

GENERAL PRODUCT LINE DIMENSIONAL SUMMARY

GBA-S (English Units)

BUMPER	DIMENSIONAL DATA							PERFORMANCE DATA				WEIGHT
	FREE HEIGHT	FREE BULGE	WRENCH OPENING	BASE DIAMETER	MOUNTING HOLE**	SOLID HEIGHT	BULGE @ SOLID HT.	@ RATED ENERGY	PEAK FORCE	EMERGENCY STOP*		SHIPPING WEIGHT
	IN	IN	IN	IN	IN	IN	IN	ENERGY IN-LBS		ENERGY IN-LBS	PEAK FORCE LBS	
GBA-098S	0.58+/-0.010	0.54+/-0.015	0.34+/-0.015	0.51+/-0.010	0.18	0.29	0.76	18	120	27	135	0.05
GBA-099S	0.73+/-0.010	0.68+/-0.015	0.42+/-0.015	0.64+/-0.010	0.21	0.40	0.96	33	180	55	195	0.10
GBA-101S	.815+/-0.025	.79+/-0.025	.48+/-0.015	.73+/-0.020	0.31	0.42	1.08	50	180	63	185	0.13
GBA-102S	1.09+/-0.035	1.02+/-0.035	.63+/-0.020	.97+/-0.020	0.31	0.57	1.45	100	300	130	320	0.32
GBA-103S	1.27+/-0.040	1.24+/-0.040	.77+/-0.020	1.16+/-0.030	0.31	0.65	1.72	200	400	225	425	0.58
GBA-104S	1.42+/-0.045	1.38+/-0.045	.84+/-0.020	1.28+/-0.030	0.31	0.72	1.90	250	600	320	570	0.74
GBA-105S	1.48+/-0.045	1.44+/-0.045	.82+/-0.020	1.35+/-0.030	0.31	0.76	1.99	300	700	370	680	0.95
GBA-106S	1.63+/-0.050	1.60+/-0.050	.93+/-0.030	1.48+/-0.030	0.54	0.85	2.17	400	900	550	975	1.2
GBA-107S	1.75+/-0.050	1.66+/-0.050	.98+/-0.030	1.58+/-0.030	0.54	0.88	2.35	550	900	630	975	1.4
GBA-108S	1.91+/-0.060	1.85+/-0.060	1.08+/-0.030	1.73+/-0.030	0.54	0.97	2.53	700	1,100	800	1,100	1.8
GBA-109S	2.03+/-0.060	1.90+/-0.060	1.12+/-0.030	1.83+/-0.030	0.54	1.00	2.71	800	1,400	1,000	1,325	2.5
GBA-110S	2.18+/-0.065	2.11+/-0.065	1.24+/-0.030	1.97+/-0.030	0.54	1.06	2.89	1,000	1,600	1,400	1,650	2.8
GBA-111S	2.33+/-0.070	2.20+/-0.070	1.30+/-0.030	2.09+/-0.030	0.54	1.19	3.07	1,200	1,700	1,350	1,775	3.3
GBA-112S	2.45+/-0.075	2.34+/-0.075	1.39+/-0.030	2.21+/-0.030	0.54	1.25	3.25	1,400	1,800	1,500	1,625	3.75
GBA-113S	2.58+/-0.080	2.53+/-0.080	1.46+/-0.030	2.33+/-0.030	0.54	1.32	3.43	1,700	2,300	2,250	2,450	4.7
GBA-114S	2.71+/-0.085	2.57+/-0.085	1.51+/-0.030	2.44+/-0.030	0.80	1.40	3.61	2,000	2,300	2,400	2,300	5.4
GBA-115S	2.96+/-0.090	2.90+/-0.090	1.70+/-0.030	2.71+/-0.030	0.80	1.55	3.97	2,500	3,500	3,600	3,550	7.0
GBA-116S	3.11+/-0.095	3.05+/-0.095	1.82+/-0.030	2.82+/-0.030	0.80	1.63	4.15	3,000	3,700	4,000	3,800	8.5
GBA-117S	3.31+/-0.100	3.20+/-0.100	1.86+/-0.030	2.95+/-0.030	0.80	1.69	4.33	3,500	4,000	5,600	4,900	9.8
GBA-118S	3.36+/-0.105	3.29+/-0.100	1.97+/-0.030	3.07+/-0.040	0.80	1.65	4.52	4,000	4,000	6,300	4,700	10.6
GBA-119S	3.66+/-0.110	3.55+/-0.110	2.14+/-0.030	3.32+/-0.040	0.80	1.78	4.88	5,000	4,000	7,000	5,250	13.0
GBA-120S	4.31+/-0.130	4.22+/-0.130	2.56+/-0.030	3.95+/-0.040	0.80	2.10	5.78	8,000	5,000	8,500	5,250	21.3

* Emergency Stop data is to be applied to applications where the bumper will be struck no more than 20 times with a minimum of 24 hours between uses.

**Mounting hole dimensions are nominal values and provide clearance for the recommended mounting hardware.

GENERAL PRODCUT LINE DIMENSIONAL SUMMARY

GBA-S LINE (Metric Units)

BUMPER	DIMENSIONAL INFORMATION							PERFORMANCE DATA				WEIGHT
	FREE HEIGHT MM	FREE BULGE MM	WRENCH OPENING MM	BASE DIAMETER MM	MOUNTING HOLE** MM	SOLID HEIGHT MM	BULGE @ SOLID HT. MM	@ RATED ENERGY		EMERGENCY STOP*		SHIPPING WEIGHT GRAMS
								ENERGY N-M	PEAK FORCE N	ENERGY N-M	PEAK FORCE N	
GBA-098S	14.7 +/- .25	13.7 +/- .4	8.6 +/- .4	13.0 +/- .25	4.6	7.4	19.5	2.0	550	3.2	605	1.4
GBA-099S	18.5 +/- .25	17.3 +/- .4	10.7 +/- .4	16.3 +/- .25	5.3	10.2	24.5	3.8	800	6.2	875	2.8
GBA-101S	20.7 +/- .6	20.1 +/- .6	12.2 +/- .4	18.5 +/- .5	7.9	10.7	27.5	5.8	800	7.1	825	3.7
GBA-102S	27.7 +/- .9	25.9 +/- .9	16.0 +/- .5	24.6 +/- .5	7.9	14.5	37.0	11	1,350	15	1,430	9.1
GBA-103S	32.3 +/- 1.0	31.5 +/- 1.0	19.6 +/- .5	29.5 +/- .8	7.9	16.5	43.5	23	1,800	26	1,900	16
GBA-104S	36.1 +/- 1.1	35.1 +/- 1.1	21.3 +/- .5	32.5 +/- .8	7.9	18.3	48.5	28	2,600	36	2,550	21
GBA-105S	37.6 +/- 1.1	36.6 +/- 1.1	20.8 +/- .5	34.3 +/- .8	7.9	19.3	50.5	34	3,000	42	3,000	27
GBA-106S	41.4 +/- 1.3	40.6 +/- 1.3	23.6 +/- .8	37.6 +/- .8	13.7	21.6	55.0	45	4,000	63	4,300	34
GBA-107S	44.5 +/- 1.3	42.2 +/- 1.3	24.9 +/- .8	40.1 +/- .8	13.7	22.4	59.5	60	4,000	72	4,300	40
GBA-108S	48.5 +/- 1.5	47.0 +/- 1.5	27.4 +/- .8	43.9 +/- .8	13.7	24.6	64.5	80	4,500	90	4,900	51
GBA-109S	51.6 +/- 1.5	48.3 +/- 1.5	28.4 +/- .8	46.5 +/- .8	13.7	25.4	69.0	90	6,000	110	5,900	71
GBA-110S	55.4 +/- 1.6	53.6 +/- 1.6	31.5 +/- .8	50.0 +/- .8	13.7	26.9	73.5	115	7,000	160	7,300	78
GBA-111S	59.2 +/- 1.8	55.9 +/- 1.8	33.0 +/- .8	53.1 +/- .8	13.7	30.2	78.0	135	7,500	150	7,850	94
GBA-112S	62.2 +/- 1.9	59.4 +/- 1.9	35.3 +/- .8	56.1 +/- .8	13.7	31.8	82.5	160	7,500	170	7,200	106
GBA-113S	65.5 +/- 2.0	64.3 +/- 2.0	37.1 +/- .8	59.2 +/- .8	13.7	33.5	87.0	190	10,500	250	11,000	133
GBA-114S	68.8 +/- 2.2	65.3 +/- 2.2	38.4 +/- .8	62.0 +/- .8	20.3	35.6	91.5	225	10,500	270	10,250	153
GBA-115S	75.2 +/- 2.3	73.7 +/- 2.3	43.2 +/- .8	68.8 +/- .8	20.3	39.4	101.0	280	15,500	410	15,750	198
GBA-116S	79.0 +/- 2.4	77.5 +/- 2.4	46.2 +/- .8	71.6 +/- .8	20.3	41.4	105.5	340	16,500	450	17,000	241
GBA-117S	84.1 +/- 2.5	81.3 +/- 2.5	47.2 +/- .8	74.9 +/- .8	20.3	42.9	110.0	400	18,000	640	21,500	278
GBA-118S	85.3 +/- 2.7	83.6 +/- 2.5	50.0 +/- .8	78.0 +/- 1.0	20.3	41.9	115.0	450	18,000	700	21,000	301
GBA-119S	93.0 +/- 2.8	90.2 +/- 2.8	54.4 +/- .8	84.3 +/- 1.0	20.3	45.2	124.0	565	18,000	780	23,500	369
GBA-120S	109.5 +/- 3.3	107.2 +/- 3.3	65.0 +/- .8	100.3 +/- 1.0	20.3	53.3	147.0	900	22,500	970	23,500	604

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