Manufacturing Standards

1) Quotation

1.1. Please pay special attention to quotation notes as they can contain important information.
1.2. Only operations detailed on our quotation will be supplied.
1.3. Grain direction must be shown at initial enquiry as it can affect sheet utilisation—if it is not shown, it will be assumed to be unimportant.
1.4. If material needs coating the RAL and thickness must be specified in the enquiry and subcon quote.
1.5. Laser Process accept no responsibility for sub-contractor quality when a customer stipulates a preferred sub-contractor or direct shipping.
1.6. Samples can be used to quote from. Material to be quoted in should be stated on enquiry. If it is not stated, the material and grade will be assumed on quotation. It is the customer responsibility to check the material is correct.

2) CAD

2.1. File types accepted. .STP/.STEP, .DWG, .DXF, .IGES/.IGS, .GEO, .SLDPRT, .SLDASM, .SCDOC.
2.2. CAD data should be supplied with a 1:1 scale unless clearly identified.
2.3. Digital file types are master over .PDFs—Laser Process is not responsible for cross-comparing files.
2.4. When reverse engineering samples or working to hand drawings/ sketches we may need to send a drawing or sample to yourselves for approval prior to full production.
2.5. Parts and assemblies are split as standard open corner joint; it must be stated if otherwise required.
2.6. Grain, coating and chequer side will be assumed outside or top face unless otherwise specified.
2.7. Parts supplied flat only should have the developed length stated. If no developed length is supplied, the development will be 0.5k to the internal bend radius on the drawing. If no internal radius is shown it will be assumed to be the same size as the material thickness.
2.8. If no formed views are provided, the part will be formed to the customer flat pattern (bend angle and direction must be stated). Laser Process is not liable if the overall formed size is incorrect due to being unable to re-develop for internal tooling.
2.9. All etching/ vaporising required must be clearly identified.
2.10. If tolerances are unachievable on parts, the cut size will be put in at mid-range. If machining allowance, no holes etc. are required, this must be stated at quotation.
2.11. If the note "WARNING: Part contains cut-outs that are small and may not be cut" is present on the quotation, holes may be spot marked or have etched centres if deemed unable to cut to a sufficient standard. If holes are required, this must be stated at quotation and the note removed.

3) General Processing

3.1. Scratch free only available on one face of material (with poly coating).
3.2. Any alterations to drawings on or after order will most likely cause an order delay. Changed parts will need to be re-quoted if not cut. All parts processed will be chargeable.
3.3. If no revisions are used on parts, it is the customers responsibility to let Laser Process know if the part has changed from the last time it was produced.
3.4. If a customer places an order from a quote with notes, Laser Process will consider this the customer acknowledging and accepting the note.

4) Laser Cutting

4.1. Material can only be laser cut with poly coating on the top face.
4.2. Poly coating often blows off small components.
4.3. Using poly coating when laser cutting leaves a residue on parts.
4.4. Internal and external radii applied to laser cut parts—this may affect parts that mate. Please state on enquiry if this will cause an issue to part function and we can discuss minimum radius sizes/ potential design changes.
4.5. Our laser slats are carbon steel—cross contamination may occur. If you require no cross contamination, please let us know at quotation stage.
4.6. Heavy burr will be removed; chamfering is a chargeable extra.
4.7. The laser cutting process leaves a tag or pip. Anything under 175mm X & Y needs a tag. Tag/ pip removal must be stated at quotation stage.
4.8. If a specific start/ stop point is required, it must be shown on the drawing and/or a written instruction at quotation point.
4.9. Etching depth can vary and may or may not be visible after paint. Poly-coating can affect etching depth/ quality. Etching is less visible on aluminium and stainless steel than mild steel. Oxygen etching (darker) can be trialled at request on stainless steel and aluminium.
4.10. Long, thin components are subject to bowing—specific flatness needs to be specified, or internal company standards will apply.
4.11. Anti-spatter is used for cutting quality—if parts need to be oil free it should be stated at quotation.
4.12. Thermal hardening occurs on profile edges.
4.13. If a specific cutting gas is required (e.g. nitrogen for painted components), it must be requested at enquiry.

5) Water Jet Cutting

5.1. Oxidation will occur post water jet cutting.

6) Forming

6.1. Witness/ tooling marks will be seen on formed parts—neoprene/ plastic inserts can be used to mitigate. Please state if required at quotation stage.
6.2. Cross contamination can occur as tooling is used on a variety of materials.
6.3. Certain bend radii may not be possible to achieve due to in house tooling limitations—if the achievable bend radii is more than 5mm different to what is shown on the drawing, we will state this on enquiry and offer an alternative.

7)Rumbling and De-Burring

7.1. Rumbling will change the appearance/finish of parts.
7.2. The rumbling process may not get rid of all heavy burr.
7.3. Rumbling will round the edges of parts.

8) Welding and Fabricating

8.1. If acid cleaning is required, it must be specified on enquiry; this is not a standard process and will require quoting.

9) Free Issue Material

9.1. Delivered material to arrive identified including: material specification, supplier, sheet size, thickness, customer, PO number and quantity. Material may be rejected without this information.
9.2. Material in single packs must not weigh more than 1.2 tonne.
9.3. If the material supplied is not flat enough to cut, it is the customers responsibility to arrange flattening/ replacement.
9.4. The minimum size sheet is 300mm x 300mm.
9.5. Free issue material will only be stored at Laser Process during the production period for each order and 5 working days after order completion. If free issue material collection has not been arranged, Laser Process will dispose of waste material after this time frame.
9.6. If Laser Process are unable to cut the free issue material supplied to an acceptable standard, the customer will be informed and production stopped.
9.7. If a specific sheet utilisation is required, the customer must state on enquiry, or Laser Process will nest as appropriate. Minimum border sizes and parts gaps to be determined by Laser Process.
9.8. Free issue material is provided at the customer's own risk. Laser Process can only accept liability for cutting charges, not for the value of material itself.
9.9. Lead time for free issue orders begins on receipt of material or order – whichever comes later.

10) Packaging

10.1. Packaging requirements deviating from standard need to be stated at quotation.

11) Quality and Documentation

11.1. PPAP's/ ISIR's can be provided where possible at an additional cost.
11.2. Mill/ test certs can be provided – please confirm the level of cert required on enquiry.

12) Tolerances

12.1. Process tolerances available upon request.
12.2. Laser and water jet cutting tolerances provided are from the "top face" only – thicker materials may taper.
12.3. Pressbrake tolerances provided will be per bend – i.e. between two bends will double the provided tolerance.