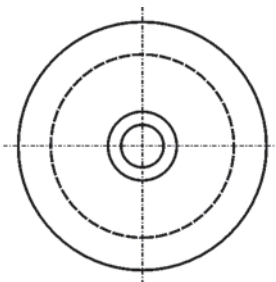
Product Code: **CNN30M12** (Ø 30mm)



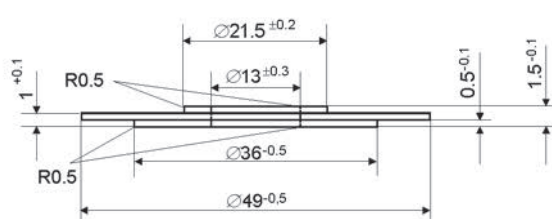
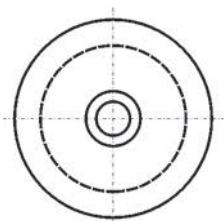
Product Code: **CNN38M12** (Ø 38mm)

## > Insulating washer of Polypropylene PPH

Isolierscheibe aus Polypropylene PPH



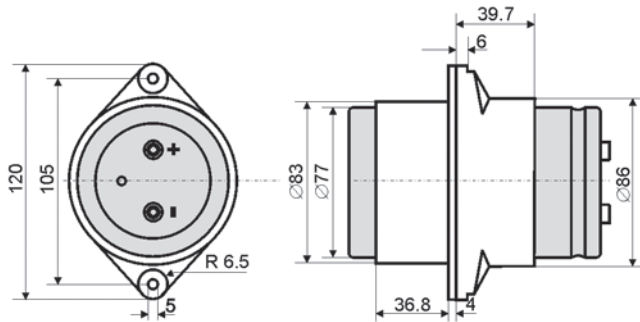
Product Code: **K500 – ISO – 77 – 13** (for capacitor ØD = 77mm and ØD = 90mm)



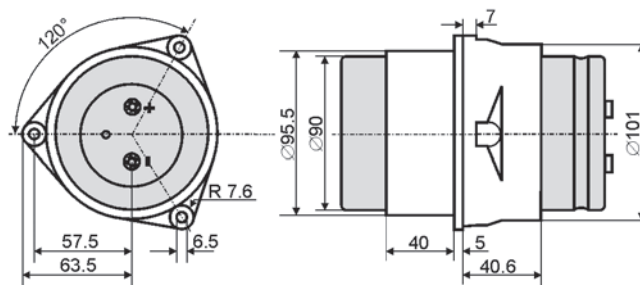
Product Code: **K500 – ISO – 50 – 13** (for capacitor ØD = 51mm and ØD = 64mm)

> Safety-Holder of PBT · Sicherheitshalter aus PBT

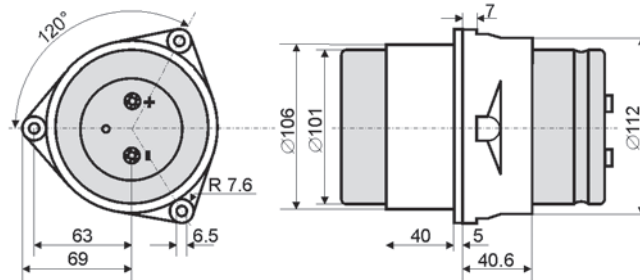
Capacitor fixing symbol code „N“



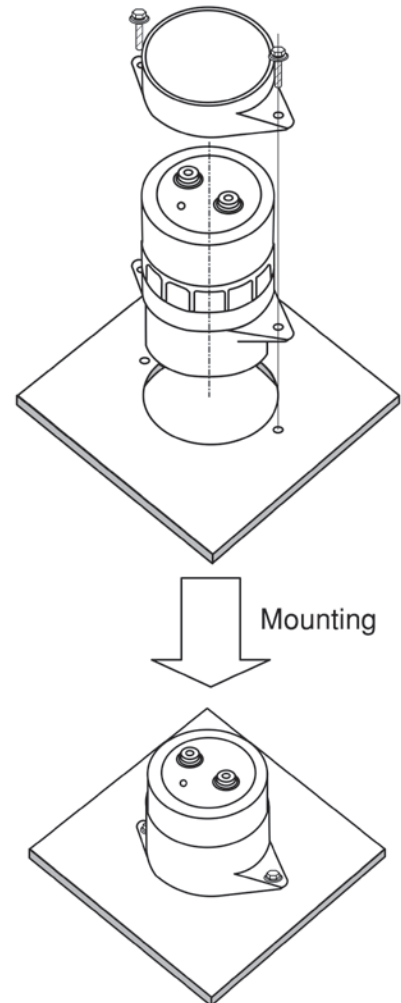
Product Code: **PBT – 77 – BF** (for capacitor ØD = 77mm)



Product Code: **PBT – 90 – BF** (for capacitor ØD = 90mm)



Product Code: **PBT – 101** (for capacitor ØD = 101mm)

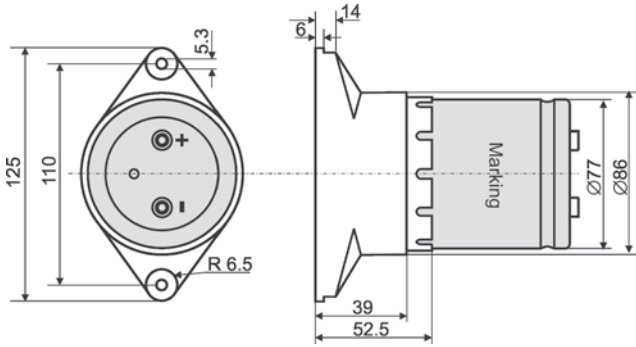


> Features of Safety-Holders · Eigenschaften der Sicherheitshalter

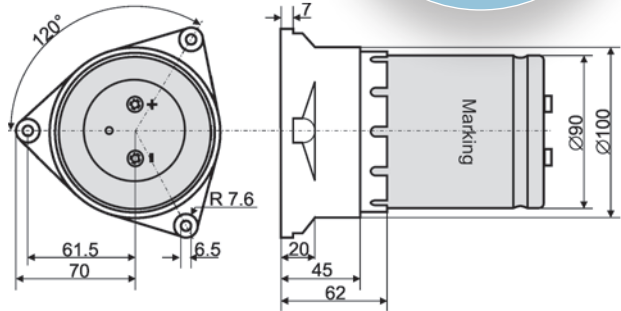
- > Better insulation and vibration characteristics compared with metal brackets.
- > Flammability: UL94-V0.
- > Test insulation voltage: 5.4 kV AC.
- > Bessere Isolations- und Vibrationsfestigkeit gegenüber Metallschellen.
- > Entflammbarkeit gem. UL94-V0.
- > Prüfisolationsspannung: 5,4 kV AC.

## > Safety-Holder of PBT for bottom cooling Sicherheitshalter aus PBT für Bodenkühlung

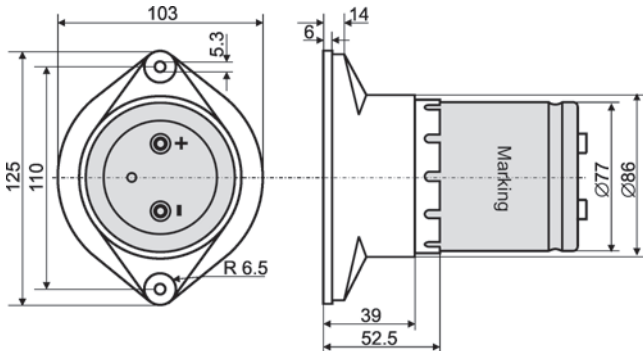
Capacitor fixing symbol code „N” in addition with „WC” for series FXR and all VF- and VG-series



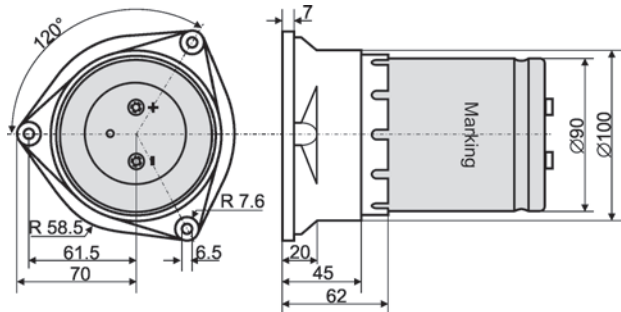
Product Code: **PBT – 77 – BC** (for capacitor ØD = 77mm)



Product Code: **PBT – 90 – BC** (for capacitor ØD = 90mm)

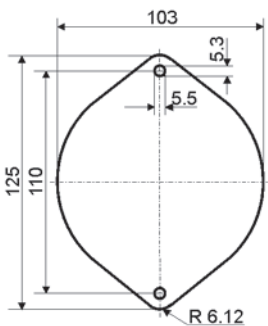


Product Code: **PBT – 77 – BC – UL**  
(for capacitor ØD = 77mm,  
meets creepage distance requirements according to UL)

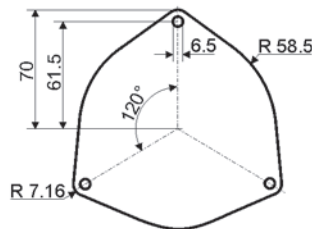


Product Code: **PBT – 90 – BC – UL**  
(for capacitor ØD = 90mm,  
meets creepage distance requirements according to UL)

## > Insulating heat conductive thermal pad for bottom cooling Isolierende Wärmeleitfolie für Bodenkühlung



Product Code: **PBT – TCFOIL – 77**  
(for capacitor ØD = 77mm)



Product Code: **PBT – TCFOIL – 90**  
(for capacitor ØD = 90mm)

## > Features of thermal pad · Eigenschaften der Wärmeleitfolie

Properties	
Thickness (mm)	0.229
Hardness (Shore A)	92
Continuous Use Temperature (°C)	-60 to +180
Dielectric Breakdown Voltage (V <sub>AC</sub> )	5500
Thermal Conductivity (W/m-K)	1.6

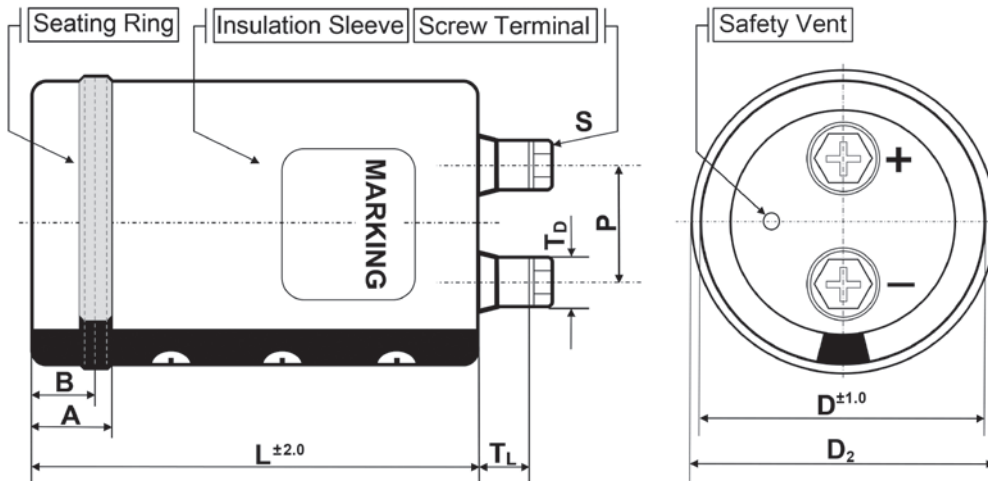
Thermal Performance vs Pressure					
Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	3.96	3.41	2.90	2.53	2.32
Thermal Impedance (°C-in <sup>2</sup> /W) (I)	0.95	0.75	0.61	0.47	0.41

Above data are values from material supplier. · Daten sind Werte des Materialherstellers.

> Dimensions of capacitor for bottom cooling

Abmessungen für Kondensator mit Bodenkühlung

Capacitor fixing symbol code „N“ in addition with suffix „WC“ for series FXR and all VF- and VG-series



Ø Capacitor	A	B	D <sub>2</sub>
ØD = 77 mm	24.5	20.0 <sup>+0.2</sup>	78.6 <sup>+0.5</sup>
ØD = 90 mm	24.3	20.0 <sup>+0.5</sup>	91.9 <sup>+0.5</sup>

Size in mm. Other dimensions depending on capacitor.

> Ripple Current Multiplier depending on Forced Bottom Cooling

Wechselstrommultiplikator in Anhängigkeit von Bodenkühlung

Capacitor series	Temperature of cooling base	Multiplier max.
FXR, VFR, VFLR, VGR, VGLR	≤ 60°C	up to 1.75*
	> 60°C	1.00

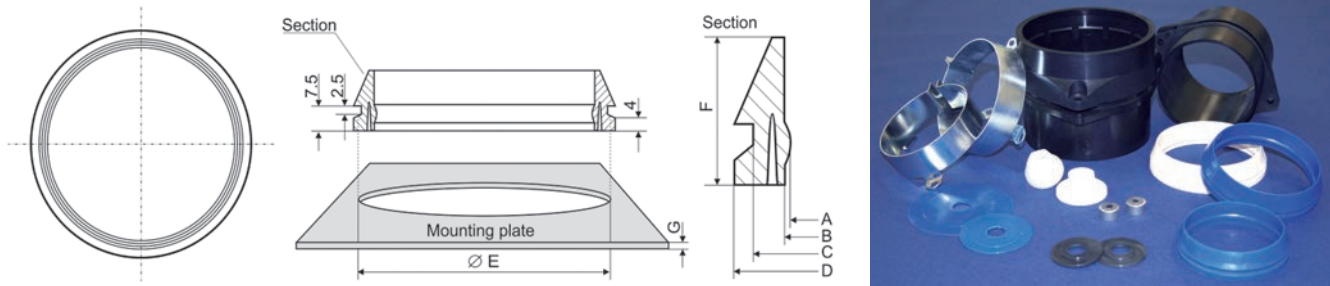
\* I<sub>RMS</sub> depending on cooling capacity (0.5 °C/W)

Please contact us if you are interested in bottom cooling applications. · Bitte kontaktieren Sie uns bei Interesse an einer Anwendung mit Bodenkühlung.

## > Press ring of LDPE or TPE for mounting

Einpressring aus LDPE oder TPE zur Befestigung

Capacitor fixing symbol code „N“



Ø Capacitor	A <sup>+0.3</sup>	B <sup>+0.3</sup>	C <sup>+0.3</sup>	D <sup>+0.3</sup>	E <sup>+0.2</sup>	F <sup>+0.2</sup>	G <sup>-0.25</sup>	Product Code Agree with RoHS
64	62.3	64.1	70.5	74.5	71.2	18.0	3.0	K100 – 64 – BF
77	74.8	77.0	84.5	88.6	85.5	20.0	2.4	K100 – 77
90	88.0	90.0	97.9	102.0	98.6	23.5	3.0	K100 – 90 – BF

Press ring materials which agree with UL-94-V0 are available on request. / Size in mm

## > Tightening torques for mounting options

Anzugsdrehmomente für Befestigungen

Mounting option	Screw	Tightening torque	
		Recommended	Max
Bracket		2.2 Nm	3.0 Nm
PBT-77-BF, PBT-77-BC / -UL	M4x20	1.7 Nm	1.9 Nm
PBT-90-BF, PBT-90-BC / -UL	M5x25	3.2 Nm	3.4 Nm
PBT-101	M5x25	3.2 Nm	3.4 Nm
Stud Bolt	M12x16	10.0 Nm	12.5 Nm*
Stud Bolt	M8x10	3.0 Nm	3.5 Nm

\* This value signifies the strength of the bolt. The torque applied to the cap nuts of nylon (Product Code CNN30M12 or CNN38M12) depend on the size of the cap nut and the thickness of mounting plate.