

# GC102\_F

## BAR CLAMP FOR HOCKEY PUK DEVICES

- Clamping total thickness of assembly from 2mm to 136mm
- Pre-loaded to the specific clamping force ( $F = 12 \div 24$  kN)
- Maximum device diameter:  $L = 89$ mm
- Surface passivation to provide extra protection
- Various lengths of bolts and insulating cups
- Flat clamping head for even clamping force application
- Four styles available
- User friendly clamping force indicator
- UL94 certified insulation material
- RoHS compliant



Characteristic		Unit	Types	Testing conditions	Values		
					Min	Typ	Max
m	Mass	g	GC102S...F		700		850
			GC102B...F		1190		1350
F	Clamping Force*	kN	GC102...12F			12	
			GC102...16F			16	
			GC102...22F			22	
			GC102...24F			24	
$\Delta F$	Clamping Force tolerance						$\pm 10\%$
$V_{INS}$	Insulation Voltage	V		50 Hz, RMS, 60 s		3000	
	Insulating Material				PPO** or PPS***		
	UL Files		PPO		E121562		
			PPS		E95746		
T	Operating temperature range	$^{\circ}C$	PPO		-30		110
			PPS		-30		230
$T_{stg}$	Storage temperature range	$^{\circ}C$	PPO		-20		135
			PPS		-40		210
$D_s$	Surface creepage distance	mm				28	
$D_a$	Air strike distance	mm				20.3	
CTI	Comparative Tracking Index	V	PPO	According to UL746		225.0	
			PPS	According to IEC112/3rd		250.0	
	Flammability	mm	PPO	UL94 V-1 Flame class rating		1.5	
				UL94 V-0 Flame class rating		6.0	
			PPS	UL94 V-0 Flame class rating		1.6	

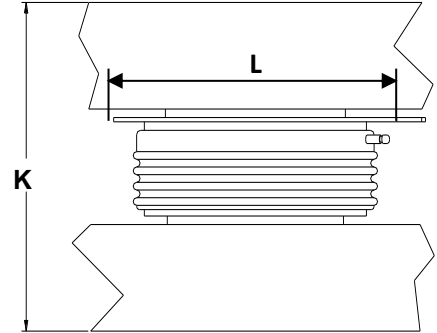
\* Polyphenylene Oxide  
 \*\*\* Polyphenylene Sulfide  
 \*\*\*\* Comparative Tracking Index

**ORDERING INFORMATION TABLE**

Use this part numbering system to order

<b>GC102</b>	<b>B</b>	<b>N</b>	<b>B</b>	<b>A</b>	<b>20</b>	<b>F</b>	<b>S</b>	<b>H</b>	<b>X</b>	<b>L</b>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	

<b>(1) Construction type:</b>	<b>B</b> = with reaction bar <b>S</b> = without reaction bar
<b>(2) Insulator position:</b>	<b>N</b> = on load bar <b>R</b> = on reaction bar
<b>(3) Insulator code:</b>	<b>_</b> = no insulating cup <b>other</b> : see table below
<b>(4) Bolt code:</b>	<b>_</b> = no bolt <b>other</b> : see table below
<b>(5) Clamping force (in kN):</b>	12÷24, with step of 1 kN
<b>(6) Special accessories</b>	<b>blank</b> = no accessories <b>S</b> = extra bar spacer (*) <b>D</b> = pressure disc in place of distribution bar
<b>(7) Insulating cup material</b>	<b>0</b> = standart PPO insulating cup <b>H</b> high temperature PPS insulating cup
<b>(8) Bolt steel type</b>	<b>0</b> = standard 8.8 steel bolts <b>X</b> = A2 stainless steel bolts (**)
<b>(9) Bar thickness</b>	<b>0</b> = standart bar thickness (20mm) <b>L</b> = low profile bars (15mm)(***)



**K:** Total thickness of the assembly to be clamped  
**L:** Max inner diameter allowable

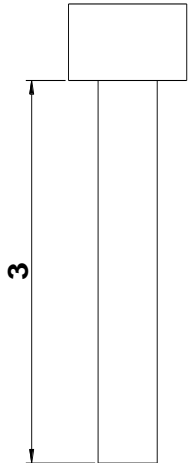
 (\*) Needed to reduce  $S_{Min}$  if a lower allowed clearance is required

(\*\*) Suggested for high current applications, magnetic sensitive applications or any application working in very high E.M. fields

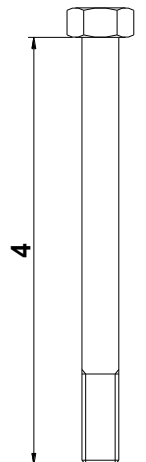
(\*\*\*) Allowed clearance is increased by 5 mm, except for GC102SR

**Type GC102BN...F: suggested insulator/bolt types**

Allowed clearance <b>S</b>		Insulator choice		Bolt choice		Max height
$S_{Min}$ [mm]	$S_{Max}$ [mm]	(3)	Ins. Length [mm]	(4)	Bolt Length [mm]	T [mm]
2	16	Z	34	U	70	92
7	21	Z	34	V	75	97
12	26	A	50	W	80	102
22	36	A	50	Y	90	112
32	46	B	70	Z	100	122
42	56	B	70	A	110	132
52	66	B	70	B	120	142
56	76	C	95	C	130	158
66	86	C	95	D	140	168
76	96	C	95	E	150	178
86	106	D	120	F	160	188
96	116	D	120	G	170	198

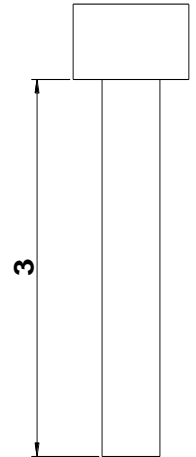

**Type GC102BR...F: suggested insulator/bolt types**

Allowed clearance <b>S</b>		Insulator choice		Bolt choice		Max height
$S_{Min}$ [mm]	$S_{Max}$ [mm]	(3)	Ins. Length [mm]	(4)	Bolt Length [mm]	T [mm]
2	16	Z	34	U	70	104
7	21	Z	34	V	75	109
12	26	A	50	W	80	114
22	36	A	50	Y	90	124
32	46	A	50	Z	100	134
42	56	B	70	A	110	144
52	66	B	70	B	120	154
56	76	C	95	C	130	164
66	86	C	95	D	140	174
76	96	C	95	E	150	184
86	106	D	120	F	160	194
96	116	D	120	G	170	204



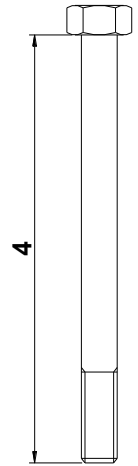
**Type GC102SN...F: suggested insulator/bolt types**

Allowed clearance S		Insulator choice		Bolt choice		Max height
S <sub>Min</sub> [mm]	S <sub>Max</sub> [mm]	(3)	Ins. Length [mm]	(4)	Bolt Length [mm]	T [mm]
2	16	Z	34	U	70	78
7	21	Z	34	V	75	83
12	26	A	50	W	80	88
22	36	A	50	Y	90	98
32	46	B	70	Z	100	108
42	56	B	70	A	110	118
52	66	B	70	B	120	128
56	76	C	95	C	130	138
66	86	C	95	D	140	148
76	96	C	95	E	150	158
86	106	D	120	F	160	168
96	116	D	120	G	170	178

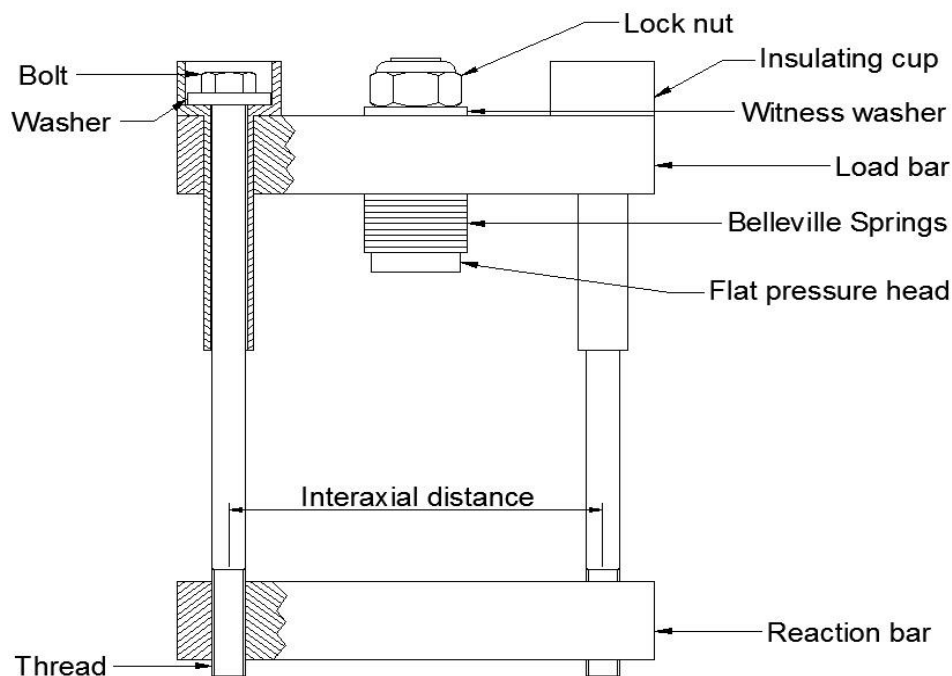


**Type GC102SR...F: suggested insulator/bolt types**

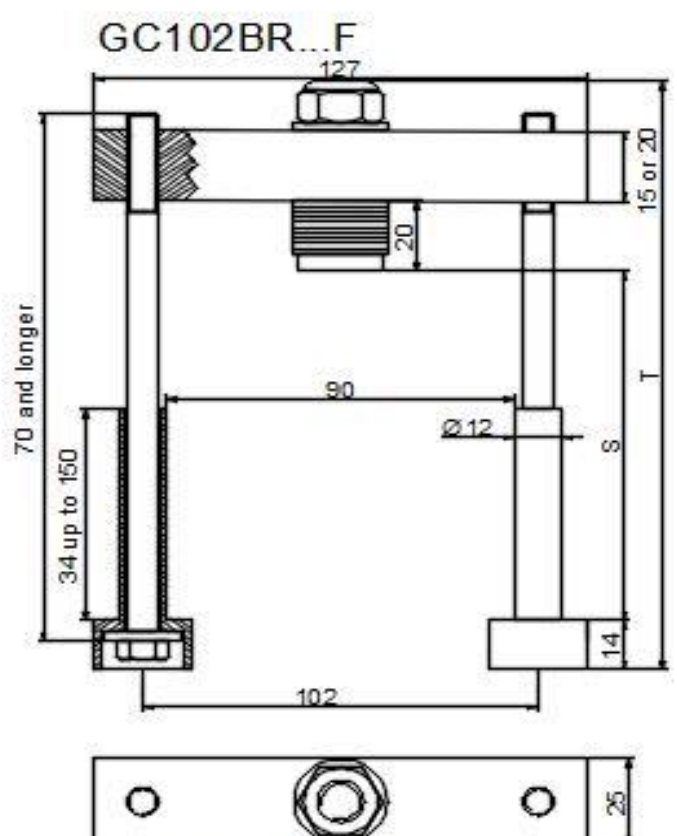
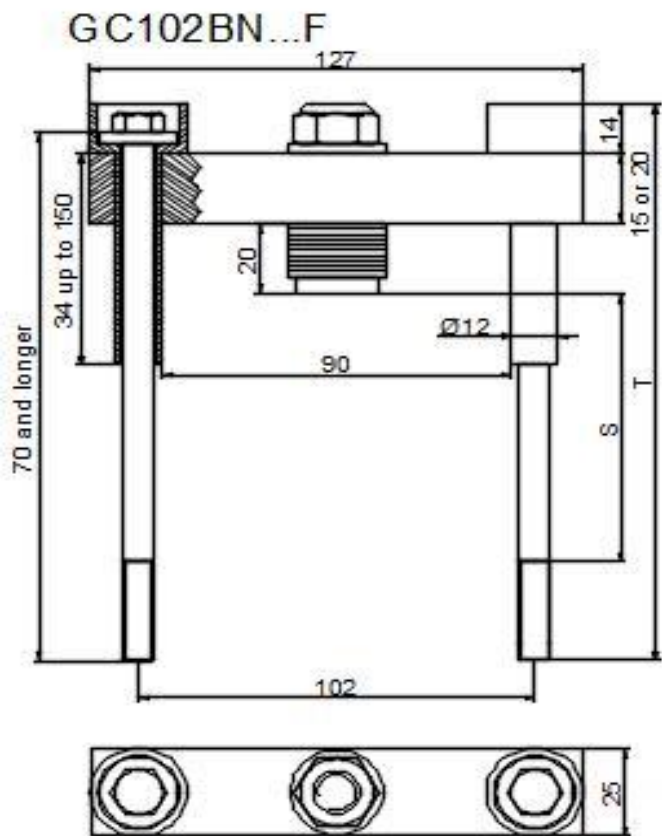
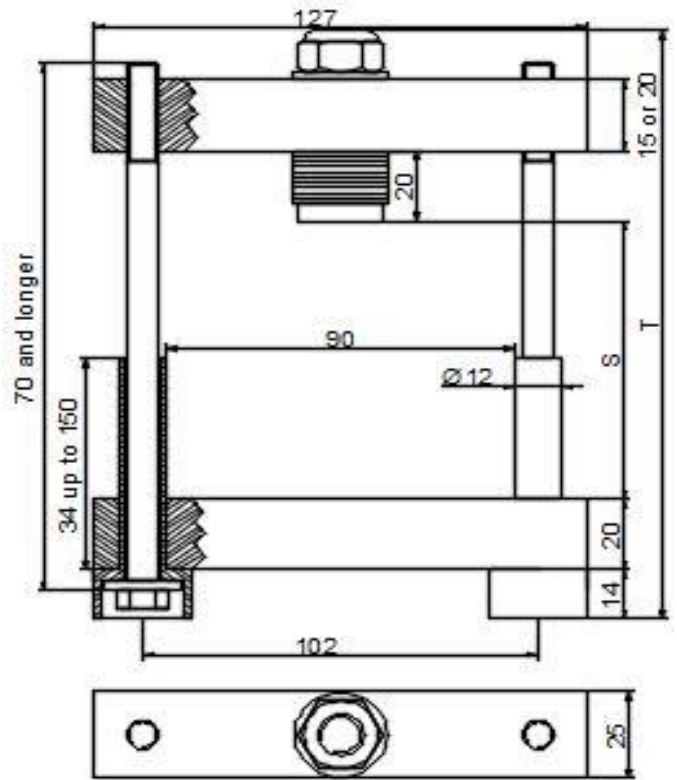
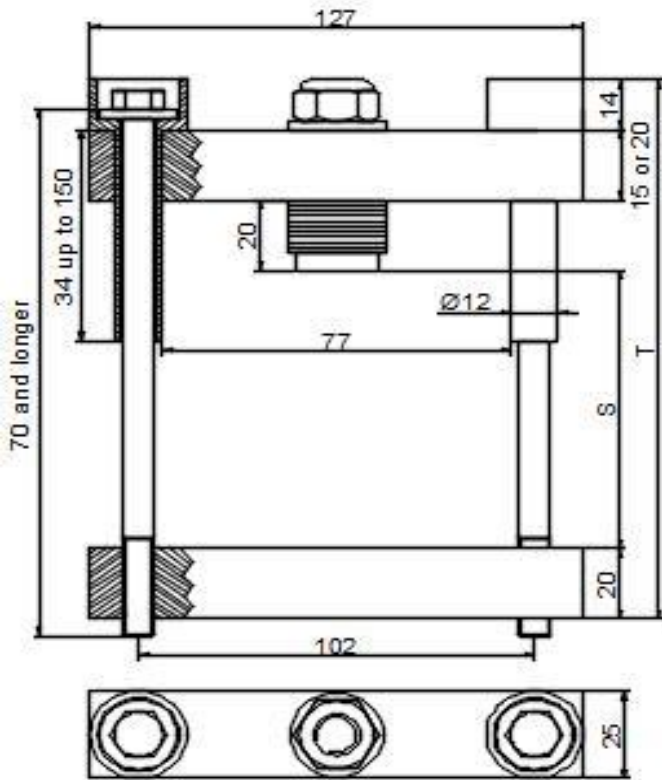
Allowed clearance S		Insulator choice		Bolt choice		Max height
S <sub>Min</sub> [mm]	S <sub>Max</sub> [mm]	(3)	Ins. Length [mm]	(4)	Bolt Length [mm]	T [mm]
22	36	Z	34	U	70	104
27	41	Z	34	V	75	109
32	46	A	50	W	80	114
42	56	A	50	Y	90	124
52	66	B	70	Z	100	134
62	76	B	70	A	110	144
72	86	B	70	B	120	154
76	96	C	95	C	130	164
86	106	C	95	D	140	174
96	116	C	95	E	150	184
106	126	D	120	F	160	194
116	136	D	120	G	170	204



**BAR CLAMP COMPONENTS LEGEND**



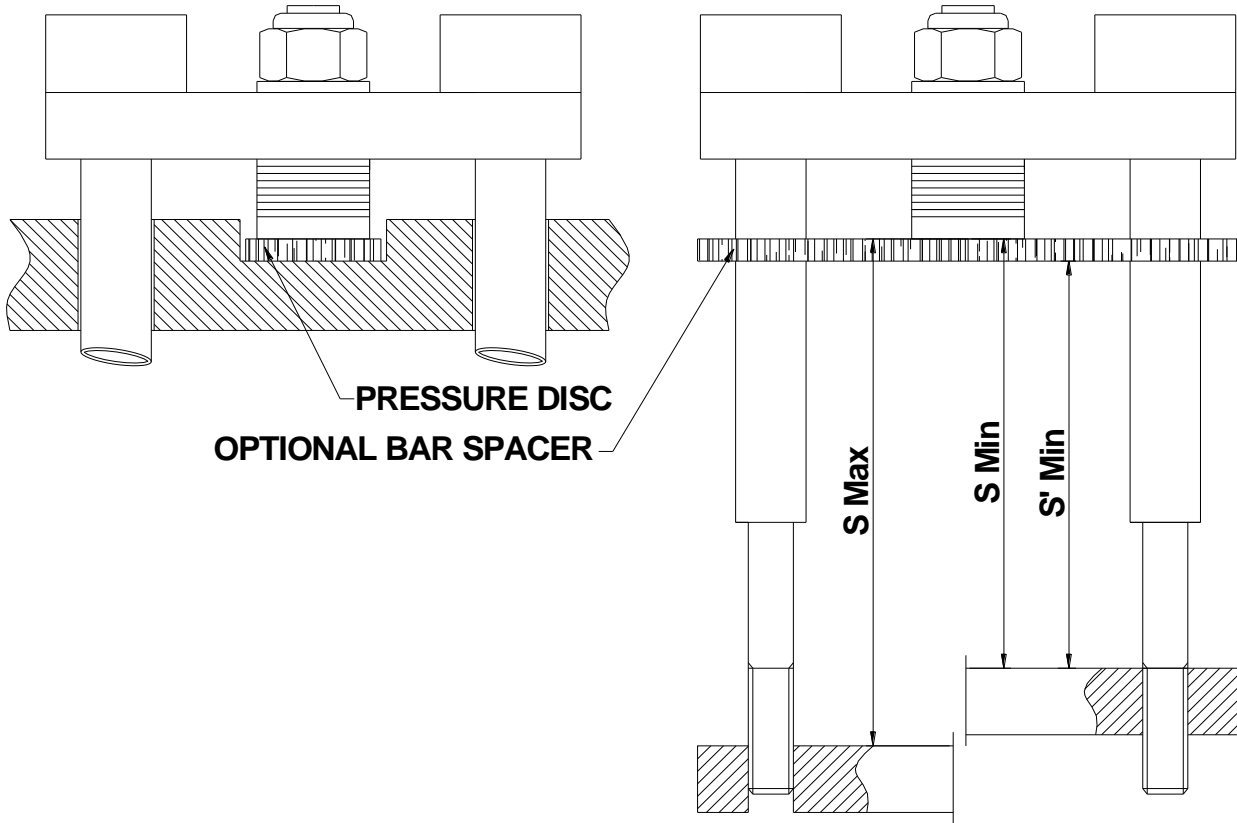
BAR CLAMP OUTLINES



GC102SN...F

GC102SR...F

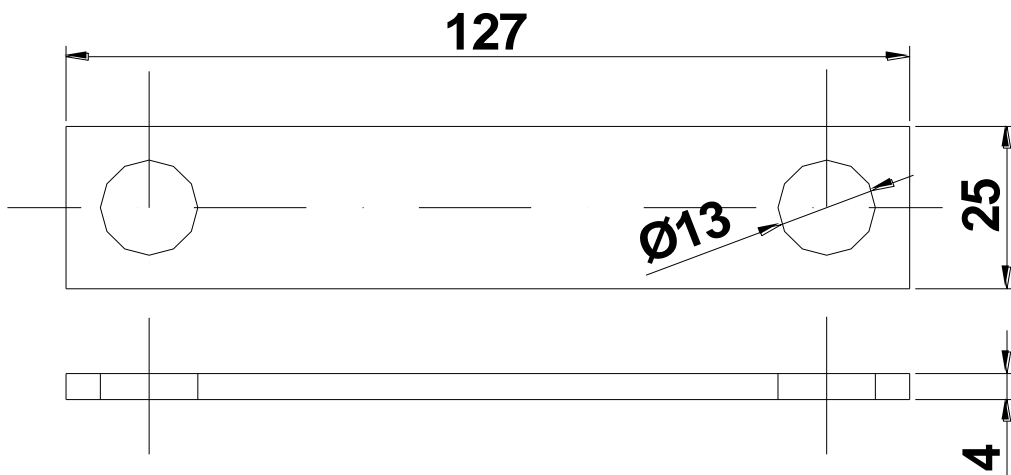
Dimensions in mm - Tolerances according to ISO 2768 MK



**SPECIAL ACCESSORIES**

The following special accessories are available on request (see ordering information table)

**Bar spacer**



**Dimensions in mm - Tolerances according to ISO 2768 MK**

In the interest of product improvement Green Power Solutions reserves the right to change any specification given in this data sheet without notice.