XTOOL P2S · 55 W CO_2 LASER

Cutting and engraving on your desk.

An enclosed CO_2 laser for **workshops, schools and small businesses** — with two cameras and autofocus.

The xTool P2S cuts and engraves wood, acrylic of any colour, leather, fabric and paper. It cuts acrylic up to 20 mm and basswood up to 18 mm in a single pass.



55 W	600 × 305	600 mm/s	18 / 20 mm	2 × 16 MP
CO_2 laser, 10.6 µm wavelength	mm working area	max. speed, X-axis acceleration 6400 mm/s²	basswood / acrylic in a single pass	panoramic and close-range camera

P

Small businesses and workshops

- Batches with identical or different designs (names, serial numbers) in a single run.
- The automatic conveyor feeder handles pieces up to 3 m long (boards, signs).
- Objects up to 215 mm tall with the riser base, cylinders up to 180 mm with rotary.
- Built-in liquid tube cooling and a 200 kPa air pump.

Š

Schools, hobbyists and makers

- The camera shows the material inside the machine — place designs on screen, so offcuts aren't wasted.
- LiDAR and autofocus measure material height for you.
- Preset library for over 500 materials — no lengthy test runs.
- Enclosed housing, automatic lid lock and emergency stop button.





WHAT IT CAN DO

Materials, processing modes and applications

Non-metallic materials absorb CO_2 laser light very well — so it cuts thicker sheets and acrylic of any colour, including clear, which diode lasers cannot. xTool lists over 300 compatible materials.

Wood and wood-based materials
basswood, plywood, MDF, bamboo — cuts up to 18 mm basswood in a single pass

Acrylic — any colour
cuts up to 20 mm in a single pass, including clear acrylic

Leather, fabric, felt
cutting and engraving: key rings, labels, patches

Paper and card
invitations, packaging, models, greeting cards

Glass, ceramics, stone
engraving glasses, tiles, coasters

Metals
listed by xTool as engraving materials (not for cutting)

Round objects RA2 Pro / RA3
glasses, tumblers, bottles — Ø 3–50 mm, up to 180 mm with the riser base

Long pieces conveyor
up to 3 m long and 14 mm thick

Not suitable
PVC, vinyl and other chlorine-containing materials, plus unknown materials







11 processing modes

- processing on slats
- cylinders (rotary)
- chuck (rotary)
- batch — same design
- batch — different designs
- without base plate (thick pieces)
- conveyor feeder
- curved surfaces
- curved surfaces with rotary
- screen-printing stencil prep
- honeycomb panel

Object height

Without tray up to **71 mm**, with tray 64 mm, with the riser base up to **215 mm**. Laser spot size 0.15 × 0.2 mm, motion accuracy 0.015 mm, image resolution 1000 DPI, camera positioning 0.3 mm.

Who it's for

Hobby and school
projects on Atomm, first piece about 20 minutes after unboxing (user experience as reported by xTool), material learning kits.

Small business
weddings and events, wooden products, signs and boards, acrylic jewellery, personalised gifts.

Production
batches with smart fill, conveyor feeder for long pieces, combined with the F1 Ultra for metals.

SOFTWARE

xTool Studio — free, for Windows and macOS



INCLUDED WITH THE MACHINE

From idea to finished piece in one program

Connect via USB (Type-C) or Wi-Fi; import SVG, DXF, JPG, JPEG, PNG, BMP and TIF. The machine also works without Wi-Fi — cable only. The P2S also supports LightBurn; the previous program, xTool Creative Space (XCS, incl. mobile app), is no longer being developed.

Almake
create a design from a one-sentence description — ready for laser processing.

Camera and positioning
panoramic camera for the whole area, close-range camera for small items; LiDAR and autofocus.

Curved surfaces
3D modelling of cylindrical objects with the rotary attachment.

Atomm
over 60,000 projects and templates for inspiration.

EasySet material library
one-click settings for over 500 materials.

Batch processing 2.0
different designs, names, serial numbers or images on one sheet.

Automatic path planning
optimised job order for shorter processing times.

PC requirements
at least Intel i5-6200U, 8 GB RAM; Win 10 (64-bit) or macOS 10.14+.

SAFETY

Enclosed housing and multi-layer protection

- **AI flame detection** — does not mistake sunlight or smoke for fire.
- **Automatic lid lock** during operation and an **emergency stop button**.
- **Access key** (plus an interlock connector).
- **Alerts**: mainboard temperature, cooling system, liquid level.
- **145 CFM exhaust fan** — route the hose out of a window.

- The P2S comes in **Class 4 laser** and Class 1 versions. Class 4 requires 10.6 µm safety goggles and a trained Laser Safety Officer (LSO).
- Operating temperature 10–30 °C; do not use below 0 °C. In cold rooms, add antifreeze per the table in the manual.
- Never leave the machine unattended and do not process PVC or vinyl.
- The optional **fire safety kit** extinguishes with CO_2.

GENERAL DATA

Machine dimensions	1000 × 639 × 268 mm	**Weight**	45 kg
Max. power	700 W	**Power supply (EU)**	220 V (no wide range)
Laser	55 W CO_2, 10.6 µm, 1.5 mrad divergence	**Pointer laser**	650 nm, 0.39 mW (Class 1)

BUILD YOUR SETUP

Accessories for the P2S



SafetyPro AP2 recommended

Air purifier, 6-stage filtration with cyclone, 150 m³/h, 55 dB, AUTO mode with the P2S. For rooms without outside venting.

Code: P5010391



Fire Safety Kit P2/P2S

CO_2 extinguishing, automatic or by button; cylinders are single-use.

Code: P5010287



Honeycomb Panel P2/P2S

For thin materials and small pieces; usable area 556 × 280 mm.



Riser Base

Objects up to 215 mm, rotary up to Ø 180 mm, load capacity up to 20 kg.



Automatic conveyor feeder

Long pieces up to 3 m and 14 mm thick; deviation under 2 mm per 1000 mm.



RA2 Pro / RA3

RA2 Pro: rollers and chuck (Ø 1–100 mm). RA3 for the P2S requires the Riser Base.

RA2 Pro P5010279 · RA3 P5010457

Extraction and air: the P2S has a built-in exhaust fan and a twin-cylinder air pump (200 kPa) — external air pumps are not supported. For rooms without outside venting we recommend the **AP2**. Spare parts: P2S filter meshes (C3030145000 / C3030146000), P2S mirrors (P5010403), CO_2 material kit (P0104001244).

Advantages

- acrylic of any colour and thick sheets in a single pass
- two 16 MP cameras and LiDAR for precise placement
- 11 processing modes, batches with different designs
- wide range of official accessories

Limitations — good to know

- 45 kg and 1 m wide — needs a sturdy table
- the laser tube is a consumable (6000–8000 hours)
- clean the filter meshes every 4 hours of use
- does not cut metals; for metals we recommend the F1 Ultra

WHY BUY FROM US

See the P2S live in our demo centre in Ljubljana

Our demo centre has the P2S alongside the **F1 Ultra** — we'll demonstrate cutting, engraving and batch processing. We advise on accessories and extraction, and offer support in Slovenian and Croatian.



The first official xTool partner for Slovenia and Croatia: demo centre, sales & service

Graving d.o.o. · Bratovševa ploščad 34, 1000 Ljubljana · demo by appointment

over 35 years of engraving tradition

gravingx.com

+386 1 777 47 44

info@graving.si