

GENERAL CASTING DESIGN DATA SHEET

	Aluminum Die Casting	Sand Casting Process	V-Process Casting	Investment Casting Process	Graphite Permanent Mold Process	Steel Die Permanent Mold Process	Plaster Mold Process
Size Range	Ounces to 50 lbs	Ounces to Tons	Up to 150 lbs	Up to 250 lbs	Up to 6 lbs	Up to 100 lbs	Ounces to 50 lbs
Tolerances	+/- .002" to 1"	+/- 1/32 to 6"	+/- .010" to 1"	+/- .005" to 1"	+/- .005" to 1"	+/- .015" to 1"	+/- .005" to 2"
Tolerance inches/inch thereafter	+/- .002"	+/- .003"	+/- .002"	+/- .005"	+/- .002"	+/- .002"	+/- .001"
Parting Line Shift	+/- .0035" up to 10 sqin	+/- .020" to .060"	+/- .020"	N/A	+/- .005"	+/- .010" to .030"	+/- .010"
Min. Section Thickness	.030" premium .060" average	.110	.090" premium .125" average	.050" premium .080" average	.090" premium .120" average	.125" premium .187" average	.060" premium .080" average
Min. Draft Required	0.5 to 3 degrees	2 to 5 degrees	Zero	Zero	1 to 3 degrees	2 to 4 degrees	1 to 3 degrees
Surface Finish	32 to 125 RMS	250 to 500 RMS	125 to 150 RMS	60 to 90 RMS	63 to 90 RMS	150 to 300 RMS	63 to 125 RMS
Average Tooling Cost	\$5K to \$100K	\$1K to \$5K	\$3K to \$6K	\$2K to \$9K	\$3K to \$8K	\$5K to \$20K	\$3K to \$9K
Average Tooling Lead-Time	6 to 14 weeks	2 to 6 weeks	2 to 4 weeks	6 to 8 weeks	2 to 4 weeks	8 to 20 weeks	2 to 6 weeks
Typical Order Quantity	5,000 +	All	All	All	All	500 +	1 to 250 pcs
Metals	Aluminum 360 380 413 Zinc Zamac 3 Zamac 5 ZA-8 ZA-12 ZA-27 Magnesium	Most all Castable Alloys	Aluminum 319 356 535	All Castable Alloys	Aluminum 356 319 ZA-12 ZA-27	Aluminum Bronze Iron Lead	Aluminum Zinc Magnesium Brass

Note: The below information is meant to be a basic guideline for comparison purposes only.
For more information or a competitive quote, please call 205-956-8013

