

GENERAL PRODUCT LINE DIMENSIONAL SUMMARY

GBA LINE (English Units)

BUMPER	DIMENSIONAL INFORMATION							PERFORMANCE DATA				WEIGHT
	FREE HEIGHT	FREE BULGE	WRENCH OPENING	BASE DIAMETER	MOUNTING HOLE**	SOLID HEIGHT	BULGE @ SOLID HT.	@ RATED ENERGY		EMERGENCY STOP*		SHIPPING WEIGHT
	IN	IN	IN	IN	IN	IN	IN	ENERGY IN-LBS	PEAK FORCE LBS	ENERGY IN-LBS	PEAK FORCE LBS	
GBA-A	.43+/-0.010	.47+/-0.015	.23+/-0.015	.41+/-0.010	0.14	0.24	0.60	20	200	26	210	0.03
GBA-C	.62+/-0.010	.67+/-0.015	.33+/-0.015	.58+/-0.010	0.17	0.39	0.82	50	375	80	400	0.13
GBA-E	.74+/-0.010	.79+/-0.015	.40+/-0.015	.70+/-0.010	0.21	0.39	1.01	90	550	140	625	0.14
GBA-1	.76+/-0.025	.84+/-0.025	.42+/-0.020	.74+/-0.020	0.31	0.42	1.07	100	650	180	750	0.16
GBA-2	1.01+/-0.030	1.11+/-0.030	.56+/-0.020	.98+/-0.020	0.31	0.54	1.43	250	1,100	400	1,200	0.37
GBA-3	1.18+/-0.035	1.31+/-0.045	.66+/-0.020	1.16+/-0.020	0.31	0.67	1.70	400	1,600	750	1,850	0.62
GBA-4	1.31+/-0.040	1.47+/-0.045	.72+/-0.020	1.28+/-0.020	0.31	0.72	1.88	550	2,000	990	2,300	0.86
GBA-5	1.37+/-0.045	1.55+/-0.050	.80+/-0.020	1.35+/-0.020	0.42	0.73	1.97	700	2,000	1,150	2,200	1.0
GBA-6	1.49+/-0.045	1.70+/-0.055	.79+/-0.020	1.48+/-0.030	0.42	0.85	2.15	900	2,800	1,450	3,150	1.4
GBA-7	1.62+/-0.050	1.80+/-0.055	.93+/-0.020	1.58+/-0.030	0.54	0.88	2.33	1,100	3,000	1,500	3,000	1.7
GBA-8	1.77+/-0.055	1.96+/-0.060	1.02+/-0.030	1.71+/-0.030	0.54	0.97	2.51	1,400	3,200	1,975	3,300	2.0
GBA-9	1.86+/-0.060	2.08+/-0.065	1.02+/-0.030	1.84+/-0.030	0.54	0.99	2.69	1,700	4,200	2,950	5,000	2.2
GBA-10	2.02+/-0.065	2.25+/-0.070	1.16+/-0.030	1.97+/-0.030	0.54	1.10	2.86	2,000	4,000	2,650	4,300	3.1
GBA-11	2.14+/-0.065	2.38+/-0.075	1.23+/-0.030	2.10+/-0.030	0.54	1.19	3.05	2,500	5,000	3,200	5,000	3.6
GBA-12	2.26+/-0.070	2.54+/-0.080	1.28+/-0.030	2.23+/-0.030	0.54	1.25	3.22	3,000	6,000	4,100	6,200	4.35
GBA-13	2.38+/-0.075	2.70+/-0.085	1.35+/-0.030	2.35+/-0.030	0.54	1.32	3.40	3,500	6,400	4,600	6,500	5.1
GBA-14	2.54+/-0.080	2.81+/-0.085	1.40+/-0.030	2.44+/-0.030	0.80	1.40	3.58	4,000	6,700	4,925	6,800	5.8
GBA-15	2.72+/-0.085	3.10+/-0.095	1.56+/-0.030	2.71+/-0.030	0.80	1.55	3.94	5,000	8,000	7,350	9,000	7.7
GBA-16	2.91+/-0.090	3.22+/-0.100	1.65+/-0.030	2.82+/-0.030	0.80	1.60	4.12	6,000	9,000	8,000	9,000	9.1
GBA-17	3.00+/-0.090	3.35+/-0.105	1.70+/-0.030	2.96+/-0.030	0.80	1.69	4.30	7,000	10,000	9,000	10,750	10.6
GBA-18	3.15+/-0.095	3.50+/-0.105	1.75+/-0.030	3.11+/-0.030	0.80	1.73	4.48	8,000	11,000	11,000	11,000	11.9
GBA-19	3.37+/-0.100	3.83+/-0.120	1.90+/-0.030	3.34+/-0.050	0.80	1.91	4.83	10,000	12,500	13,750	13,500	14.9
GBA-20	3.98+/-0.120	4.56+/-0.140	2.24+/-0.030	3.93+/-0.060	0.80	2.20	5.73	17,000	19,000	26,000	21,000	25.0

* 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 PRODUCT LINE DIMENSIONAL SUGMMARY

GBA LINE (Metric Units)

BUMPER	DIMENSIONAL INFORMATION							PERFORMANCE DATA				WEIGHT
	FREE HEIGHT	FREE BULGE	WRENCH OPENING	BASE DIAMETER	MOUNTING HOLE**	SOLID HEIGHT	BULGE @ SOLID HT.	@ RATED ENERGY		EMERGENCY STOP*		SHIPPING WEIGHT
	MM	MM	MM	MM	MM	MM	MM	ENERGY N-M	PEAK FORCE N	ENERGY N-M	PEAK FORCE N	GRAMS
GBA-A	10.9 +/- .25	11.9 +/- .4	5.8 +/- .4	10.4 +/- .25	3.6	6.1	15.3	2.2	900	3.0	925	0.90
GBA-C	15.7 +/- .25	17.0 +/- .4	8.4 +/- .4	14.7 +/- .25	4.3	9.9	20.8	5.8	1,600	9.0	1,700	3.7
GBA-E	18.8 +/- .25	20.1 +/- .4	10.2 +/- .4	17.8 +/- .25	5.3	9.9	25.7	10	2,500	15.5	2,800	4
GBA-1	19.3 +/- .65	21.3 +/- .6	10.7 +/- .5	18.8 +/- .5	7.9	10.7	27.0	11	2,900	20	3,400	5
GBA-2	25.7 +/- .75	28.2 +/- .8	14.2 +/- .5	24.9 +/- .5	7.9	13.7	36.5	30	4,900	45	5,400	10
GBA-3	30.0 +/- .9	33.3 +/- 1.1	16.8 +/- .5	29.5 +/- .5	7.9	17.0	43.0	45	7,125	86	8,300	18
GBA-4	33.3 +/- 1.0	37.3 +/- 1.1	18.3 +/- .5	32.5 +/- .5	7.9	18.3	48.0	65	8,900	110	10,200	24
GBA-5	34.8 +/- 1.1	39.4 +/- 1.3	20.3 +/- .5	34.3 +/- .5	10.7	18.5	50.0	80	8,900	130	9,500	28
GBA-6	37.8 +/- 1.1	43.2 +/- 1.4	20.1 +/- .5	37.6 +/- .8	10.7	21.6	54.5	100	12,500	165	14,000	40
GBA-7	41.1 +/- 1.3	45.7 +/- 1.4	23.6 +/- .5	40.1 +/- .8	13.7	22.4	59.0	125	13,350	170	13,500	48
GBA-8	45.0 +/- 1.4	49.8 +/- 1.5	25.9 +/- .8	43.4 +/- .8	13.7	24.6	64.0	160	14,250	225	14,500	57
GBA-9	47.2 +/- 1.5	52.8 +/- 1.6	25.9 +/- .8	46.7 +/- .8	13.7	25.1	68.5	190	18,700	330	22,500	62
GBA-10	51.3 +/- 1.6	57.2 +/- 1.8	29.5 +/- .8	50.0 +/- .8	13.7	27.9	72.5	225	17,800	300	19,000	88
GBA-11	54.4 +/- 1.6	60.5 +/- 1.9	31.2 +/- .8	53.3 +/- .8	13.7	30.2	77.5	285	22,250	360	22,500	102
GBA-12	57.4 +/- 1.8	64.5 +/- 2.0	32.5 +/- .8	56.6 +/- .8	13.7	31.8	82.0	340	26,700	460	28,000	123
GBA-13	60.5 +/- 1.9	68.6 +/- 2.2	34.3 +/- .8	59.7 +/- .8	13.7	33.5	86.5	400	28,475	520	30,000	145
GBA-14	64.5 +/- 2.0	71.4 +/- 2.2	35.6 +/- .8	62.0 +/- .8	20.3	35.6	91.0	450	30,000	550	31,000	164
GBA-15	69.1 +/- 2.1	78.7 +/- 2.4	39.6 +/- .8	68.8 +/- .8	20.3	39.4	100.0	565	35,500	825	40,000	218
GBA-16	73.9 +/- 2.3	81.8 +/- 2.5	41.9 +/- .8	71.6 +/- .8	20.3	40.6	105.0	680	40,000	900	40,000	258
GBA-17	76.2 +/- 2.3	85.1 +/- 2.7	43.2 +/- .8	75.2 +/- .8	20.3	42.9	109.0	800	44,500	1,000	48,000	301
GBA-18	80.0 +/- 2.4	88.9 +/- 2.7	44.5 +/- .8	79.0 +/- .8	20.3	43.9	114.0	900	49,000	1,250	50,000	337
GBA-19	85.6 +/- 2.5	97.3 +/- 3.0	48.3 +/- .8	84.8 +/- 1.3	20.3	48.5	123.0	1,130	55,600	1,550	60,000	422
GBA-20	101.0 +/- 3.0	115.8 +/- 3.6	56.9 +/- .8	99.8 +/- 1.5	20.3	55.9	146.0	1,950	84,500	2,950	90,000	709

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