

Formnext 2025

"Industrial applications and the commercial potential of Additive Manufacturing"

Suuret muovitulosteet

Kooste messuilla esillä olleista
FGF-tulosteista

THE VISIONARY
SEES BEYOND LIMITS

Imagining designs
and geometries no one
thought possible.



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SAVONIA



3D-tulostuksen yhteishanke

Meriteollisuus Kalastusvene



Materiaali: CEAD HDpro, Koko: 3550 x 1950 x 1190 mm, Paino: 820 kg, Tulostusaika: 88 tuntia

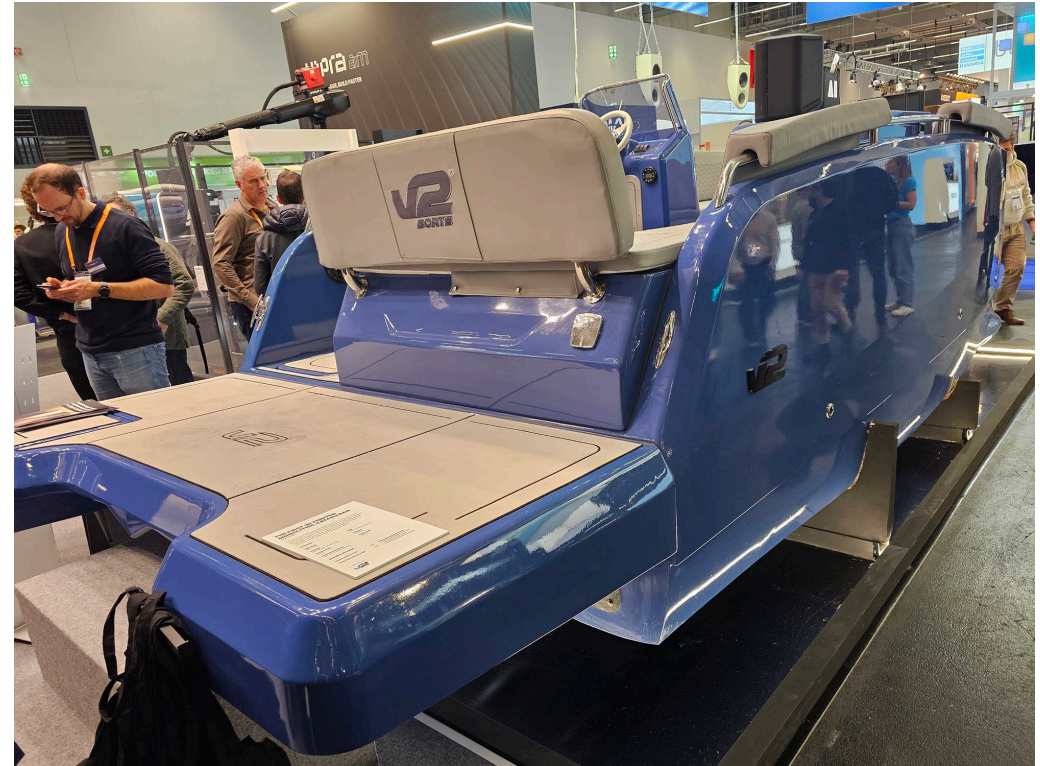
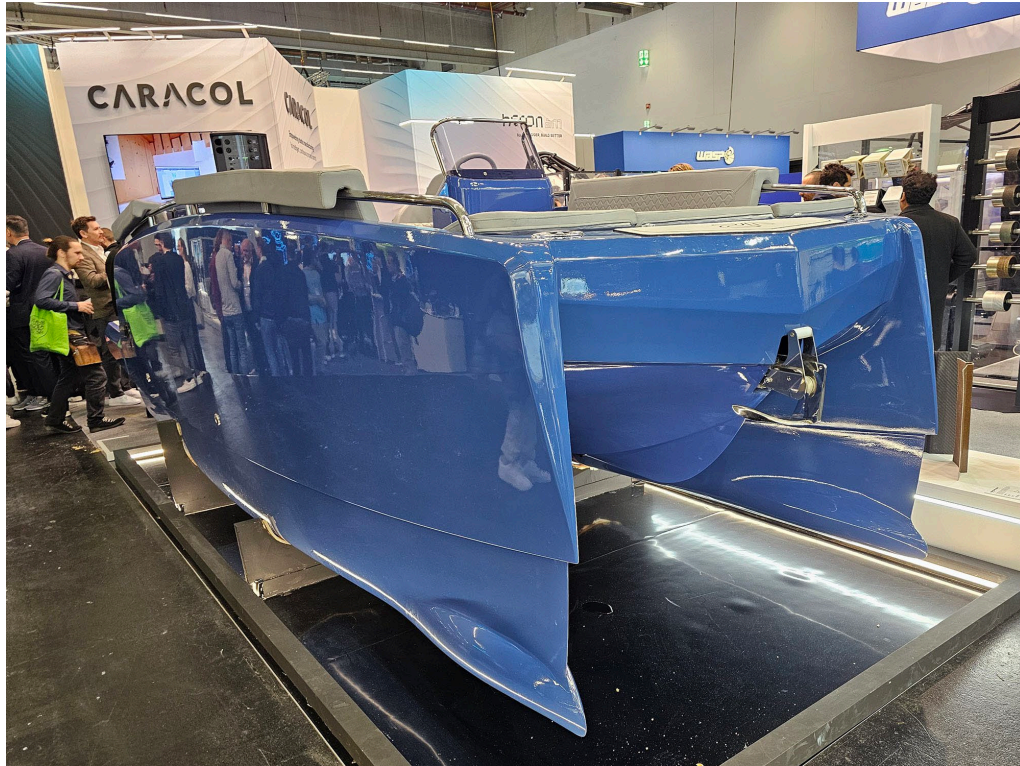


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Meriteollisuus Katamaraani



Materiaali: rpp+30%GF, Koko: 6100 x 2300 x 1500 mm, Paino: 1200 kg, Tulostusaika: 180 tuntia



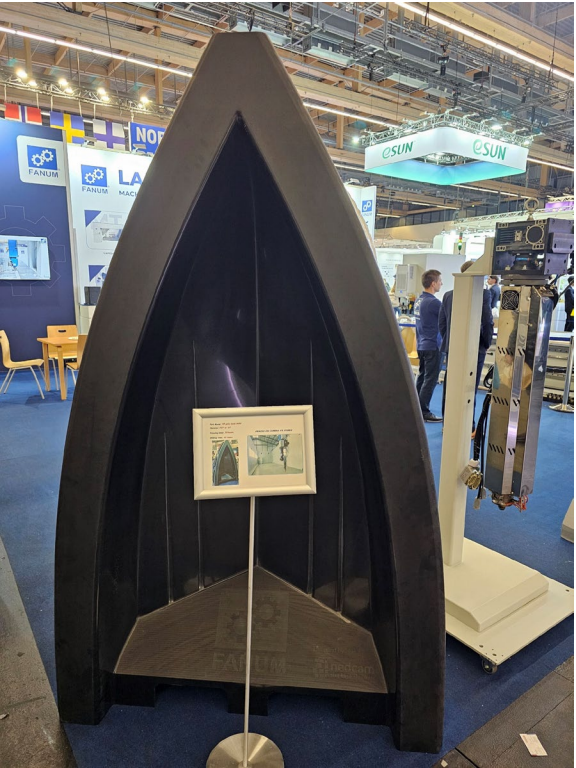
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Meriteollisuus

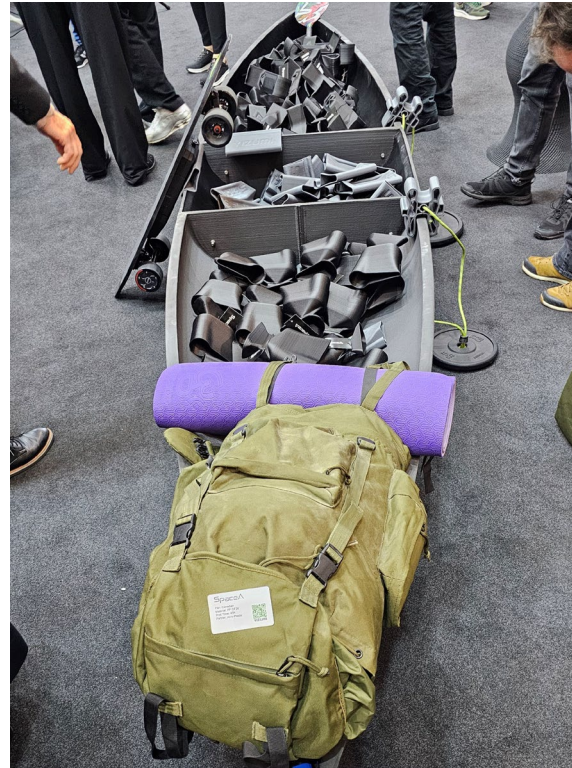
Venemuotit, kanootti, drone



Fanum, Material: PETG GF
Print time: 30+45 h



Fanum
Material: EPS



Izumi, Material: PP CF30, Print time: 45 h



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Muotit ja työkalut



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Vacuum workholding

- Material: Recycled PC (25% CF)
- Manufacturer: Breton
- Machine: Breton Genesi E4 A+M
- Post-processing: CNC
- Build time:
 - Printing: 9 h
 - Machining: 20 h



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Trim Fixture

- Application: Aerospace composite fan cowl vacuum trim fixture
- Manufacturer: Airtech
- Printer: Thermwood 1040 LSAM
- Material: Dahltram® T-100GF (30% GF)
- Dimensions: 1200 x 1000 x 920 mm
- Weight: 230 kg



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Autoclave tool

- Material: PESU (GF reinforced)
- Manufacturer: Krauss Maffei, Lehvoss, Airbus, Becker Karbon
- Printer: Krauss Mafferi PowerPrint Plus
- Notes:
 - Thermal stability up to 220 °C



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Concrete formwork

- Application: 3D-formwork for concrete casting
- Manufacturer: Zeisberg, CEAD
- Printer: CEAD Hybrid Flexcube
- Material: Dahltram® T-100GF (30% GF)
- Weight: 70 kg
- Printing time: 20 h
- Layer height: 3 mm
- Layer width: 22 mm
- Nozzle size: 18 mm



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Carbon fiber preforming tool

- Enables the creation of carbon fiber panels for industrial machines
- Manufacturer: CPC group, Caracol
- Material: rPET-G + 30% GF
- Dimensions: 835 x 1400 x 350 mm
- Weight: 65 kg
- Print time: 10 h
- Post-processing: CNC
- Benefits:
 - Weight reduction: 75%
 - Waste reduction: 20%



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Train front cover

Functional, finished part, certified according to the EN-45545

- Material: PA6 + 25% GF (fire retardant)
- Dimensions: 1800 x 800 x 80 mm
- Nozzle: 3 mm
- Weight: 20 kg
- Print time: 18 h
- Post-processing: Trimming & painting
- Benefits:
 - Lead time reduction: 70%
 - Waste reduction: 40 %
 - Cost reduction: 30 %



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Trimming tool

- Manufacturer: CEAD, Adaxis, TMS
- Material: PETG-1113 (30% GF)
- Weight: 105 kg
- Dimensions: 600 x 450 x 1200 mm
- Post-process: CNC
- Build time:
 - 16 h (printing)
 - 15 h (CNC)



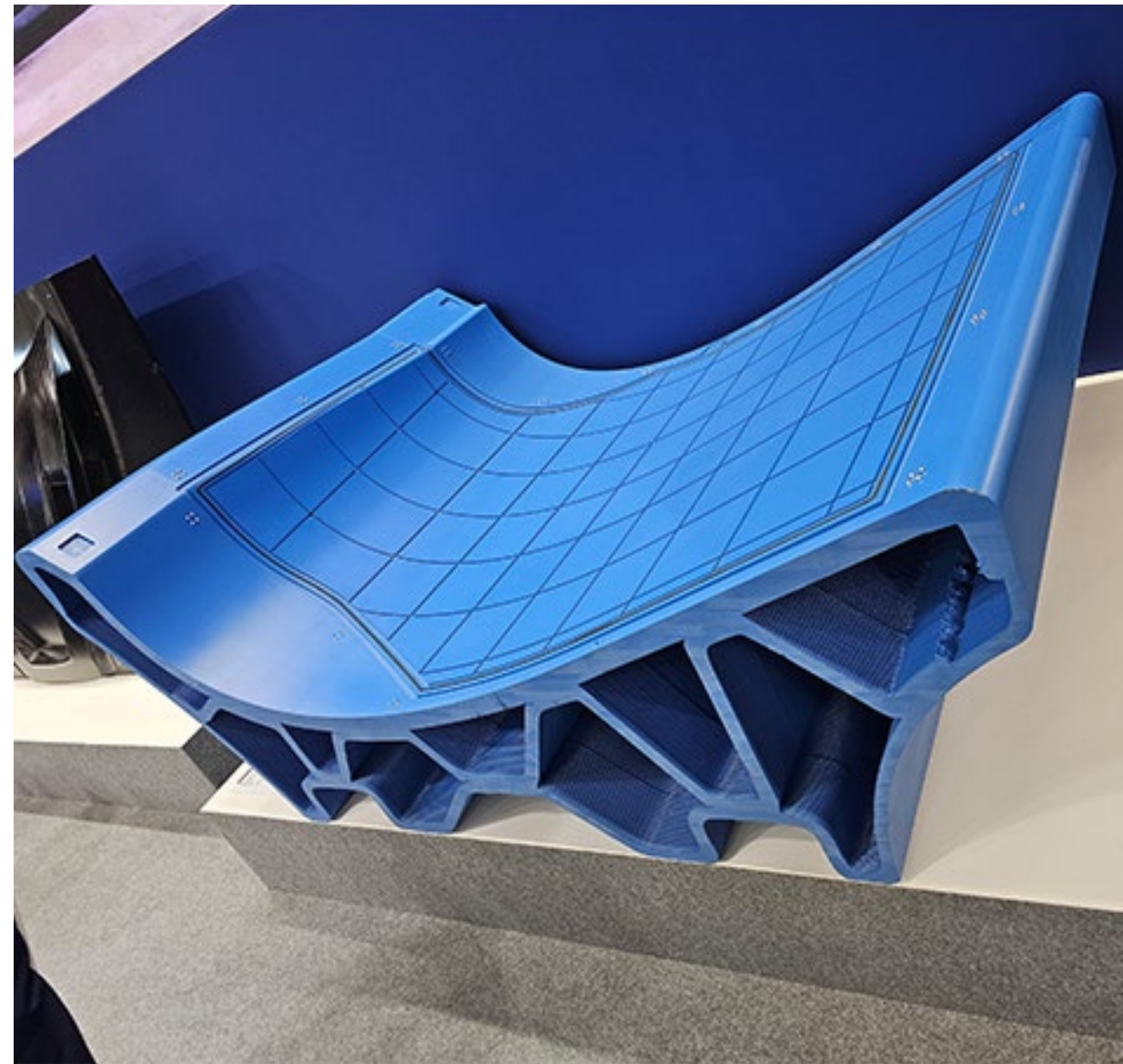
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CRFP Machining Vacuum Fixture

- Application: Aerospace
- Dimensions: 2200 x 1500 x 900 mm
- Weight: 470 kg
- Material: PC + 20% GF
- Extruder: 100 kg/h
- Build time:
 - Printing: 26 h
 - Machining: 12 h



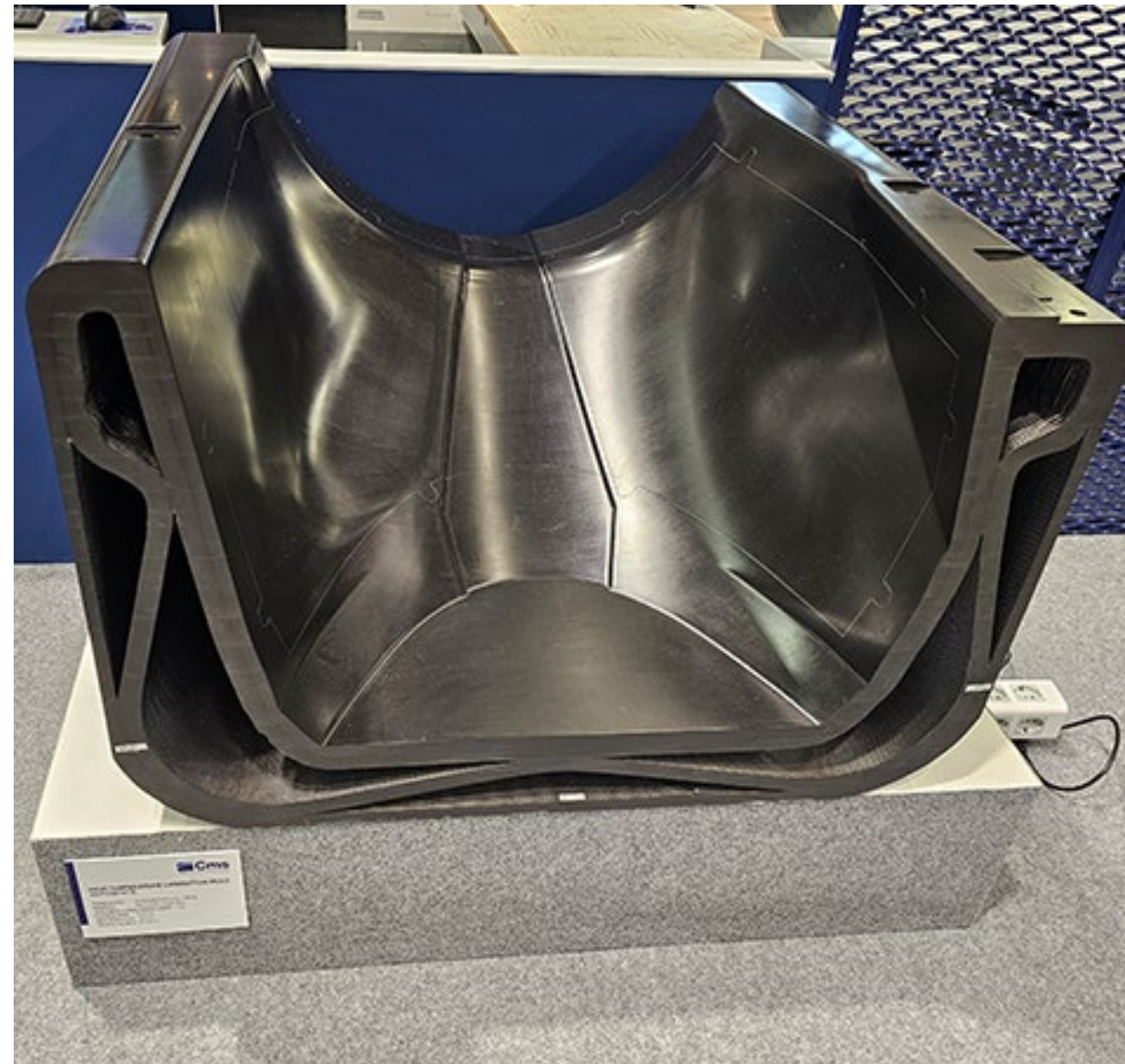
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High temp lamination mold

- Application: Aerospace
- Manufacturer: CMS
- Material: PEI + 20% CF
- Dimensions: 1200 x 900 x 1000 mm
- Printing time: 8 h
- Machining time: 24 h
- Weight: 190 kg
- Wall thickness: 36 mm
- Autoclave curing temperature: 170 °C



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Direct lamination mold

- Maserati MV3200 GTC Hood
- Manufacturer: CMS
- Dimensions: 1600 x 1300 x 400 mm
- Weight: 230 kg
- Material: PC (20% CF)
- Build time:
 - Printing: 17 h
 - Machining: 20 h
- Extruder: 30 kg/h



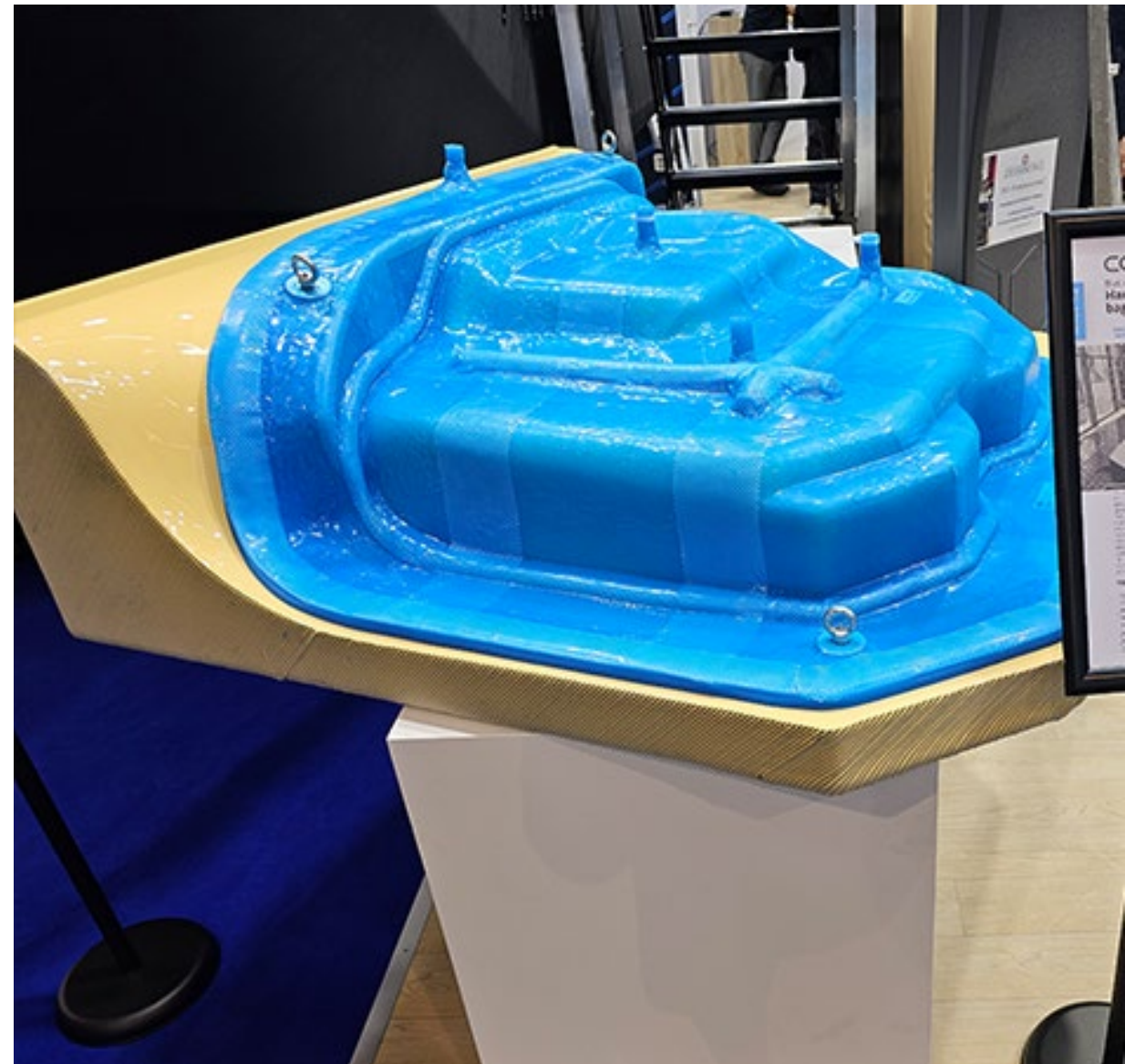
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Bus engine cover tool

- Hand Layup with reusable silicone bagging
- Manufacturer: CEAD
- Printer: CEAD Hybrid Flexbot
- Material: Polymaker Polycore PETG-1013
- Dimensions: 1280 x 1240 x 410 mm
- Weight: 90 kg
- Printing time: 20 h
- Layer height: 4 mm
- Layer width: 21 mm
- Nozzle: 12 mm



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Manhole chamber base

- Material: ABS (20% CF)
- Weight: 100 kg
- Printing time: 11 h
 - (3 bases = 3.5 - 4h per part)



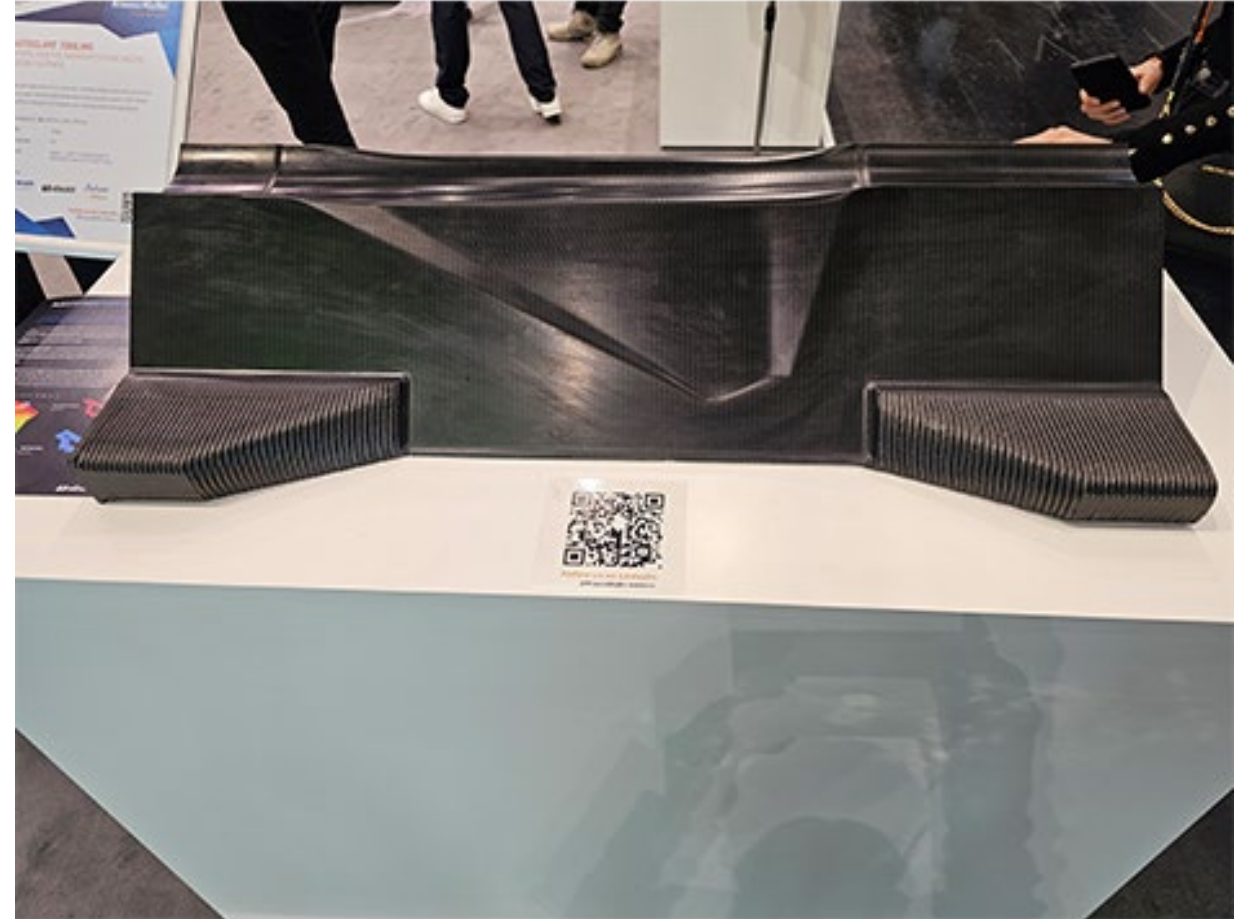
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Autoclave tooling

- Enables high-temperature autoclave processes ($> 180^{\circ}\text{C}$).
- Manufacturer: WARR rocketry, aibuild, Sabcic, Krauss Maffei
- Dimensions: 910 x 560 x 170 mm
- Material: SABIC LNP Thermocomp E004EXAR1 (20% CF ULTEM PEI)
- Printing time: 9 h
- Weight: 26 kg
- Post-processing: milling



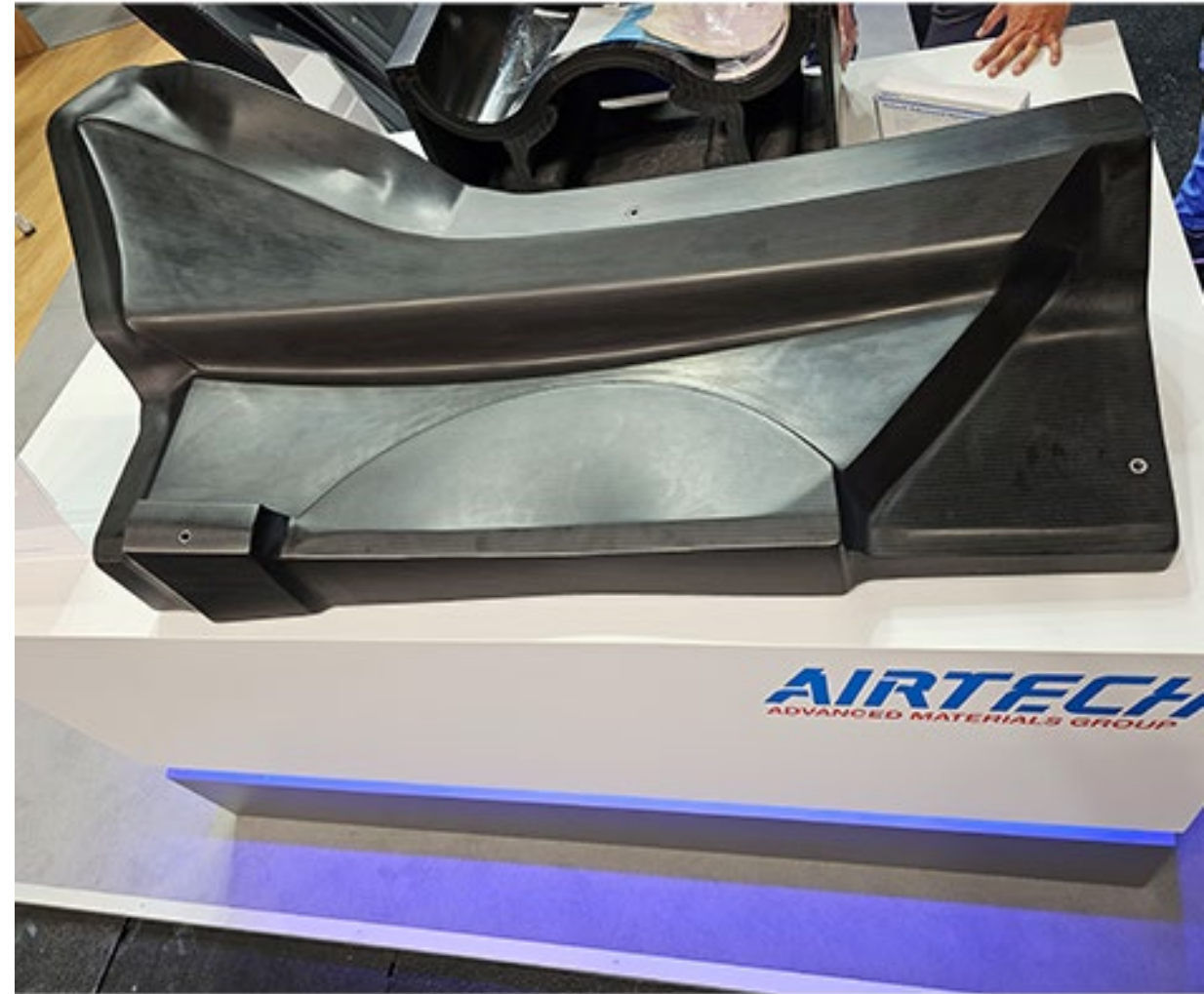
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Panel Mold

- Application: Kimera Automobili EVO37 Rear Quarter Panel Mold
- Printer: CEAD Flexbot
- Manufacturer: Airtech
- Material: Dahltram® C-250 CF
- Dimensions: 1400 x 700 x 400 mm
- Weight: 85 kg
- Printing time: 15 h



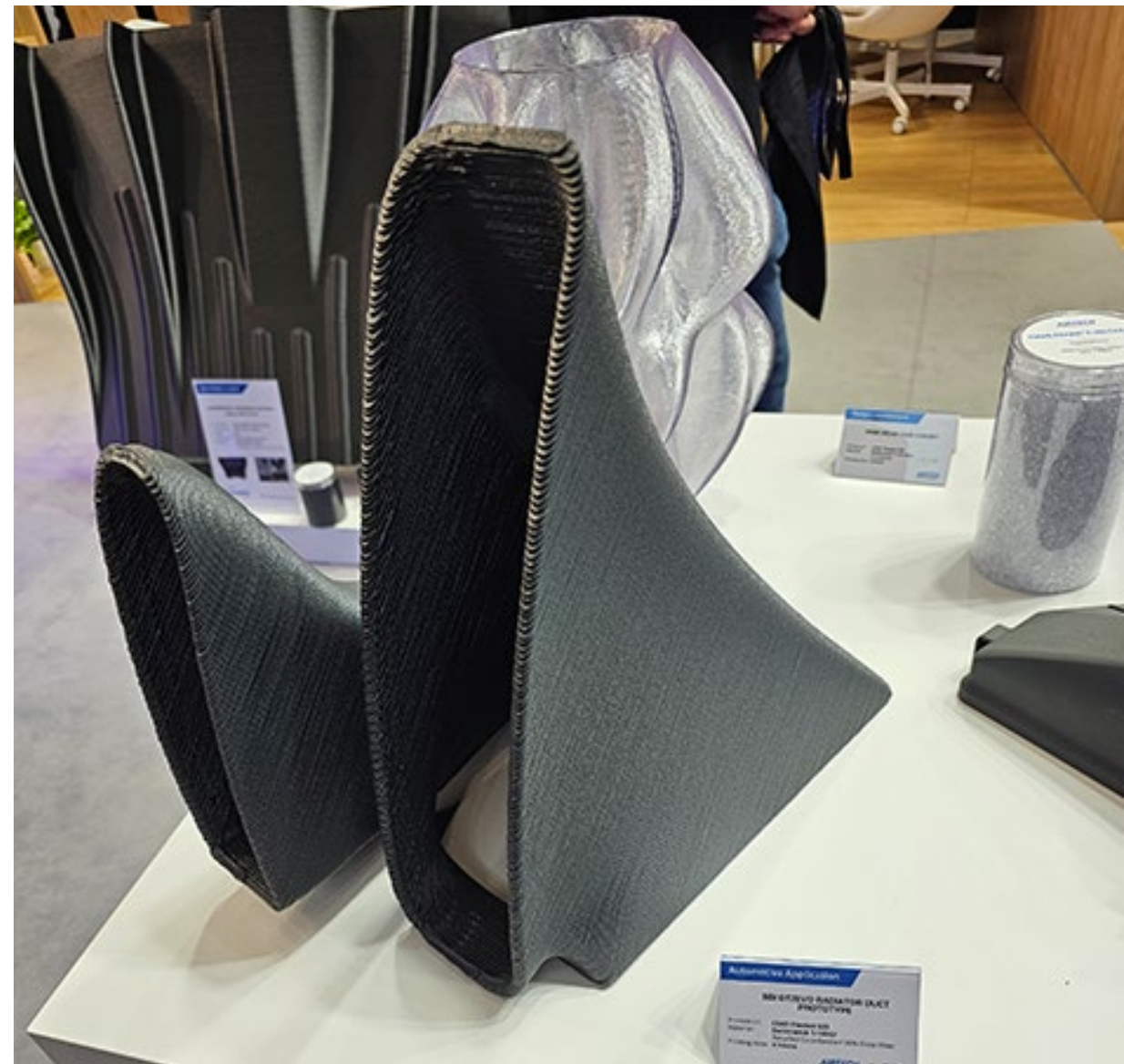
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Radiator duct

- Application: BBI GT2EVO radiator duct prototype
- Printer: CEAD Flexbot
- Manufacturer: Airtech, bbi motorsport
- Material: Dahltram® T-100GF
- Printing time: 4 h



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RTM Mold

- Application: Carbon fiber propeller mold
- Dimensions: 450 x 350 x 1475 mm
- Material: Polycore PC-7413 (20% CF)
- Weight: 90 kg
- Printing time: 18 h



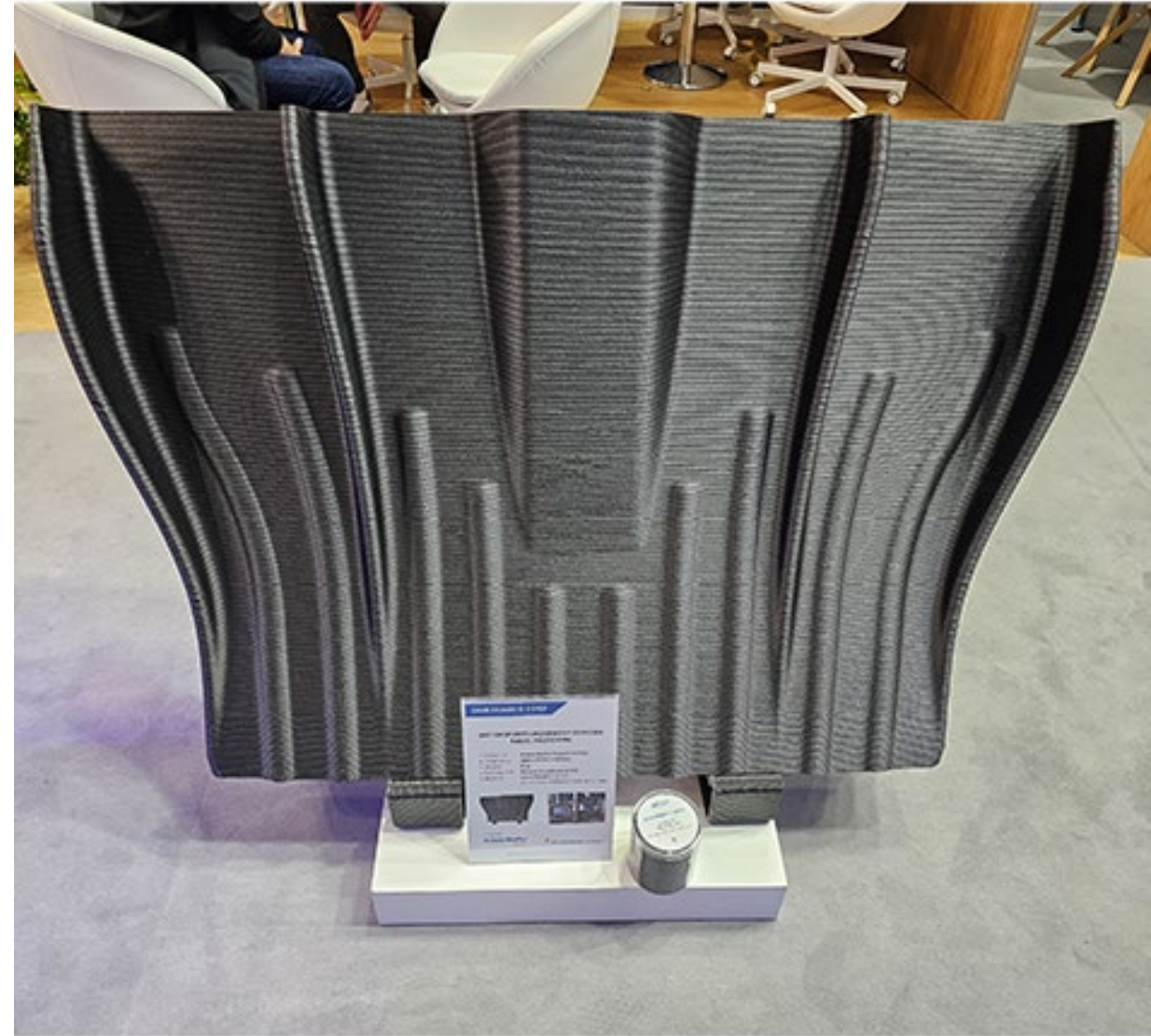
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Underbody diffuser panel

- Application: Motorsports underbody diffuser panel prototype
- Manufacturer: Krauss Maffei
- Printer: Krauss Maffei PowerPrint Flex
- Material: Dahltram® C-327CF (20% CF)
- Dimensions: 1320 x 1000 x 260 mm
- Weight: 8 kg
- Print time: 8 hours (2 parts)



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Wood pressing mold

- Manufacturer: CEAD
- Dimensions: 420 x 210 x 480 mm
- Weight: 40 kg
- Material: Airtech T100GF
- Printing time: 4.5 h
- Layer height: 12 mm
- Benefits:
 - Lead time reduction
 - Lightweight design
 - Recyclability



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Huonekalut ja sisustuselementit



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Smart materials 3D



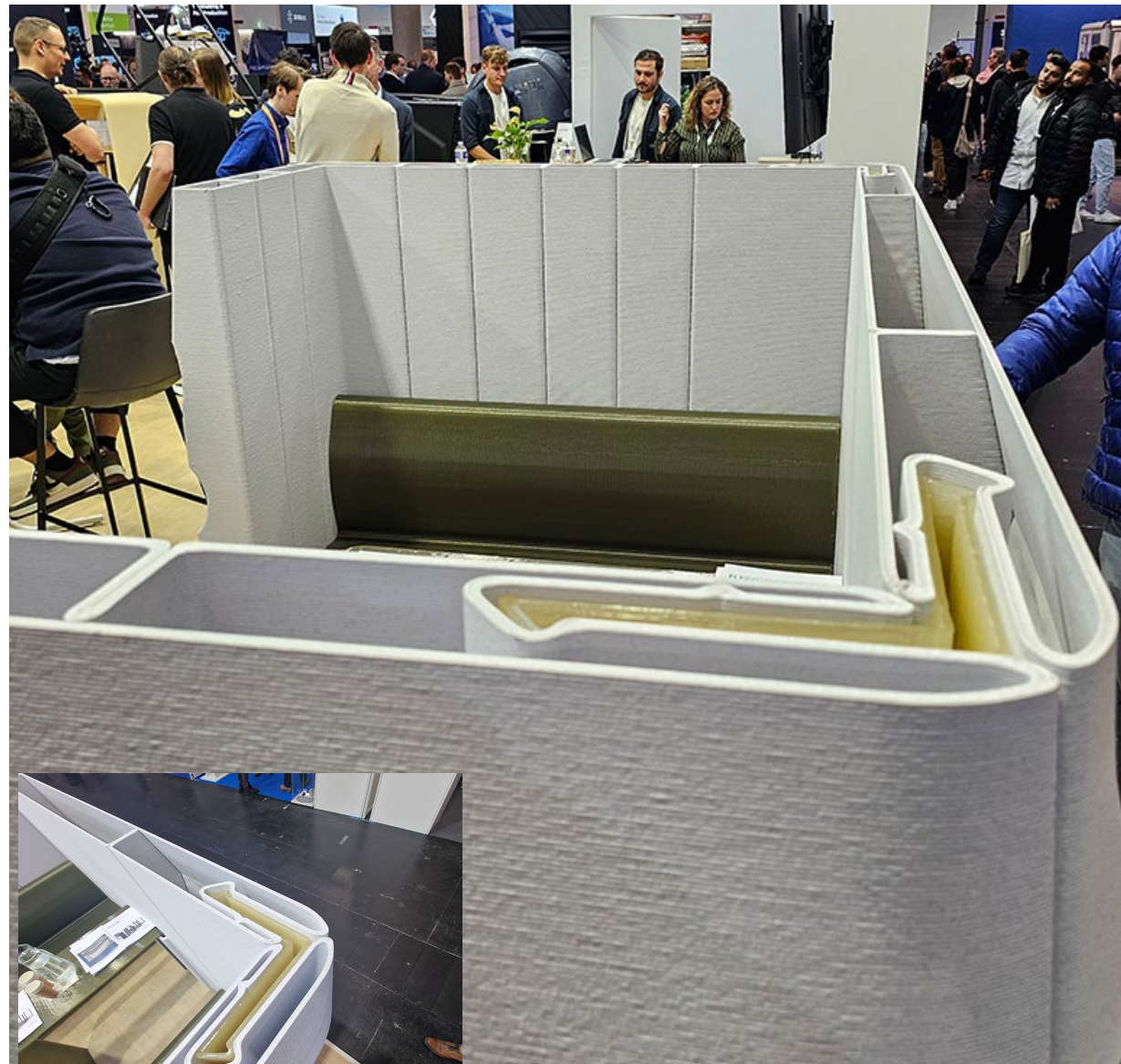
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CEAD



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[Bio-based Facade Panels: Sustainable Design through Large-Scale AM](#)



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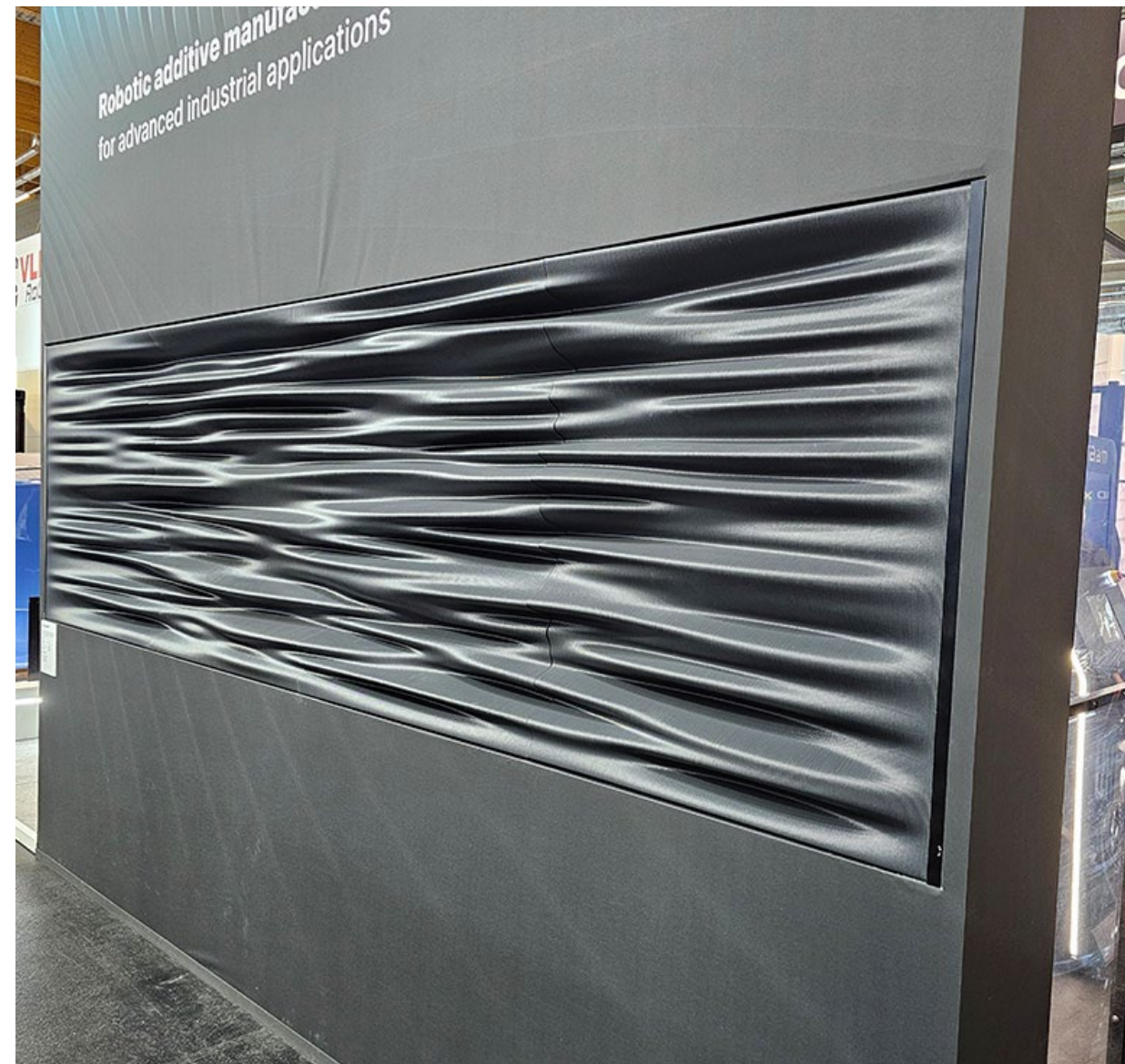
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Seinäpaneeli

Valmistaja: Caracol

- Järjestelmä: Heron 300 – HV extruder
- Materiaali: rPETG + 30% GF
- Suutin: 5 mm
- Koko: 990 x 150 x 1100 mm
- Paino: 35 kg (kpl)
- Tulostusaika: 11 h
- Muuta
 - Modulaarinen ja skaalattava



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Wave wall panels

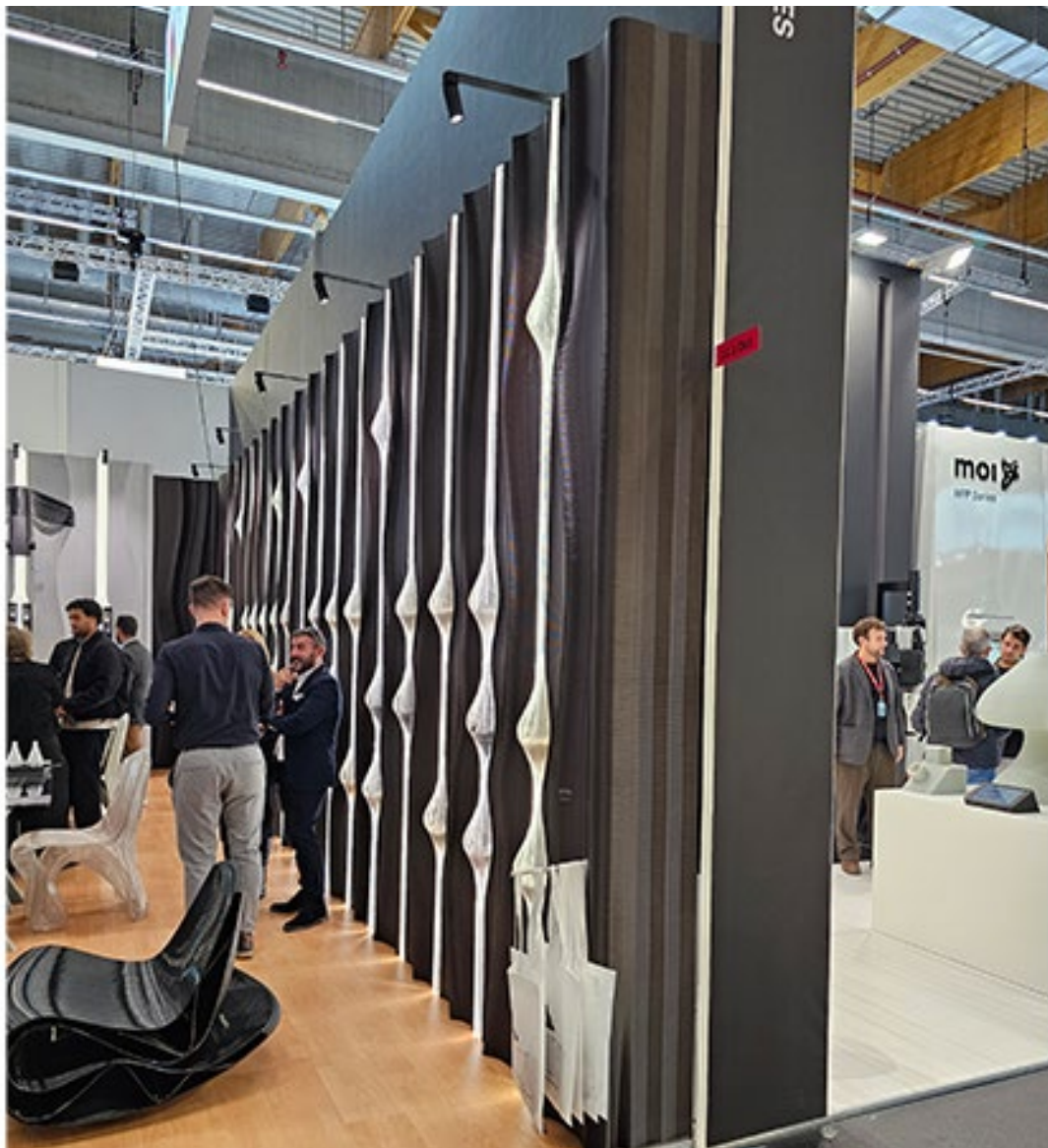
- Manufacturer: CEAD, Lamáquina
- Printer: CEAD Flexbot
- Material: Polycore PETG-1000 R85
- Dimensions: 691 x 767 x 2233 mm
- Weight: 80 kg



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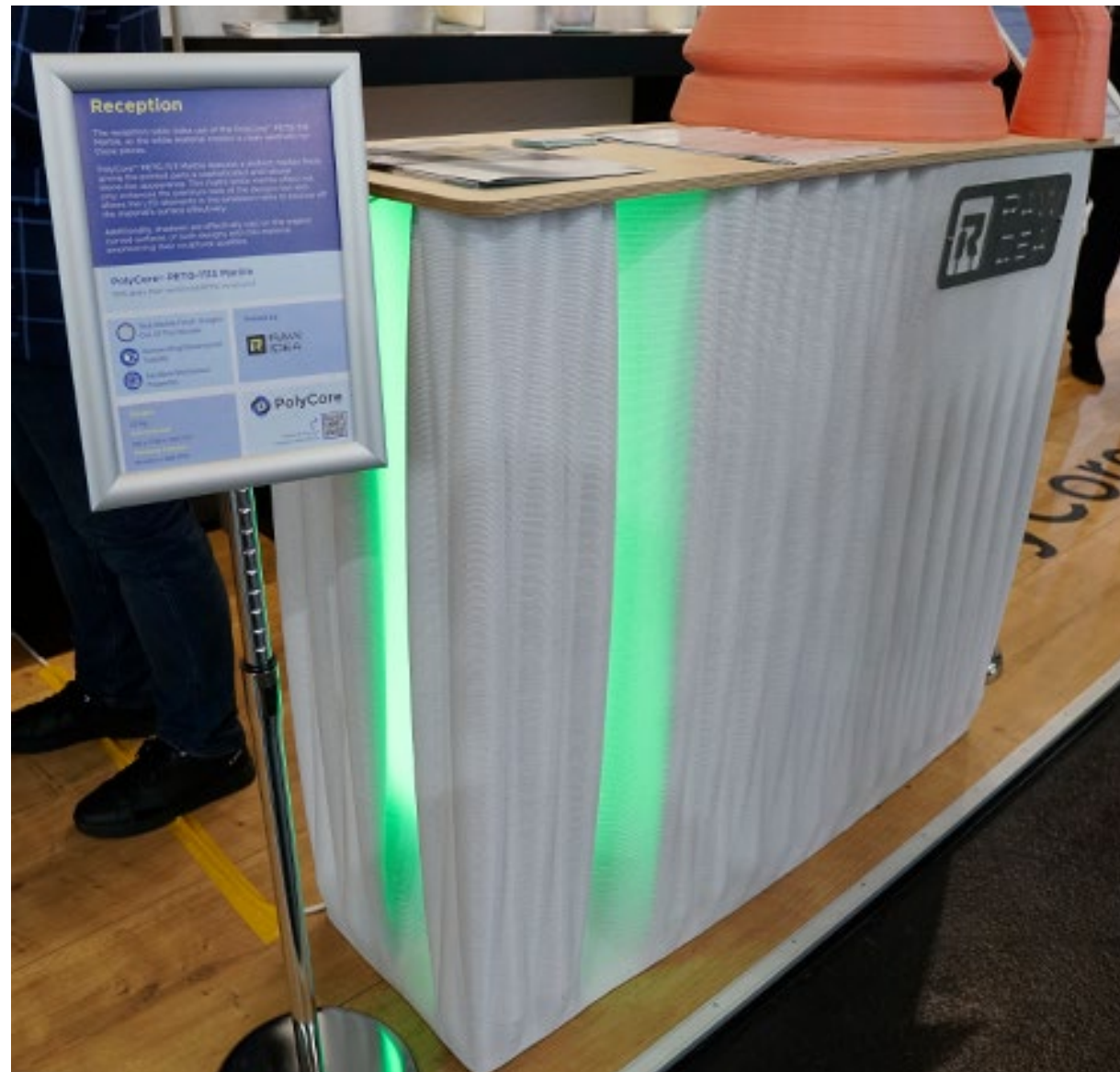
Seinäpaneelin materiaali: RPETG Cork



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[Breton Kitchen Island](#)

Dimensions: 3000 x 1000 x 900 mm

Weight: 450 kg

Material: rPETG (30% GF)



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Pingispöytä ja mailat

Valmistaja: Airtech

- Materiaali: Dahltram® S-150CF (ABS 20CF)
- Laite: Thermwood 1040 LSAM
- Mitat: 2200 x 1000 x 900 mm
- Paino: 220 kg
- Tulostusaika: 8 tuntia
- Mailat
 - Kahvat: Kimya TPU
 - Mailapinta: Kimya PLA-HI



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Plant Pot

- Manufacturer: Adddix
- Printer: Weber DXR
- Material: SikaBiresin TP400
- Printing time: 12 h
- Nozzle size: 4 mm
- Notes:
 - Plant pot modularly expandable



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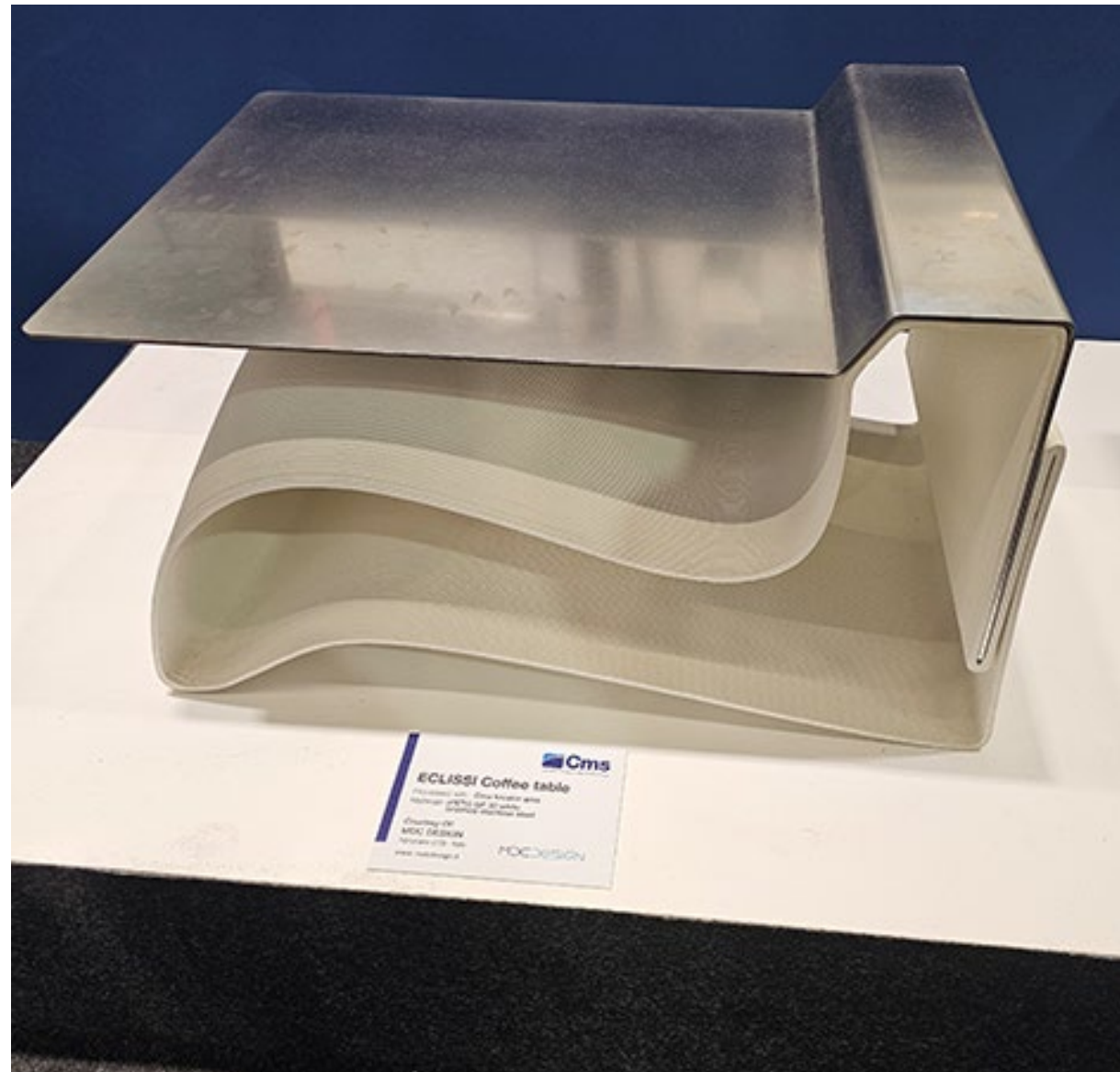




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[Septa](#)



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[Sss'aa HIVE](#)



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Smart materials 3D: Materiaali, RPETG GF



CMS & MDC Design: "My Coffee Mug", Materiaali: rPLA



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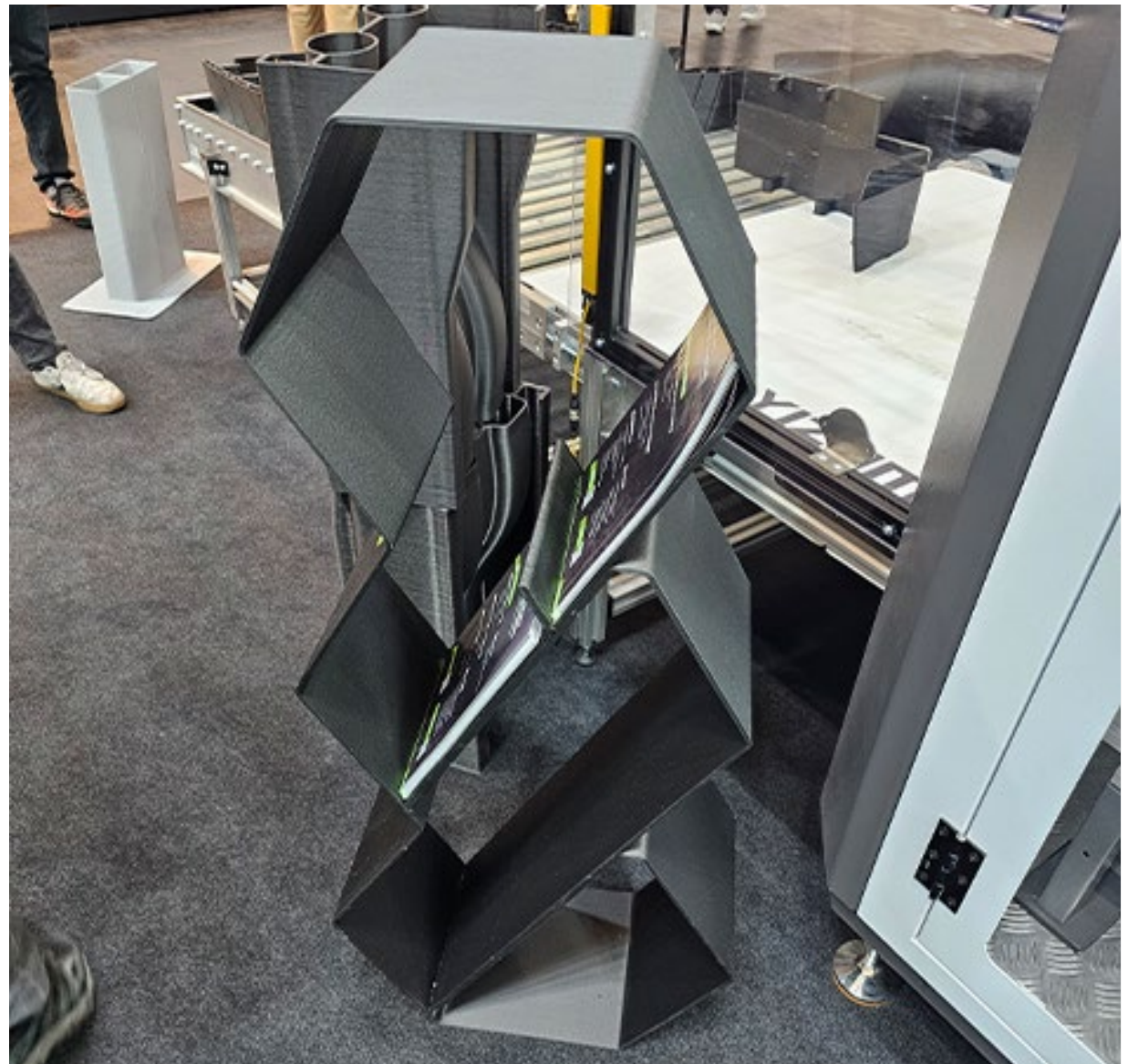




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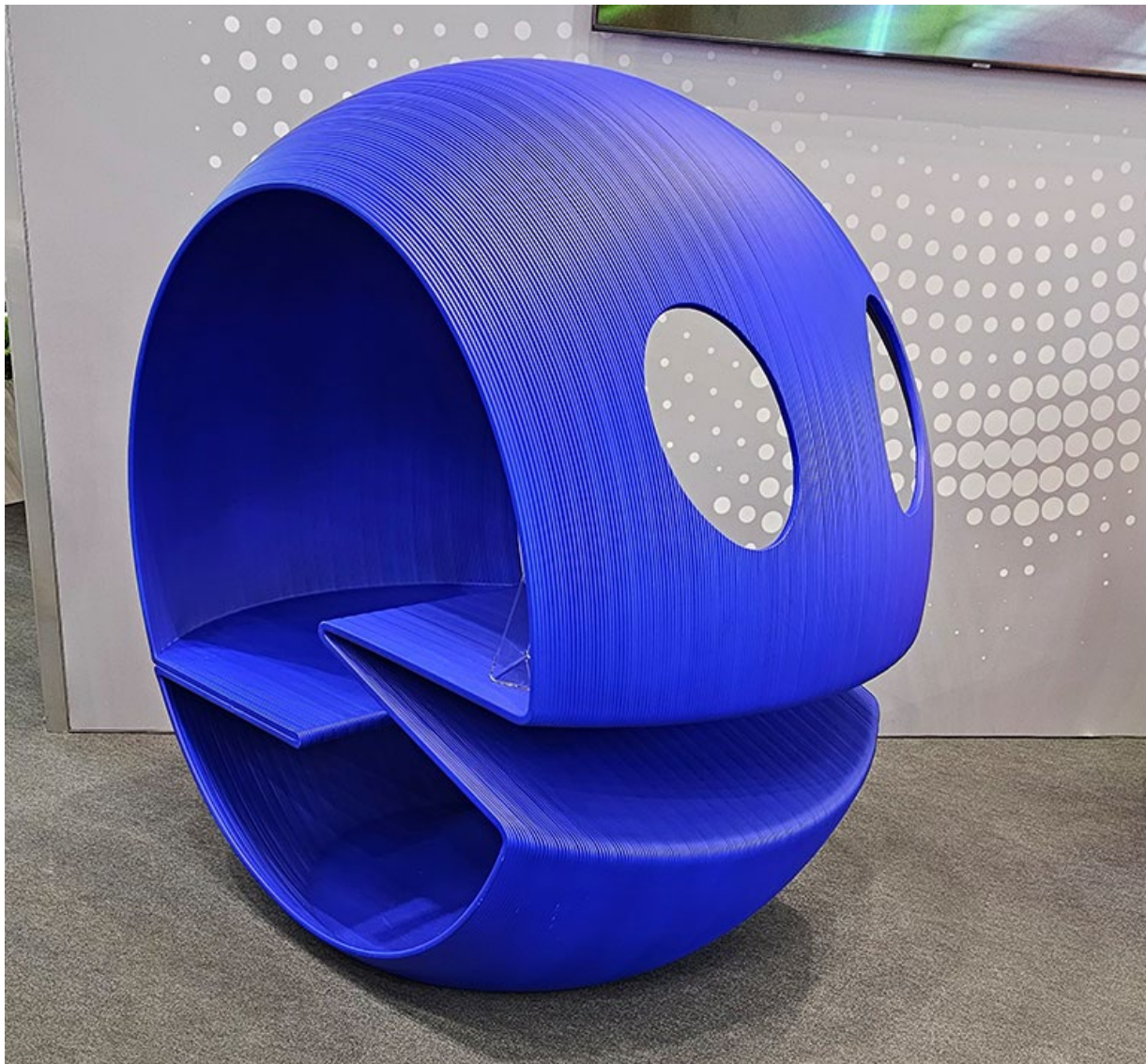
[Parametrically designed furniture](#)
Material: PLA-cellulose composite



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Stylplex



Stylplex



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Muuta



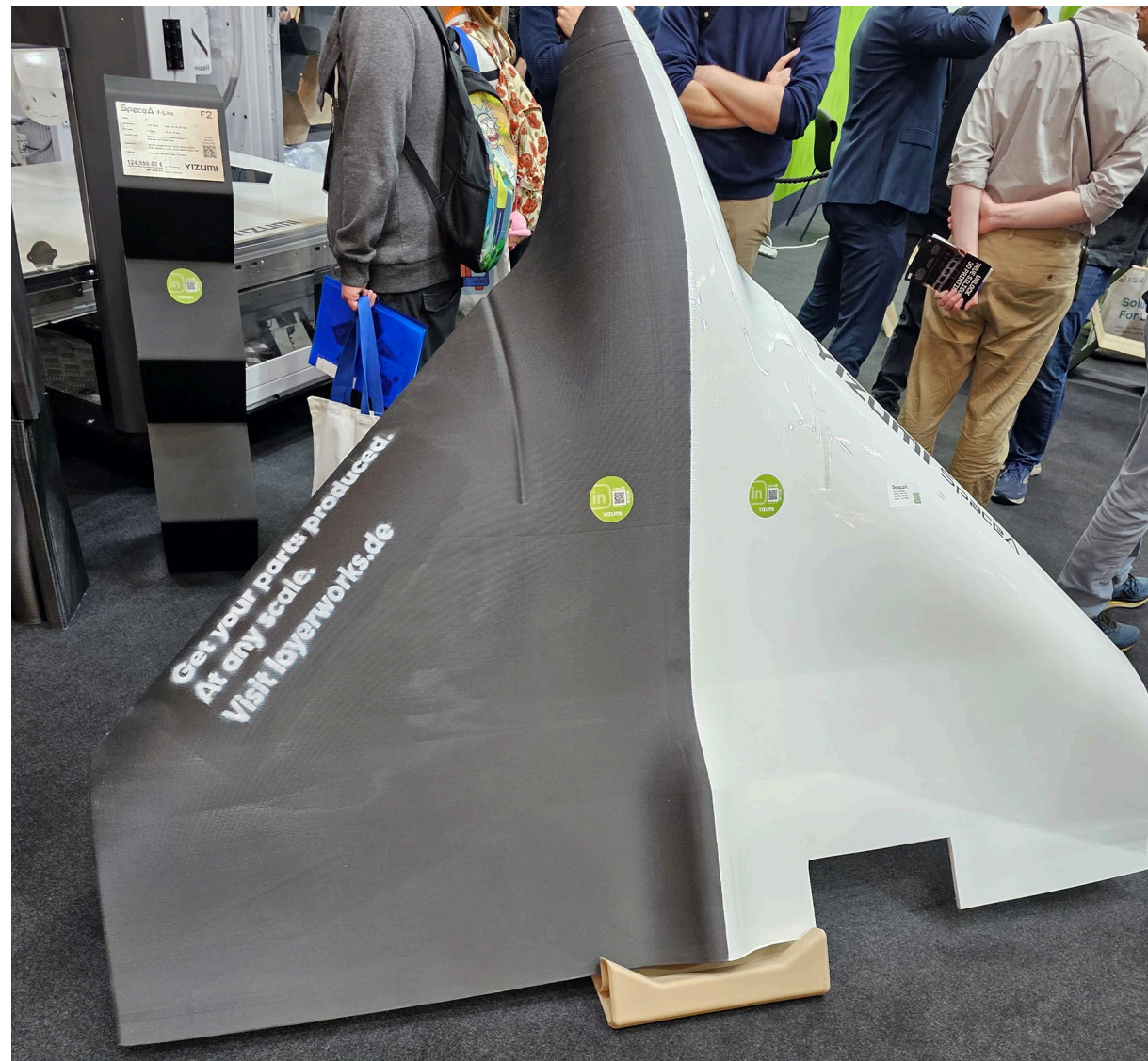
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Vaahumuovitarjotin linseille
Materiaali: TPE-Foam



Drone runko
Materiaali: PA6 CF30, Tulostusaika: 161 min



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Pipe Shaft

- Manufacturer: Alois Bader AG Switzerland
- Printer: Yizumi SpaceA B-Line
- Material: SikaBiresin TP201
- Printing time: 5 h
- Nozzle size: 2 mm
- Notes:
 - Hot-Air welded with PE100



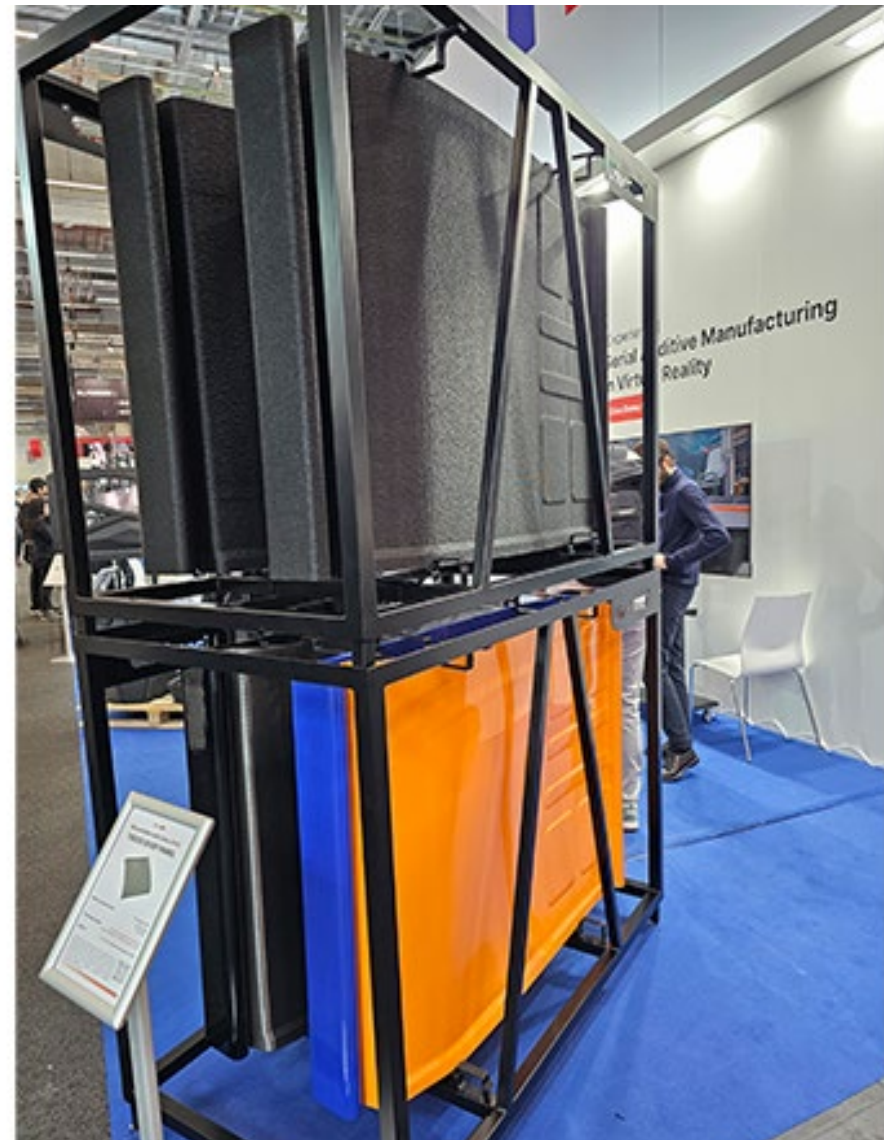
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Perämootorin kotelo, 40 kpl / viikko (Materiaali: PP GF30)



Rekan kattopaneeli, 180 kpl / viikko (Materiaali: PP GF30)



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Car parts

- Manufacturer: Fanum
- Formula front nose wing
 - Material: PET-G Grey
 - Printing time: 6 h
 - Milling time: 2 h
 - Weight 20 kg
- Nose cone formula 1
 - Printer: Fanum Lambda VTS Hybrid
 - Material: Dahltram C-250GF
 - Printing time: 6 h
 - Milling time: 3 h
 - Weight: 30 kg



Monihorn speaker system

- Manufacturer: CEAD & Addit Audio
- Material: Dahltram® T-100GF (rPETG 30% GF)
- Manufacturer: CEAD
- Printer: CEAD Hybrid Flexcube
- Dimensions: 400 x 400 x 1000 mm
- Weight: 17 kg
- Printing time: 6 h



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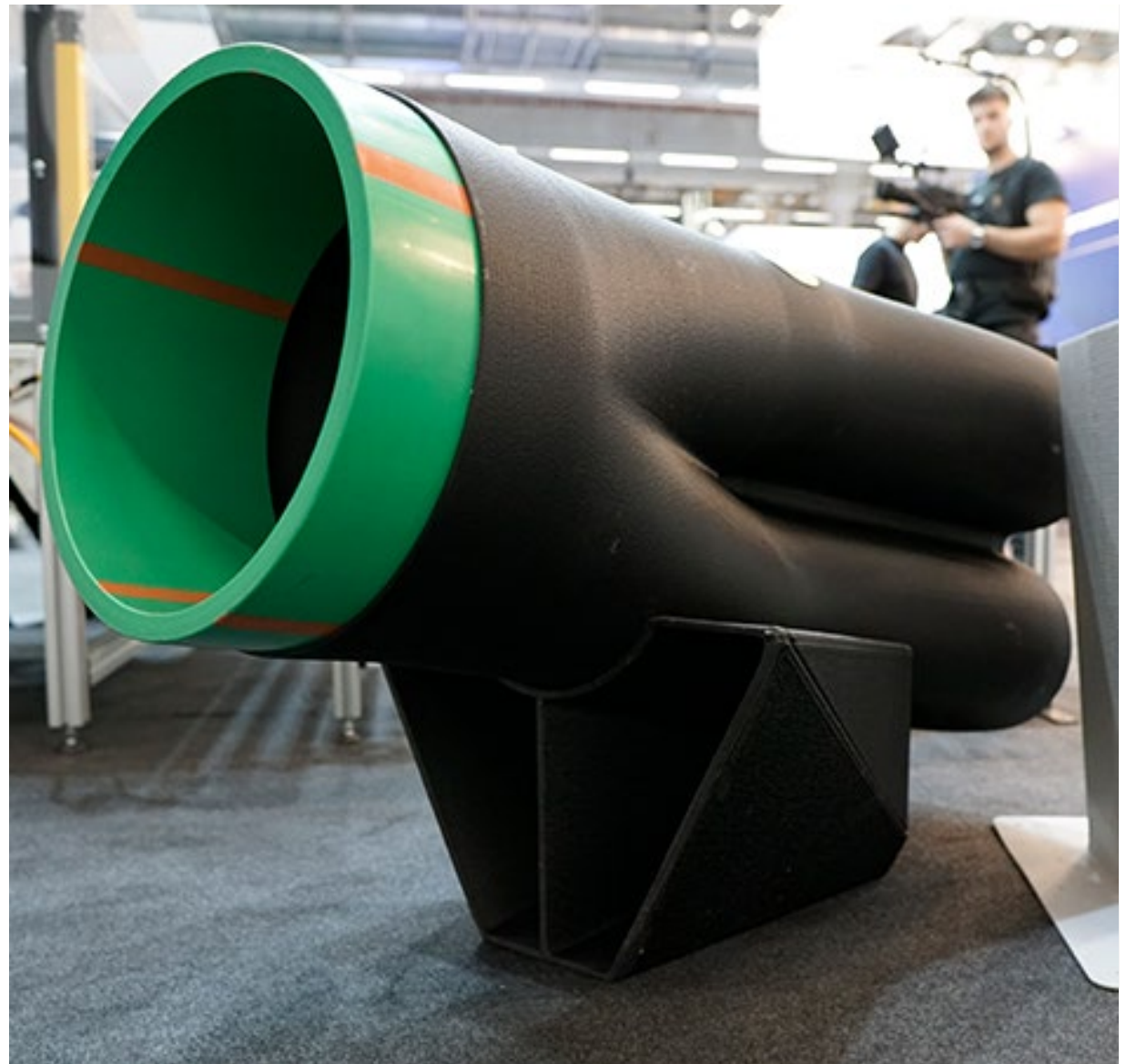




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