

LASER CUTTING AND DRILLING: METALS AND NON-METALS

Laser Cutting Project Brief and Sample Evaluation Request

EMAIL THIS FORM TO
sales@vytek.com

All forms: vytek.com/smp

QR CODE

vytek.com/smp?process=cutting

Use this form to describe your cutting application and request a sample evaluation. You do not need a laser system to start, and you are not expected to know process times, achievable quality or cycle times. Those are what sample evaluation is for. Complete what you know; where you are unsure, choose "Vytek to determine" or leave it blank.

1 DESCRIBE	2 SEND FILES	3 SHIP SAMPLES	4 CONFIRM SCOPE	5 GET RESULTS
Complete Parts 1 to 3. Skip anything you do not know.	Email this form, drawings, photos and video to sales@vytek.com . Forms for each process are at vytek.com/smp .	Print a copy of this form and include it with labeled samples.	Vytek confirms scope, timing and any cost within three business days of receiving complete information.	Receive a Sample Evaluation Report with photos, results and cycle-time estimates.

SAMPLE EVALUATION SCOPE AND COST

Most initial sample evaluations are performed at no charge. Where testing requires custom fixturing, extended development, multiple iterations or formal reporting, Vytek will confirm scope and any cost before work begins. Results are laboratory estimates; production performance is confirmed during acceptance testing of the final system.

PART 1 · PROJECT BRIEF

About you, your part and your production

01 CONTACT AND COMPANY

Company		Facility / location	
Primary contact	Title / department	Date	
Phone	Email		
Project name / reference		How did you hear about Vytek?	
Industry ☐ Aerospace / defense ☐ Electronics / semiconductor ☐ General fabrication ☐ Automotive / transportation ☐ Energy / batteries ☐ Other ☐ Medical device ☐ Tooling / molds			

02 PROJECT STATUS AND TIMING

Project status ☐ Initial investigation ☐ Replacing existing equipment ☐ Other			☐ Budgetary planning ☐ Production problem / capacity need			☐ Active capital project ☐ Approved project / sourcing		
Desired equipment timing ☐ Immediately ☐ 6–12 months			☐ Less than 3 months ☐ More than 12 months			☐ 3–6 months ☐ Not yet determined		
Target installation date, if known				Budget range, if established (optional)				

03 APPLICATION AND CURRENT PROCESS

Briefly describe what you need to cut, and why

What are you trying to improve?

- | | | |
|--|--|---|
| ☐ Throughput / capacity | ☐ Edge quality | ☐ Accuracy / tolerance |
| ☐ Fine features | ☐ Reduce secondary operations | ☐ Material utilization |
| ☐ Bring work in-house | ☐ Automation | ☐ Other <input type="text"/> |

Is this process performed today?

- ☐ Yes ☐ No ☐ New product / new process

Current method

- | | | |
|---|---|--|
| ☐ Existing laser | ☐ Plasma | ☐ Waterjet |
| ☐ Punch / stamping | ☐ Die cutting | ☐ Machining / routing |
| ☐ Outsourced | ☐ Other <input type="text"/> | |

Existing equipment make / model

Current time per part or rate, if known

What problems or limitations do you have today?

04 PART AND MATERIAL

Part name

Part number(s)

Number of part types

Smallest part (L × W × H)

Largest part (L × W × H)

Weight range

Material

- | | | |
|--|---|--|
| ☐ Carbon / mild steel | ☐ Stainless steel | ☐ Tool steel |
| ☐ Aluminum | ☐ Anodized aluminum | ☐ Titanium |
| ☐ Copper / brass | ☐ Nickel alloys | ☐ Galvanized / coated steel |
| ☐ Acrylic | ☐ Wood / MDF | ☐ Paper / cardboard |
| ☐ Textile / leather | ☐ Foam / rubber | ☐ Plastics / films |
| ☐ Composite | ☐ Other <input type="text"/> | |

Specific alloy / grade, if known

Coating or finish type and thickness, if any

Surface condition

- | | | |
|--|---|--|
| ☐ Bare / as received | ☐ Machined | ☐ Polished / ground |
| ☐ Painted | ☐ Powder coated | ☐ Anodized |
| ☐ Plated | ☐ Heat treated / passivated | ☐ Oxidized / rusted |
| ☐ Oily / contaminated | ☐ Other <input type="text"/> | |

05 PRODUCTION AND HANDLING

Required output (parts per hour or takt)

Shifts per day / days per week

Annual volume

Required cycle time per part, if known

Typical batch size / changeovers per shift

Do not know your cycle time? Leave it blank. The sample evaluation measures laser process time and estimates total cycle time for different ways of loading and unloading parts.

Production type

- ☐ Continuous
 ☐ Batch
 ☐ High-mix / low-volume
 ☐ Low-mix / high-volume
- ☐ Prototype / R&D
 ☐ Job shop / contract

How do parts arrive and get presented today?

- ☐ Operator loads one at a time
 ☐ Fixture / nest
 ☐ Tray / pallet
- ☐ Conveyor
 ☐ Robot / cobot
 ☐ Existing production line
- ☐ Bulk / loose
 ☐ Unknown
 ☐ Other

Desired level of automation

- ☐ Manual workstation
 ☐ Semi-automatic
 ☐ Fully automatic
- ☐ Integrated into existing line
 ☐ Automation Ready (automate later)
 ☐ Vytek to recommend

06 WHAT GOOD LOOKS LIKE

Describe acceptance criteria: what makes a part good or rejected?

Can you provide good and rejected examples (parts or photos)?

☐ Yes
 ☐ No
 ☐ Some

Top priorities (choose up to three)

- ☐ Cut speed / throughput
 ☐ Edge quality
 ☐ Accuracy / tolerance
 ☐ Fine features
- ☐ Minimal heat-affected zone
 ☐ Material utilization
 ☐ Capital cost
 ☐ Operating cost
- ☐ Future automation

07 WHAT VARIES?

Variation drives automation. Mark what changes from part to part or batch to batch. The perfect part is easy; production lives in the exceptions.

- ☐ Material type
 ☐ Material thickness
 ☐ Sheet / blank size
- ☐ Part geometry
 ☐ Coating / film on material
 ☐ Flatness / warp
- ☐ Nest / mix per sheet
 ☐ Batch size
 ☐ Frequent new part numbers
- ☐ Other

Describe the variation or exceptions you see most often

PART 2 · CUTTING DETAILS

Tell us what you cut, how thick, how accurate and how the edge must look

08 MATERIAL AND FORM

Laser type, if known

☐ Fiber (metals) ☐ CO2 (non-metals) ☐ Ultrafast / micro features ☐ Vytek to recommend

Material form

☐ Flat sheet / plate ☐ Tube / pipe ☐ Structural profile
☐ Formed / 3D part ☐ Coil / roll ☐ Film / foil
☐ Other

MATERIAL	THICKNESS	SHEET / BLANK SIZE	SHARE OF WORK (%)

Some materials, such as PVC and other chlorinated plastics, cannot be laser cut safely. If unsure, tell us the material and we will advise.

09 FEATURES AND TOLERANCES

Features

☐ Profile cutting ☐ Holes / drilling ☐ Slots / fine features
☐ Tube / 3D cutting ☐ Kiss-cut / partial depth ☐ Etch or mark plus cut
☐ Bevel / chamfer ☐ Other

Smallest hole or feature

Tolerance requirement

Typical part size

Edge quality required

☐ As-cut acceptable ☐ Dross-free ☐ Burr-free
☐ Square / minimal taper ☐ Minimal heat-affected zone ☐ Oxide-free / bright edge
☐ No charring (non-metals) ☐ Polished edge (acrylic) ☐ Other

Assist gas, if known

☐ Oxygen ☐ Nitrogen ☐ Compressed air ☐ Vytek to determine

Are microjoints or tabs to hold parts acceptable?

☐ Yes ☐ No ☐ Unknown

10 PRODUCTION AND MATERIAL HANDLING

Sheets or parts per day

Hours of cutting per day

Prototype or production?

Sheet or part loading

- | | | | |
|---|---|--|--|
| ☐ Manual load / unload | ☐ Shuttle / exchange table | ☐ Automatic sheet loading | ☐ Part sorting / stacking |
| ☐ Tube loader | ☐ Robot load / unload | ☐ Vytek to determine | |

Operations after cutting

- | | | | |
|------------------------------------|--|----------------------------------|---|
| ☐ Deburring | ☐ Bending / forming | ☐ Welding | ☐ Painting / coating |
| ☐ Machining | ☐ Assembly | ☐ None | |

Nesting / CAD-CAM software used

Available floor space (W × D)

Available utilities

- | | | | |
|--|--|---|---|
| ☐ 480 V three phase | ☐ 208 / 240 V three phase | ☐ Compressed air | ☐ Bulk nitrogen / oxygen |
| ☐ Fume extraction | ☐ Unknown | | |

PART 3 · SAMPLES, FILES AND SUBMISSION

What to send and where to send it

11 SAMPLES

Can sample parts be supplied?

☐ Yes ☐ No ☐ To be determined

Send material coupons in each thickness, ideally at least 6 × 6 in (150 × 150 mm), or full parts if geometry matters. Include any protective film or coating as supplied. Label each sample with your company name and a sample ID.

SAMPLE ID	DESCRIPTION / VARIATION (TYPICAL, WORST CASE, FINISH)	QTY	NOTES

May samples be permanently processed or destroyed?

☐ Yes ☐ No ☐ Limited quantity

May Vytek section or cut samples if needed?

☐ Yes ☐ No ☐ Ask first

After testing, samples should be

☐ Returned to address below ☐ Scrapped by Vytek ☐ Untested parts returned only

Coated, treated or hazardous material? Safety data sheet attached

☐ Yes ☐ No ☐ Not applicable

Export control: do not send export-controlled technical data or parts (ITAR / EAR) without contacting Vytek first. Files and data you send are kept for the evaluation and follow-up, and deleted on request.

What should the evaluation tell you?

☐ Feasibility / can it be done ☐ Cut speed per thickness ☐ Edge quality (photos, close-up)
☐ Tolerance / dimensional check ☐ Heat-affected zone / taper ☐ Cycle time per part or sheet
☐ Assist gas recommendation ☐ Recommended laser and configuration

12 FILES, PHOTOS AND VIDEO

Included with this request

☐ Part drawing (PDF with dimensions) ☐ STEP / 3D CAD ☐ Part photos
☐ Video of current process ☐ Good / rejected examples ☐ Quality specification
☐ Fixture / tray drawings ☐ DXF / DWG of parts ☐ Nest or sheet layout
☐ Material certification ☐ Other

Photo tips: photograph each part beside a ruler, show the area to be processed close up, show how parts arrive and leave the station, and include good and rejected examples. Large files: email sales@vytek.com and we will send a secure upload link.

13 RETURN SHIPPING AND SUBMISSION

Return ship-to company and attention

Carrier / account number (optional)

Return street address, city, state, ZIP

Date samples will ship

Tracking number

Submitted by

Additional notes or instructions for the applications engineer

SEND FILES AND SAMPLES

Email this form and your files to sales@vytek.com. Ship samples, with a printed copy of this form, to: VyteK, Attn: SMP Dept, 195 Industrial Road, Fitchburg, MA 01420, USA. Questions: 978-342-9800.

QR CODE
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WHAT YOU WILL RECEIVE

A Sample Evaluation Report with photos and close-ups of cut edges, measured cut speeds per material and thickness, dimensional checks where requested, observations on dross, taper and heat effect, estimated cycle time per part or sheet including handling, identified risks, and a recommended laser type, power, assist gas and next step.

FOR VYTEK USE

SMP number

Date received

Applications engineer

Sales contact

Evaluation level

☐ Feasibility check

☐ Process evaluation

☐ Process development (quoted)

Scope and cost confirmed with customer (date / by)

Report due