



INDUSTRIAL AM-PRODUCTIVITY MADE IN GERMANY

AMpolar® i2 enables series production

Our **AMpolar® i2** industrial production 3D printing machine employs a patented **High-Speed Rotative AM Process (HSR)**. The unique, continuously rotating print platform enables highly productive single-pass printing over an extremely large build area of 2.0 m² (21.5 ft²) resulting in a build volume of 700 litres.

To match the output of one AMpolar® i2, multiple traditional 3D printers have to be operated in parallel, increasing costs and complexity in comparison to our HSR AM Process. AMpolar® i2 delivers unparalleled output of printed parts per time unit, resulting in a significant reduction in costs per part.

We cover the whole production process: from data processing (object creation, polar-slicing) to printing parts, materials, to easy and cost-efficient post-processing. In close partnership with ALTANA AG, a global leader in speciality chemicals, we tailor the materials to fit the exact requirements of our customers.



The AMpolar® i2 industrial production system

Produces large and small parts with highest productivity

Material-Jetting Technology to your advantage:

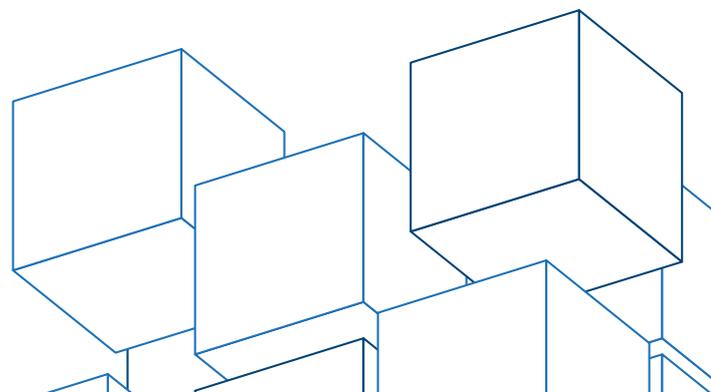
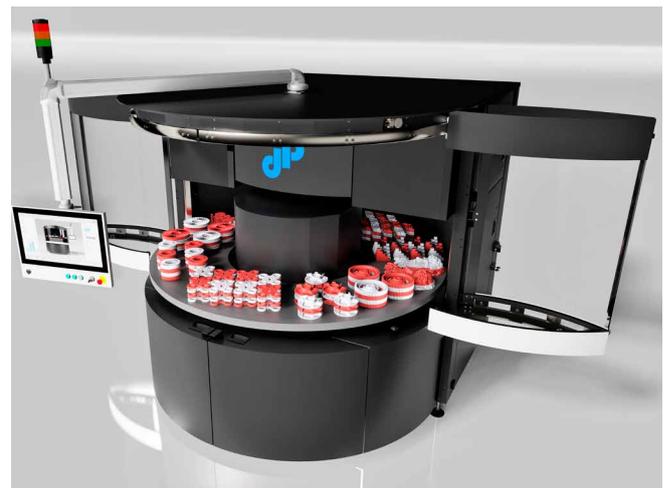
- 1. Highest Industrial AM Productivity**
Cost-efficient series production of AM parts.
- 2. High Speed Rotative (HSR) AM Process**
Single-pass printing mode over large build volume; scalable build area.
- 3. Multi-Process Ability**
Integration of additional processes within the printing process (i.e. pick and place).
- 4. Multi-Material Printing**
Three print-stations for multi-material printing and material graduation; material properties tailored to application.
- 5. Two Print-Modes – One Printer**
Manufacturing Mode - for highest productivity on series production due to bigger build volume.
Prototyping Mode - for high speed rapid prototyping due to shorter cycle-time.
- 6. Water Soluble Support Material**
100% water soluble support material.
No manual labour. No additional chemicals or mechanical treatments, enabling up-to 50% reduced post-processing time.
- 7. Long Component Lifetime**
Long component lifetime due to fixed print heads, no moving consumables, and an optional automatic contactless print head cleaning device.

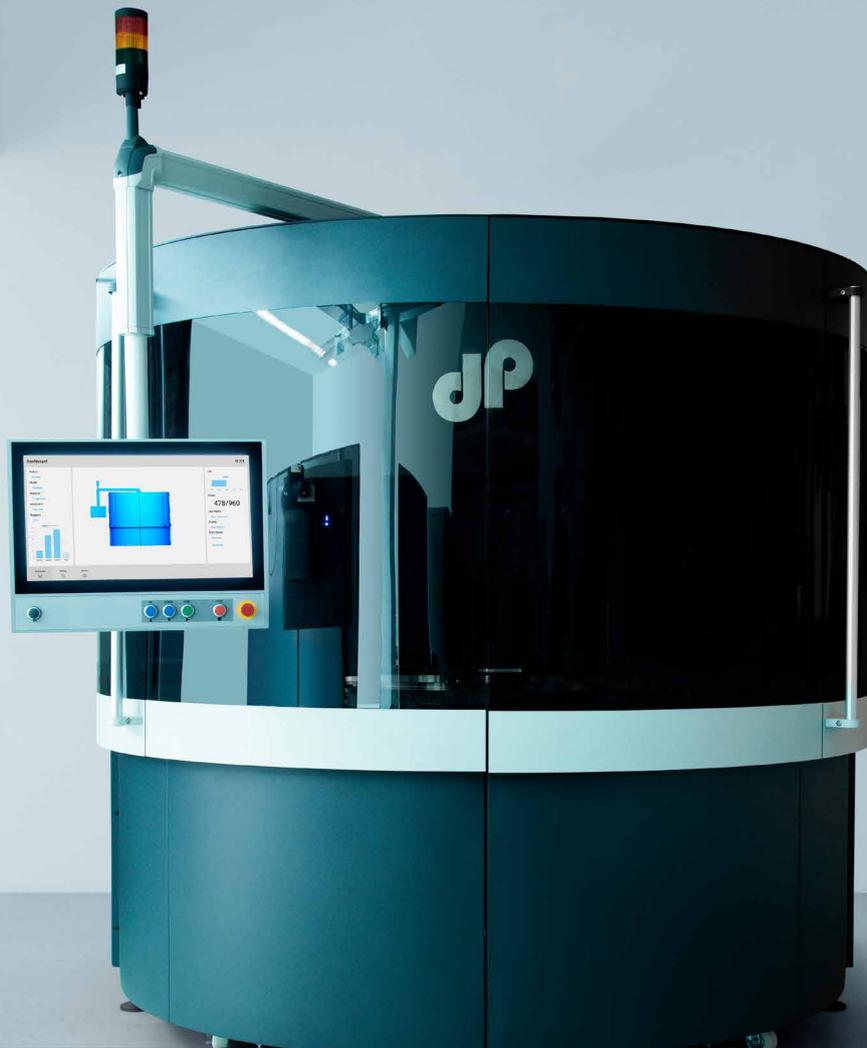
AMpolar® i2 - the first machine, performing Additive Manufacturing on a truly industrial scale

Multi-material, high quality, and lowest costs per part - our AMpolar® i2 employs a patented High-Speed Rotative (HSR) AM Process. The unique, continuously rotating print platform enables highly productive single-pass printing over an extremely large build volume. AMpolar® i2 delivers unparalleled output of printed parts per time unit, resulting in a significant reduction in costs per part.

Multi-Process Ability

AMpolar® i2 enables integration of additional processes within printing process. The printing process can be resumed after manipulation of the part. For example, it is possible to combine the rotating print platform with a fully automated pick-and-place process to place electronic components into the plastic part, while continuing printing. Integration into a fully automated environment was never easier.





AMpolar® i2 offers a highly effective HSR AM process for the two phases of product manufacturing:

- High-Speed *Prototyping Mode* to optimize design and component quality
- High-Volume *Manufacturing Mode* to realize series production

All modes on the same printer to avoid any transmission problems during up-scaling of production.

Multi-Material Printing

The AMpolar® i2 is equipped with three individual print stations, allowing the production of multi-material parts at the highest productivity. It is possible to generate various properties by graduating different materials.

In close collaboration with ALTANA AG, a global, leading specialty chemicals company, we offer superior print materials tailored to the specific customer applications. Cubik Ink® is our material suite, with each material available in transparent and various colours. The Cubik Ink® base materials include the high-performance Cubik Ink® Tough materials, as well as the Cubik Ink® Flexible materials for soft-touch surfaces or flexible parts.

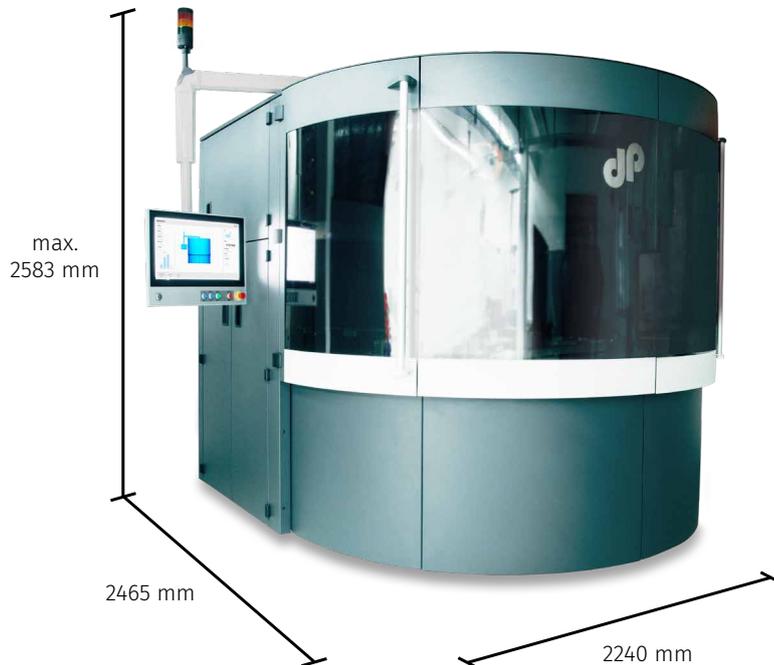
Water-soluble Support Material and Lowest Costs per Part

We developed an easy to handle, 100% water-soluble support material that allows quick and automatic removal of all support structures. No additional chemicals or mechanical treatments. We enable a smooth and highly productive workflow with up-to 50% reduced post-processing time without the additional risk of damaging the finished parts.

www.dppolar.de

AMpolar® i2 – Industrial AM Productivity

Technical Data and Machine Specifications



Options

- External working station
- Extraction systems for used air
- Post processing equipment
- Qualification documentation
- Disaster recovery package
- Automatic contactless print head cleaning process



Object and Support Materials

- **Cubik Ink® Tough**
available transparent and in various colours
- **Cubik Ink® Flexibel**
available transparent and in various colours
- **Cubik Ink® support materials**, 100% water soluble
- **Other materials** upon request



Printing unit

- Print Technology: Material-Jetting
- Printing Method: **High Speed Rotative Process (HSR)**
- Print Width: max. 420 mm (16.5 in)
- Print Area: 2.0 m² (21.5 ft²) (scalable)
- Layer Thickness: 4-25 µm
- Build Resolution (xyz): up to 720 x 720 x 5.000 dpi
- Net Build Volume: 700 L (24.7 ft³)
- Productivity: max. 10 L/h (0.4 ft³/h)



Operation: Touch panel

- Panel size: 21.5"
- Data file format: STL
- Data management: Job selection and specific settings are adjusted using an external working station.

