

## Cast Metal Alloys

### Production Grade Metal Prototypes

We can convert your CAD files into 3D objects, dimensionally accurate in rapid turnaround time.

**Cast metal tolerances:** XY direction:  $\pm 0.005$ " 1st " ;  $\pm 0.002$ " per inch for each inch thereafter. Z direction or any dimensions across the parting line is  $+0.015$ " /  $-0.005$ " for the 1st inch,  $\pm 0.002$ " per inch for each inch thereafter. Radii parallel to parting line add  $\pm 0.005$ " for dimensions affected. Location tolerance for mold inserts (cores)  $\pm 0.015$ ", angular alignment for mold inserts (cores)  $\pm 5$  degrees and features less than .075 may not fill depending on geometry, area, and casting alloy.

Alloys	Alloys Type
A319	Exhibits good resistance to most common forms of corrosion
A355	Workable of all the common commercial metals
A356	Corrosion resistance is excellent with good weldability
Almag	An aluminum magnesium with excellent corrosion resistance
AZ91D	A high-purity alloy with excellent corrosion resistance and castability
Brass and Bronze	Brass is decorative, gears and valves – Bronze boat fittings and propellers
Carbon Steel	General and non-specialized metal products
Ductile Iron	Versatile cast irons exhibiting a wide range of properties
Grey Iron	High compressive strength widely used in posts and columns of buildings
Stainless Steel	Resists corrosion and maintains its strength as high temperatures
Zinc	Excellent thermal and electrical conductivity with precise casting tolerances

Disclaimer: All tolerance specifications reflect the approximate range of a process's capabilities and should be viewed only as a guide. Actual capabilities are dependent upon manufacturing, equipment, material, and part requirements.