

# GC118..F

## BAR CLAMP FOR HOCKEY PUK DEVICES

- Clamping total thickness of assembly from 0mm to 133mm
- Pre-loaded to the specific clamping force ( $F = 22 \div 32$  kN)
- Maximum device diameter:  $L = 105$ 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	GC118S...F		930		1030
			GC118B...F		1750		1870
F	Clamping Force*	kN	GC118...22F			22	
			GC118...24F			24	
			GC118...30F			30	
			GC118...32F			32	
$\Delta F$	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	°C	PPO		-30		110
			PPS		-30		230
$T_{stg}$	Storage temperature range	°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	

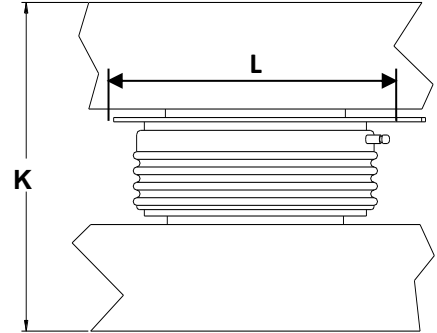
\* Polyphenylene Oxide  
 \*\*\* Polyphenylene Sulfide  
 \*\*\*\* Comparative Tracking Index

**ORDERING INFORMATION TABLE**

Use this part numbering system to order

<b>GC118</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 (25mm)



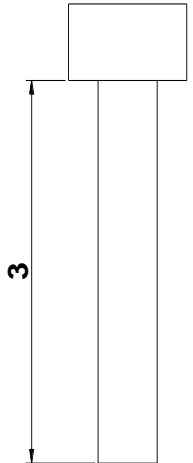
**K:** Total thickness of the assembly to be clamped  
**L:** Max inner diameter allowable

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

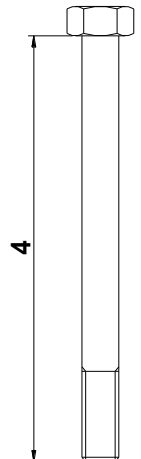
(\*\*) Suggested for high current applications, magnetic sensitive applications or any application working in very high E.M. fields

**Type GC118BN...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]
0	8	Z	34	U	70	92
0	13	Z	34	V	75	97
4	18	A	50	W	80	102
14	28	A	50	Y	90	112
24	38	B	70	Z	100	122
34	48	B	70	A	110	132
44	58	B	70	B	120	142
48	68	C	95	C	130	158
58	78	C	95	D	140	168
68	88	C	95	E	150	178
78	98	D	120	F	160	188
88	108	D	120	G	170	198

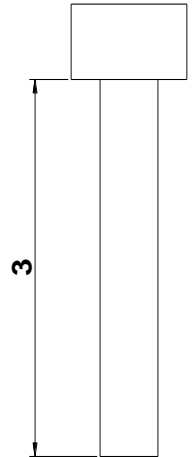

**Type GC118BR...F: suggested insulator/bolt types**

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]
0	8	Z	34	U	70	109
0	13	Z	34	V	75	114
4	18	A	50	W	80	119
14	28	A	50	Y	90	129
24	38	A	50	Z	100	139
34	48	B	70	A	110	149
44	58	B	70	B	120	159
48	68	C	95	C	130	169
58	78	C	95	D	140	179
68	88	C	95	E	150	189
78	98	D	120	F	160	199
88	108	D	120	G	170	209



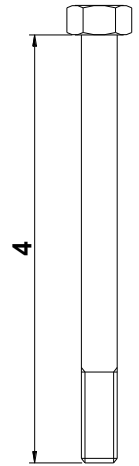
Type GC118SN...F: suggested insulator/bolt types

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]
0	8	Z	34	U	70	78
0	13	Z	34	V	75	83
4	18	A	50	W	80	88
14	28	A	50	Y	90	98
24	38	B	70	Z	100	108
34	48	B	70	A	110	118
44	58	B	70	B	120	128
48	68	C	95	C	130	138
58	78	C	95	D	140	148
68	88	C	95	E	150	158
78	98	D	120	F	160	168
88	108	D	120	G	170	178

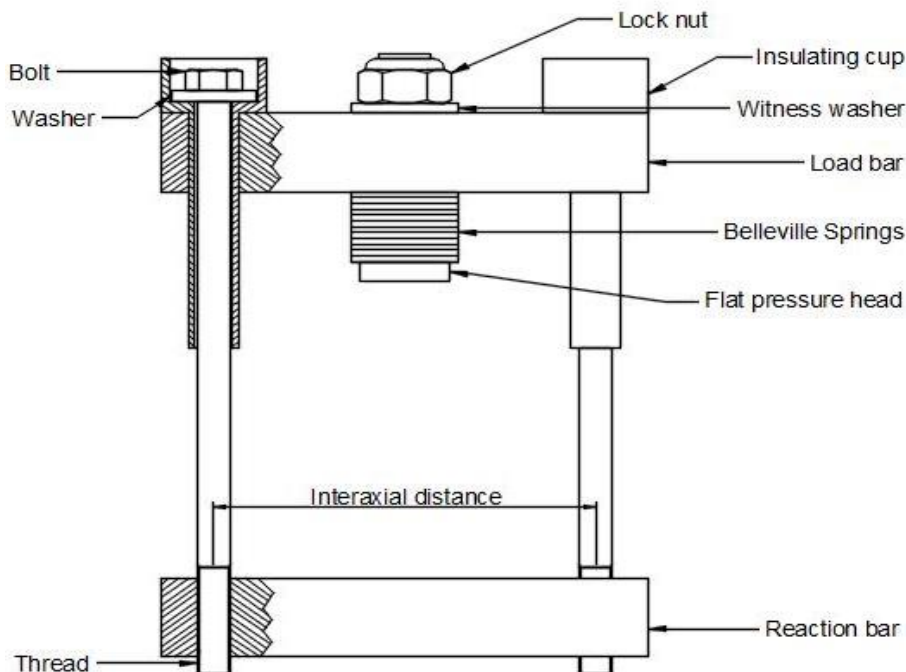


Type GC118SR...F: suggested insulator/bolt types

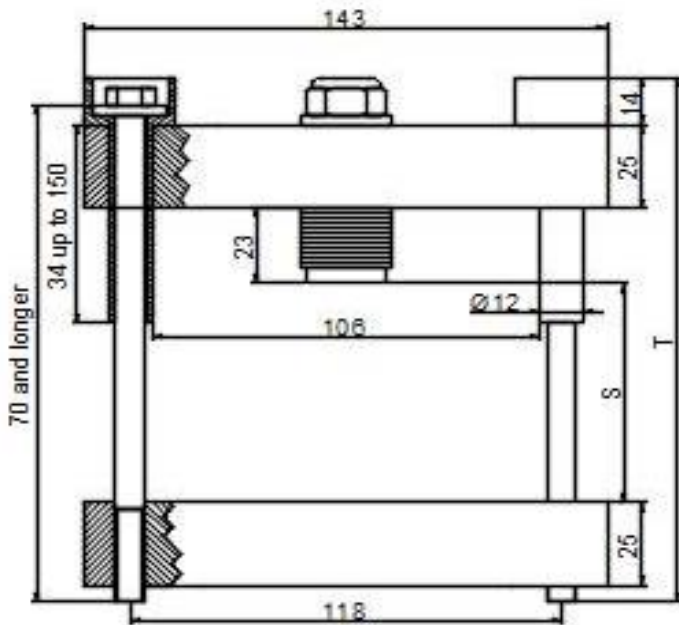
Allowed clearance S		Insulator choice		Bolt choice		Max height
S <sub>Min</sub> [mm]	S <sub>Max</sub> [mm]	(3)	Ins. Length [mm]	(4)	Bolt Length [mm]	T [mm]
19	33	Z	34	U	70	109
24	38	Z	34	V	75	114
29	43	A	50	W	80	119
39	53	A	50	Y	90	129
49	63	B	70	Z	100	139
59	73	B	70	A	110	149
69	83	B	70	B	120	159
73	93	C	95	C	130	169
83	103	C	95	D	140	179
93	113	C	95	E	150	189
103	123	D	120	F	160	199
113	133	D	120	G	170	209



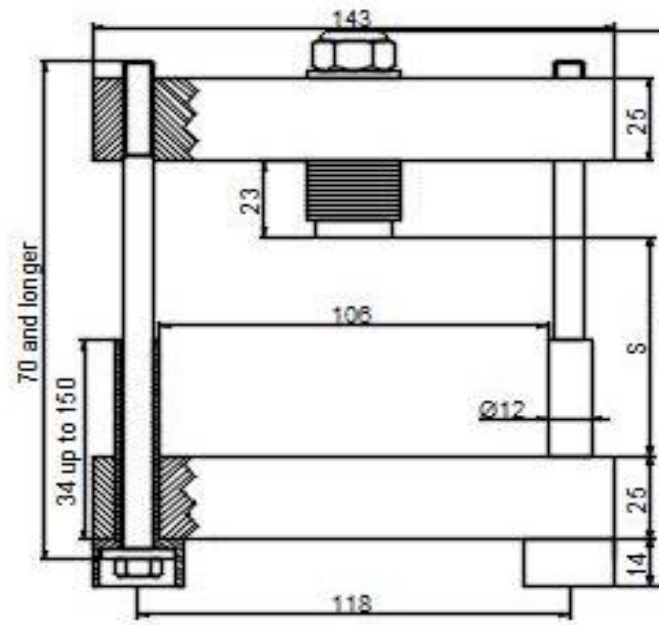
BAR CLAMP COMPONENTS LEGEND



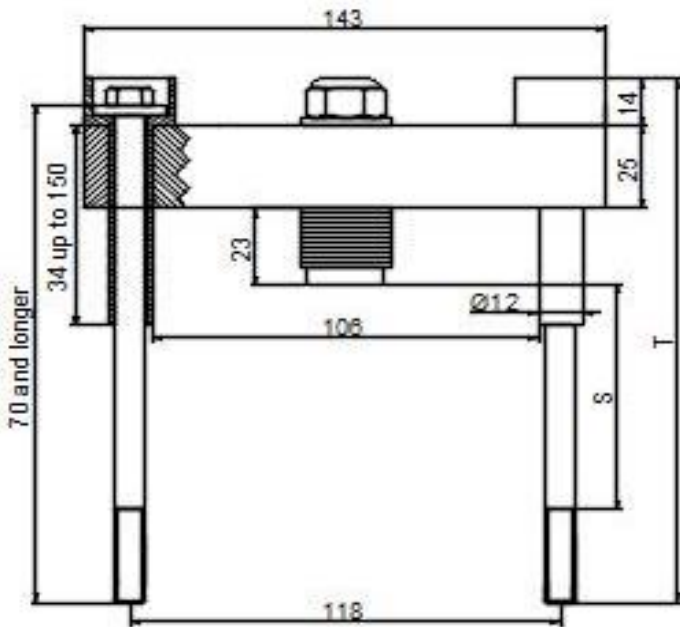
BAR CLAMP OUTLINES



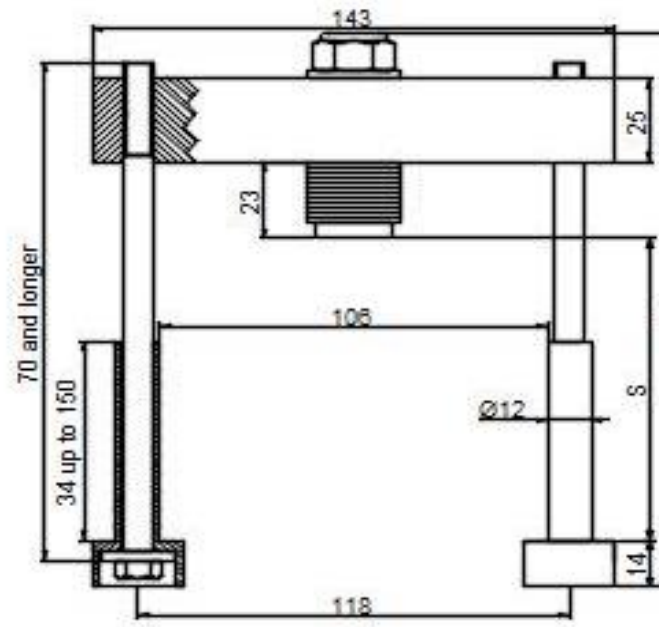
GC118BN...F



GC118BR...F



GC118SN...F



GC118SR...F

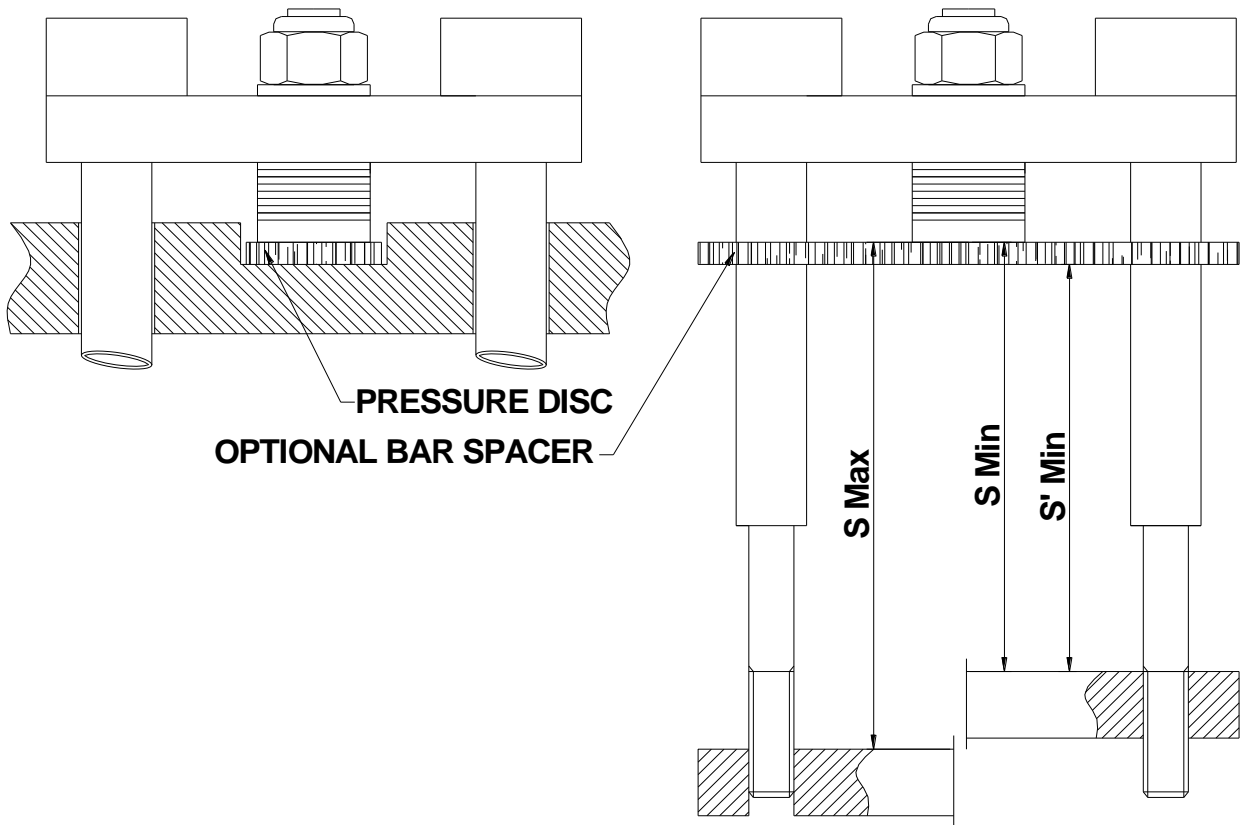
Dimensions in mm - Tolerances according to ISO 2768 MK

1.  $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

2.  $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

3.  $\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$

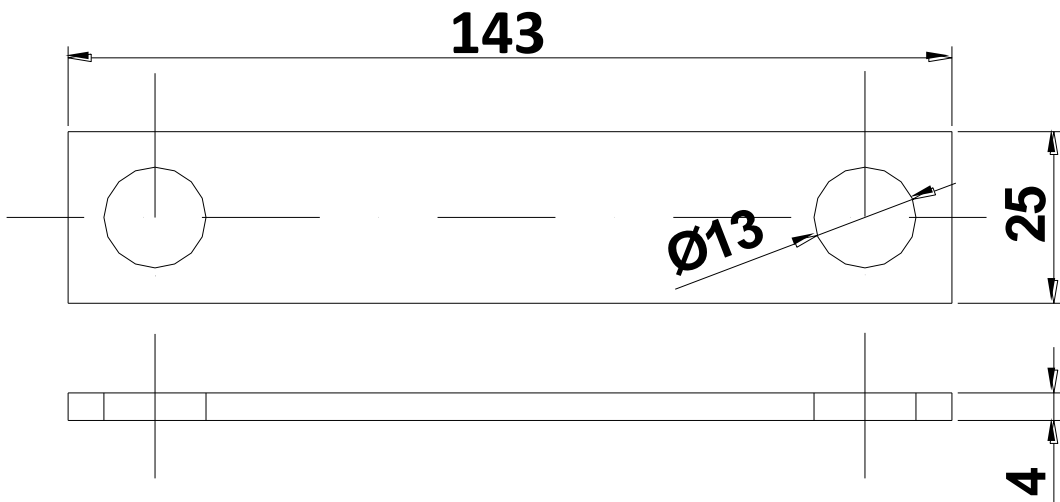
4.  $\frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$



**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.