

# Comparison of Different Casting Processes

Items	<a href="#">Sand Casting</a>	Permanent Mold Casting	Die Casting	<a href="#">Investment Casting</a>	Chemically Bonded Shell Mold Casting
Typical dimensional tolerances, inches	± .010"	± .010"	± .001"	± .010"	± .005"
	± .030"	± .050"	± .015"	± .020"	± .015"
Relative cost in quantity	Low	Low	Lowest	Highest	Medium high
Relative cost for small number	Lowest	High	Highest	Medium	Medium High
Permissible weight of casting	Umlimited	100 lbs.	75 lbs.	Ounces to 100 lbs.	Shell ozs. To 250 lbs. no-bake 1/2 lb. - tons
Thinnest section castable, inches	1/10"	1/8"	1/32"	1/16"	1/10"
Relative surface finish	Fair to good	Good	Best	Very Good	Shell good
Relative ease of casting complex design	Fair to good	Fair	Good	Best	Good
Relative ease of changing design in production	Best	Poor	Poorest	Fair	Fair
Range of alloys tht can be cast	unlimited	Aluminium and copper base preferable	Aluminum base prepferable	Unlimted	Unlimited