



WATERJET & LASER PLANNING GUIDE

Which cutting technique is right for you?

	 LASER CUTTING	 WATERJET CUTTING
Thickness Range	Mild steel up to 3/4" Stainless steel up to 1/2" Aluminum up to 1/4"	Virtually any material up to 10.0"
Range of Materials	Acrylic, steel, stainless steel, aluminum, wood, plastic	Virtually any material
Accuracy of Process	+/- .005" (1)	+/- .005" to +/- .030" (1) (varies by thickness)
Edge Quality / Finish Variations	Steel exhibits oxidized edge stainless/alum exhibit polished edge Clear acrylic is translucent	All materials have sandblasted edge finish. Visit www.H2ojet.com under edge finishes for a comprehensive guide.
Fundamental Process Differences	Cuts with gas laser light, thermal cutting process	Cuts with high pressure water & abrasive, non-thermal cutting process
Typical Applications and Uses	Cutting of flat metal sheets, etching	Cutting of metal, stone, glass, marble, composites
Secondary Processing Consideration	Cut edges exhibit heat affected zone (2), metallurgical changes occur in heat zones	Taper (2), striations in cut edge (3)
Cosmetic Processing Consideration	Backside of cut metals exhibit some discoloration on edge, some light surface spatter from piercing. Ideal for cutting polished or finished materials.	Water stains, minor sandblasting of surface around pierce point. Ideal for cutting materials which are to be finished after cutting.
Maximum Weight Per Plate	5,000lbs	10,000lbs +
Maximum Sheet of Plate Sizes	78" width x unlimited length	144" width x unlimited length
Materials Not Applicable to Process	Copper, brass, glass, stone, composites, ceramics, rubber, laminates	Tempered glass, beryllium copper
Width of Cut (also known as kerf)	.015"	.02" to .050" depending on focusing tube size
Notes	(1) Capable of +/- .003" on thin gage materials (2) Heat affected zone typically penetrates half the thickness of the material.	(1) Accuracy & edge finish are directly related to speed of cut which directly affects price. (2) Dynamic waterjet cutting technology cuts without leaving taper on parts. (3) Striations occur when edge finish is not a consideration & rough cutting can be done.



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WATERJET & LASER

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