Protype CD400
Industrial 3D Printing

Industrial IDEX 3D printer with open material architecture. Predictable production of engineering parts 24/7, dramatically reduced cost per part, and technological independence.

400^3
mm print area

IDEX
2 extruders

10+
days unattended

MARKET CHALLENGES

Factors limiting additive manufacturing efficiency

Closed Materials

Part cost is 5-10x higher. Lock-in to proprietary cartridges inflates economics during the operational phase.

Low Throughput

Equipment is occupied 20+ hours by a single part. R&D queue and production downtime. A second printer is needed.

Passive Chamber Heating

Thermal deformation of parts, geometry distortion, delamination, and increased defect rates.

Manual Filament Change

An operator must manage material changes. The printer sits idle during off-hours — production stops.

FLAGSHIP PRODUCT

Protype CD400 — Industrial IDEX 3D Printer

Two independent extruders, active thermal chamber, and a fully open material system.

IDEX Copy / Mirror

2 independent extruders — x2 parts per shift. Mirror and duplicate printing.

400 x 400 x 400 mm

One of the largest chambers in its class. Large-format parts in a single cycle.

Auto-change 4 x 3 kg

Up to 10+ days of unattended operation. Filament runout sensor.

Open Materials

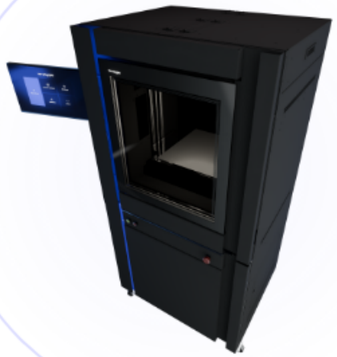
ABS, PA, PC, TPU, PA-CF and more. No filament vendor lock-in.

Active Thermal Chamber

Chamber up to 90 °C, bed up to 150 °C, hotend up to 550 °C. Engineering plastics without delamination.

Full Automation

Auto bed leveling, auto nozzle cleaning, built-in drying and monitoring camera.

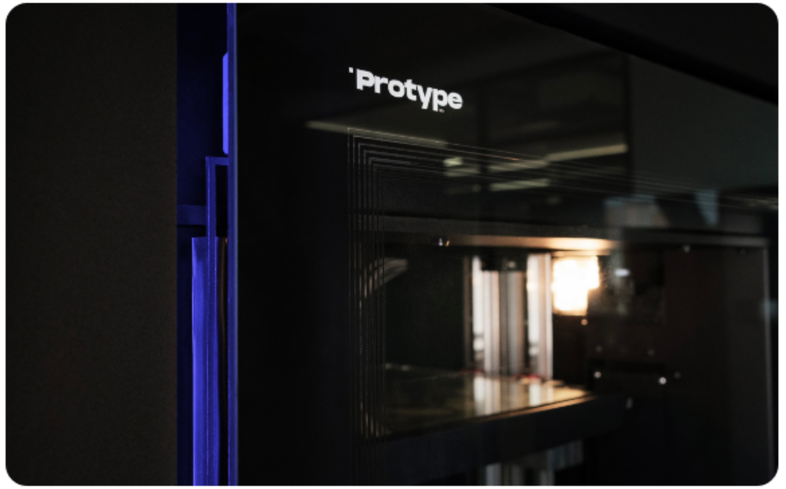


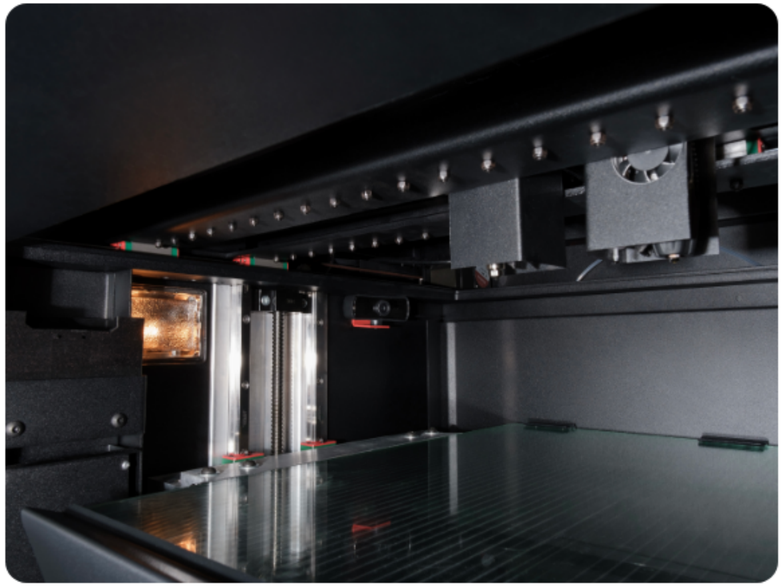
24/7
Continuous printing

x2
Parts (IDEX)

GALLERY

CD400 — Built for Production

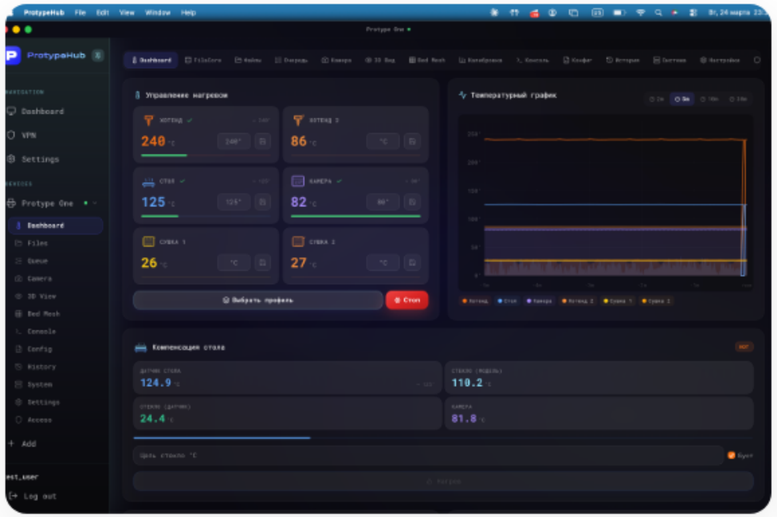




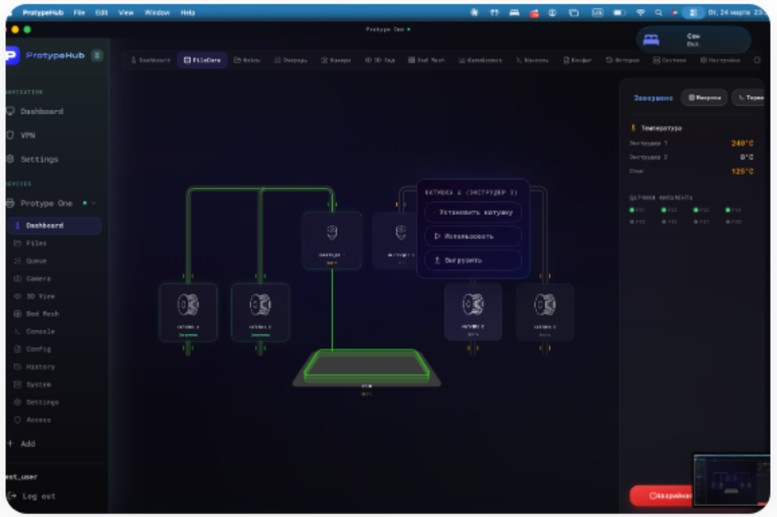
REMOTE MANAGEMENT

Manage your fleet from phone or computer

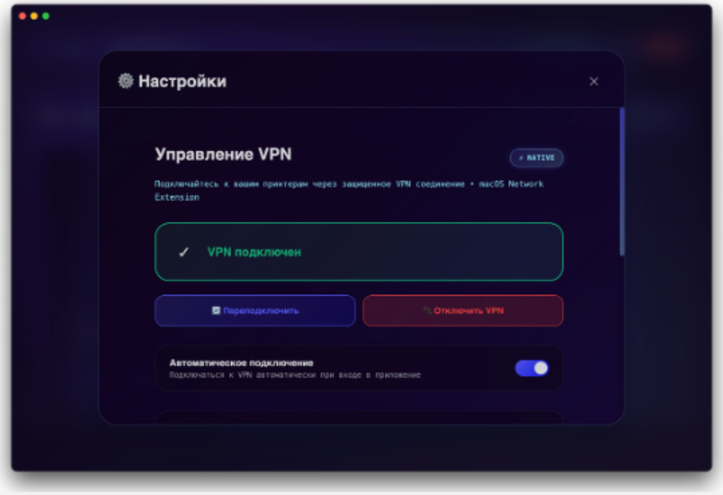
ProtypeHub — a unified application for monitoring and managing all printers. Works via secure VPN from anywhere in the world.



Dashboard — temperatures, print status, real-time graphs



FilaCore — spool management, auto-change, filament remaining



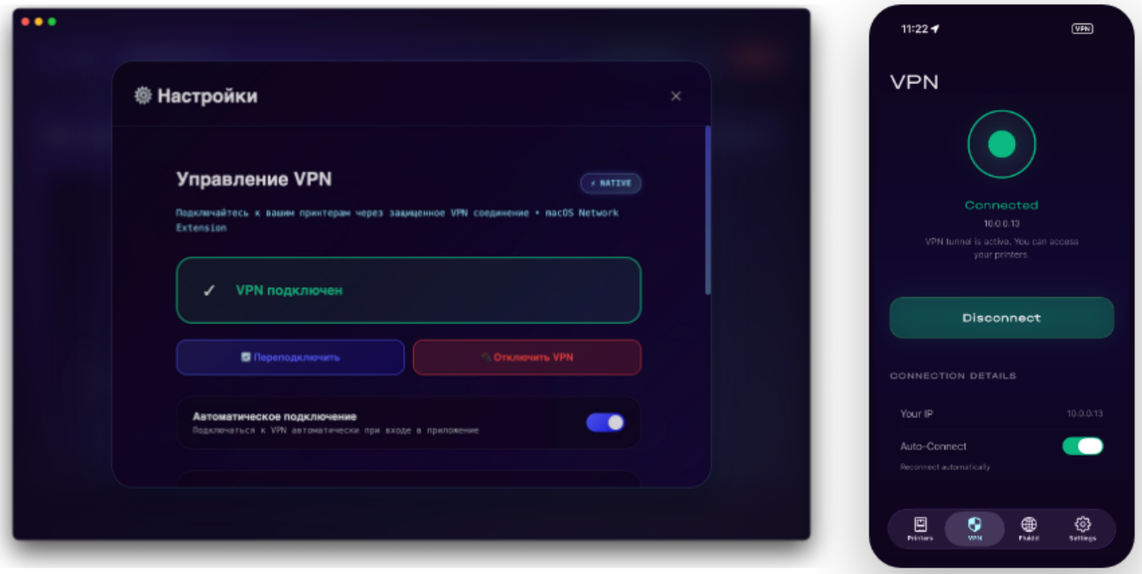
VPN — secure access without static IP, one-click connection

SECURITY

ProtypeVPN — Secure Remote Access System

Encrypted channel for equipment management without compromising the corporate network.

- ✓ **Plug & Play** — plug in the printer and everything works out of the box
- ✓ **Remote Control** — from the office, home, or another facility
- ✓ **Network Protected** — corporate network remains fully closed
- ✓ **Fast Scaling** — connect new printers in minutes
- ✓ **Single Access Point** — scale your fleet across branches with one entry point
- ✓ **Invisible from Internet** — all traffic is encrypted end-to-end



ProtypeVPN provides a secure way to manage production without violating company security policies. Suitable for defense sector and air-gapped networks.

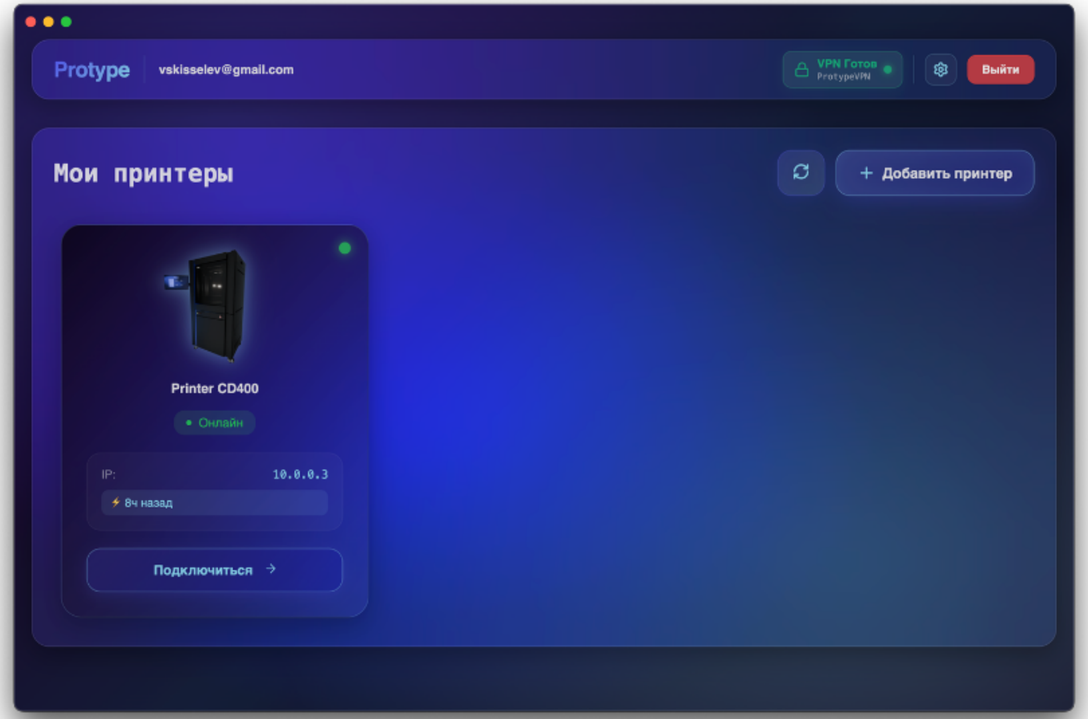
FLEET MANAGEMENT

ProtypeHub: All Printers in One Window

Desktop application for macOS / Windows / Linux. No cloud, no open external ports.

- **Centralized Management** — all printers in a single interface
- **Job Submission** — upload and print in a couple of clicks
- **Real-time Monitoring** — status, queue, print history
- **Camera and Alerts** — 24/7 monitoring from anywhere

0	3 OS
Cloud dependencies	macOS, Windows, Linux



SOFTWARE

ProtypeOS — Proprietary OS

Unified interface on a 22" touchscreen for full print control.

Built-in Slicer

Prepare models and start printing directly from the printer.

Material Profiles

Ready-made settings for ABS, PA, PC, TPU and more.

Queue and Log

Task distribution and complete history.

Remote Access

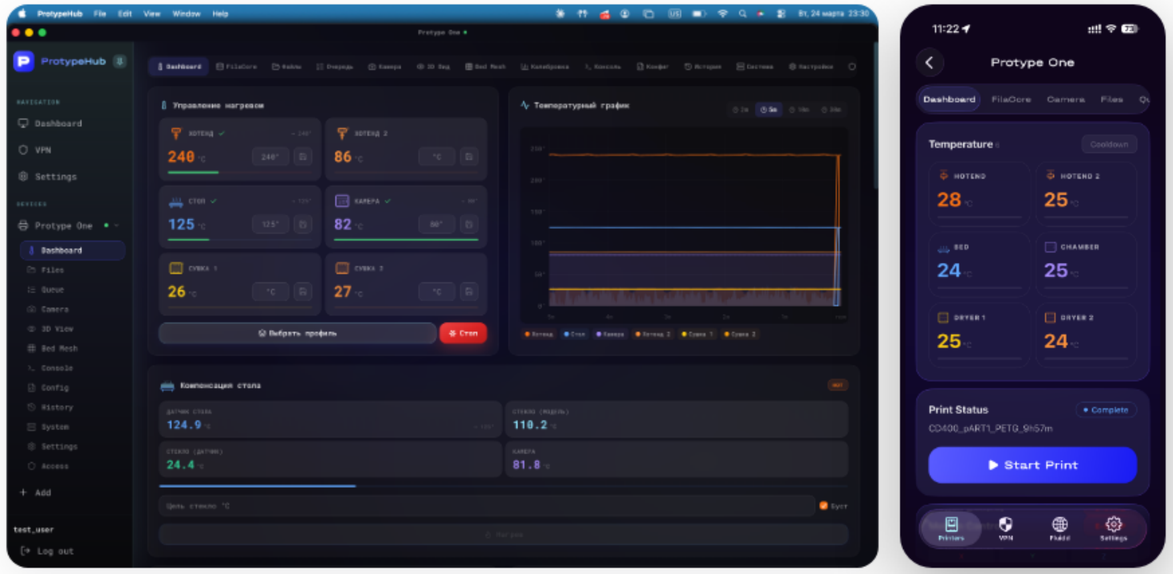
LAN/Wi-Fi — upload models without USB drives.

Roles and Permissions

Operator, engineer, manager.

Logging

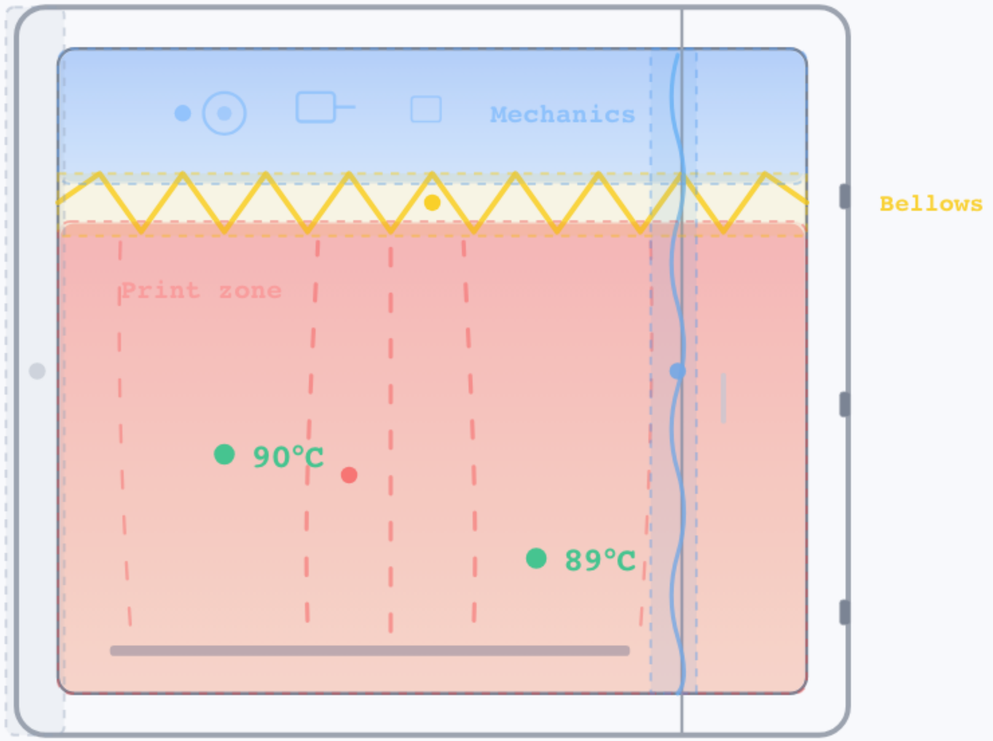
Full traceability for every part.



CD400 THERMAL CHAMBER

Enclosed Thermal Chamber for Stable Printing

For ABS, Nylon, PC, ASA — a stable chamber temperature means no warping and predictable part geometry.



Enclosed Design with Convection

up to 90 °C

Active heating maintains stable temperature and minimizes the impact of the external environment.

Heat-Resistant Components and Seals

no degradation

Designed for prolonged operation at chamber temperatures up to 90 °C without wear.

Body Thermal Insulation

efficient

Reduces heat loss through walls and chamber doors, maintaining stable operating conditions.

Bed up to 150 °C

tempered glass

Automatic leveling, uniform heating — minimal warping across the entire area.

SPECIFICATIONS

Full Technical Specifications

EXTRUDER AND PRINTING

Hotend temperature	up to 550°C
Nozzle diameter	0.3–1.2 mm
Print speed	up to 300 mm/s
Volumetric flow rate	up to 60 mm³/s
XY/Z accuracy	5 µm / 2 µm
Layer thickness	0.05–0.75 mm

CHAMBER AND BED

Print volume	400×400×400 mm
Chamber temperature	up to 90°C
Bed temperature	up to 150°C
Bed surface	Tempered glass
Auto-calibration	Yes

IDEX AND AUTOMATION

IDEX	2 independent heads
Modes	Copy / Mirror
Auto-change	4×3 kg
Auto nozzle cleaning	Yes
Unattended operation	up to 10+ days
Monitoring camera	Built-in

DRYING

Drying chambers	2×up to 80°C
Humidity sensor	Yes
Active ventilation	Yes

COMPATIBLE MATERIALS

Standard	ABS, PET-G, HIPS, TPU
Engineering	PA-6, PA-12, PC, ASA
Composite	PA-CF, ABS-CF, CARBEX

CONTROL AND DIMENSIONS

Display	22" touch HMI
ProtypeOS	LAN, Wi-Fi, VPN
Dimensions	1900×770×920 mm
Weight / Power	380 kg / 4500 W
Warranty	12 months

PLACEMENT

Installation Requirements

No special conditions needed: we reduced the footprint while preserving full chamber volume.

Floor

Level and stable. Doorway ≥ 80 cm (dimensions: 1,900 x 770 x 920 mm).

Electrical

220 V, 50 Hz; dedicated line with grounding; peak power up to 4.5 kW; separate outlet for dryer.

EMI / Interference

Keep away (≥ 1-2 m) from power equipment and cables to avoid interference.

Access and Climate

~50 cm clearance for maintenance; standard ventilation is sufficient.

The printer fits easily in an office and can be transported in a standard elevator

ECONOMICS

ROI of 3D Manufacturing

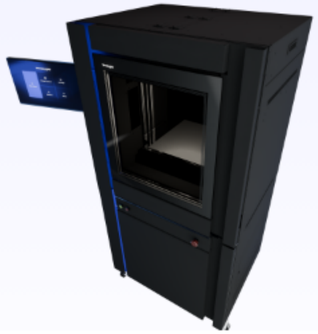
3D printing is an investment asset, not an expense. With a baseline volume of 250 parts per year, equipment pays for itself in 6-12 months.

6-12	5-10x	x2	10+
months payback	cost reduction	parts (IDEX Copy)	days unattended operation

One operator, one connection point, one software license — but 2x more finished products per shift. IDEX Copy/Mirror doubles productivity without buying a second printer. Open materials reduce filament cost by 5-10x compared to closed systems.

PRODUCT LINE

Configuration & Pricing



CD400

Core

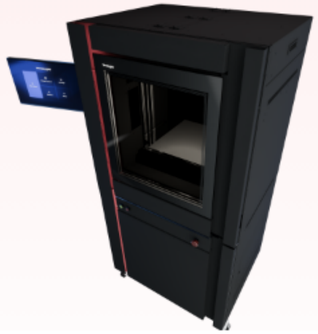
Industrial IDEX 3D printer for serial composite printing.

- Print area 400 x 400 x 400 mm
- IDEX + Copy/Mirror
- Hotend up to 550 °C, chamber 90 °C
- Auto-change 4 x 3 kg
- ProtypeOS + 22" touchscreen

from

111 900 BYN

≈ $39 000



CD400HT

High-Temp

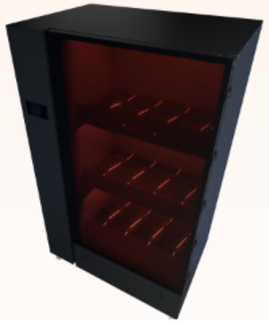
High-temperature 3D printer for PEEK, PEKK, ULTEM.

- Extruder up to 550 °C
- Chamber up to 150 °C, bed up to 250 °C
- Print area 350 x 350 x 400 mm
- Drying up to 130 °C

from

159 200 BYN

≈ $55 500



FILO

Dryer

Industrial drying cabinet for filament.

- Up to 12 spools x 3 kg
- Temperature up to 130 °C
- Closed loop with desiccant
- Connects up to 3 printers

from

26 100 BYN

≈ $9 100

Ecosystem approach: all three products work as a unified system. FILO feeds dry material to CD400/CD400HT; ProtypeOS provides unified management.

Protype

What's Next?

1

We calculate the benefit

We analyze your tasks and select the optimal equipment configuration.

2

We install and train

A Protype engineer visits on-site, installs the equipment and trains your team.

3

We support

Technical support, software updates, service and warranty up to 36 months.

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