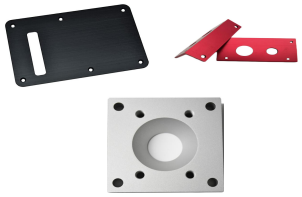
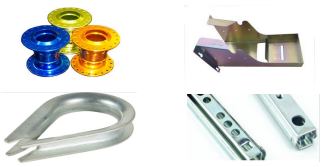
Material information

Material + grade	Elongation at break	Machinability	Weldability	Corrosion res	Tensile strength
Aluminum 5052*	7-27%	Fair	Good	Excellent	195 – 290 MPa
Aluminum 5754*	10 - 15 %	Good	Excellent	Excellent	160 - 200 MPa
Stainless Steel 304	45 - 60 %	Excellent	Excellent	Good	480 - 620 MPa
Stainless Steel 316L	30 - 50 %	Good	Excellent	Excellent	480 - 620 MPa
Mild Steel 1018	17-27%	Good	Excellent	Poor	190 - 440 MPa
Copper 110	15 - 50 %	Poor	Moderate to Poor	Good	220 - 230 MPa

Surface finish information

Finish	Description	Pros	Surface treatment image	Application
Bead blasting	Shooting glass beads or other abrasives at the part at high speed, resulting in a uniform matte or satin surface finish.	1.Deburrs 2.Adds uniform matte or satin surface finish		Used mainly for visual purposes and to prepare surfaces for other coatings. Comes in several different grits which indicate the size of the bombarding pellets. Can be combined with anodizing.
Powder coating	Powder coating adds a thin layer of protective polymer on the surface of the part. We can powder coat as per RAL color.	1.Adds decorative finish 2.Improves weather & corrosion resistance 3.Compatible with all metals 4.Higher durability than paints		All metals. Both decorative and protective and can be combined with bead blasting.
Anodizing	This is an electrochemical process of placing a stable oxide coating on the material, usually aluminum.We can anodize black,natural,red colors etc.	1.Gives the material a smooth almost matte texture 2.Durable & aesthetically pleasing 3.Can be applied easily to internal cavities and small parts 4.Wide range of colors available		Can be used on aluminum, titanium, zinc & magnesium to increase corrosion resistance and visual appeal.
Conversion coating	Known also as alodine or chemical film, this process immerses parts in a chemical bath until a coating has formed.	1.Protects from corrosion 2.Allows grounding currents to pass through 3.Paints adheres well, can act as primer 4.Increases durability		Best for functional parts, not intended for decorative use.
Brushing	Brushing is produced by polishing the metal with grit resulting in a unidirectional satin finish.	1.Removes machine marks		Brushing is mostly used for aesthetic purposes and can be used to cover up imperfections from machining for customer-facing parts.
Brushing + electropolishing	Parts are brushed and then run through an electropolishing process - an electrochemical process used to polish, passivate and deburr metal parts.	1.Reduces roughness of parts Deburrs 2.Makes surface smoother and shiny 3.Increases corrosion resistance 4.Produces more hygienic surface		Best for parts that need to be smooth at a microscopic level. Suitable for the majority metals, but mostly used for stainless steels.
Nickel plating	To Make the product bright	1.Reduces roughness of parts Deburrs 2.Makes surface smoother and brighter		Both decorative and protective.