

ARBURG

**FREEFORMER:
UNIQUE FOR PRINTING SOFT,
HEALTH CARE AND MEDICAL
THERMOPLASTICS**





ARBURG

Headquarters in
Germany
on approx. 180,000 m²

~ 3.200 employees worldwide
Consolidated turnover
2018: EUR 754 million
2019: EUR 738 million
Export share ~ 70 %

WE ARE A FAMILY-RUN COMPANY



The family-owned company was founded in 1923 by Arthur Hehl



Brothers Eugen (left) and Karl Hehl (1923-2010) shaped the company



Managing Partners

Eugen Hehl, Juliane Hehl, Michael Hehl, Renate Keinath

WIR SIND DA- WITH MODULAR SOLUTIONS

Modular Injection
moulding machines

Industrial additive
manufacturing systems



Flexible
robotic systems

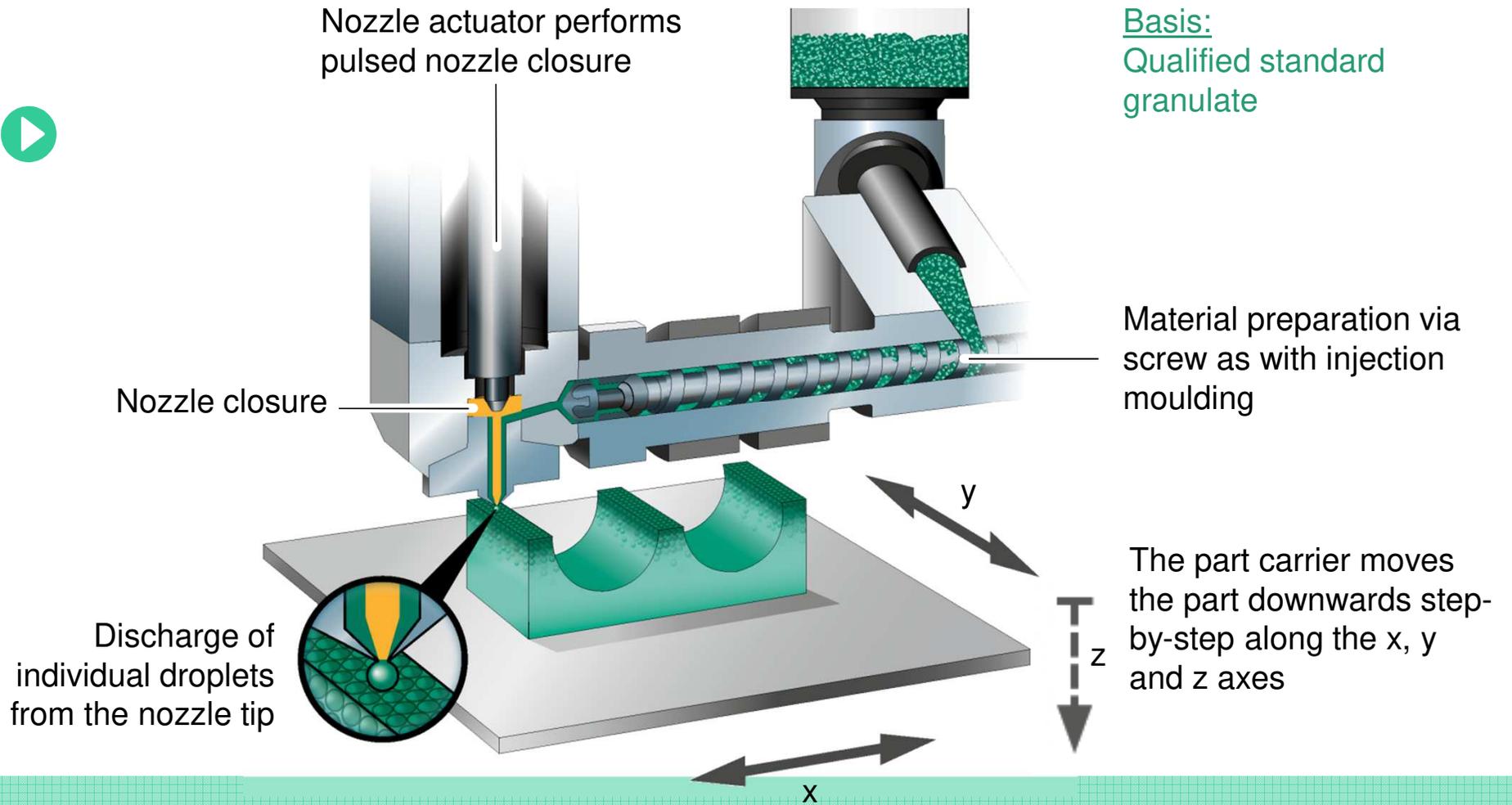
Turnkey production cells

Integrated machine
control system

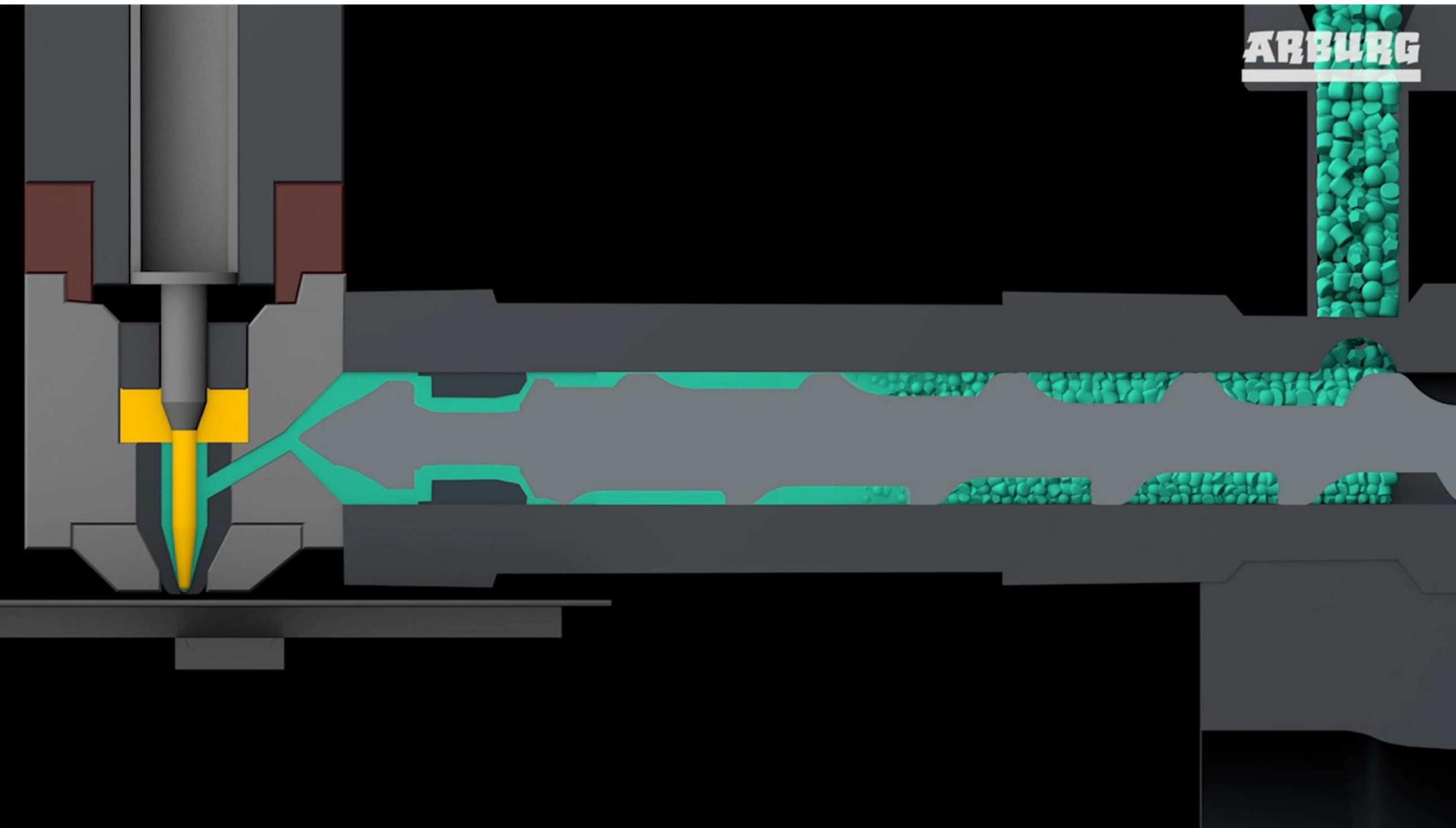


Efficient production
management

“arburgXworld”
online customer portal



ARBURG



EVER-EXPANDING RANGE OF MATERIALS



Thermoplastics

- PP
- PA
- PC
- ...



Flexible

- TPE / TPU
- TPV automotive
- SEBS
- ...



Medicine

- PLLA/PCL
- PMMA
- PCU
- ...



Special materials

- Conductive
- Flame-retardant
- Biodegradable
- ..



Support materials

- ARMAT 21
- ARMAT 11
- ARMAT 12
- Compounds



Customer-specific materials

AVAILABLE SIZES

freeformer 200-3X

Discharge units **2**
Installation area **200 cm²**
Part carrier **3-axis**

Usable build chamber space
x **154 mm**
y **134 mm**
z **230 mm**



freeformer 300-3X

Discharge units **2-3**
Installation area **300 cm²**
Part carrier **3-axis**

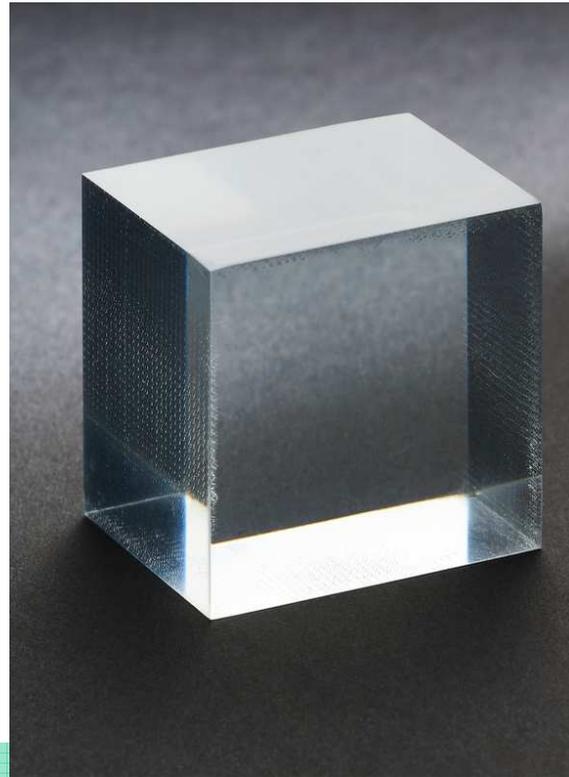
Usable build chamber space
x **234 mm**
y **134 mm**
z **230 mm**

Combination of up to three components in a single part

Low-emission technology for clean-room-production

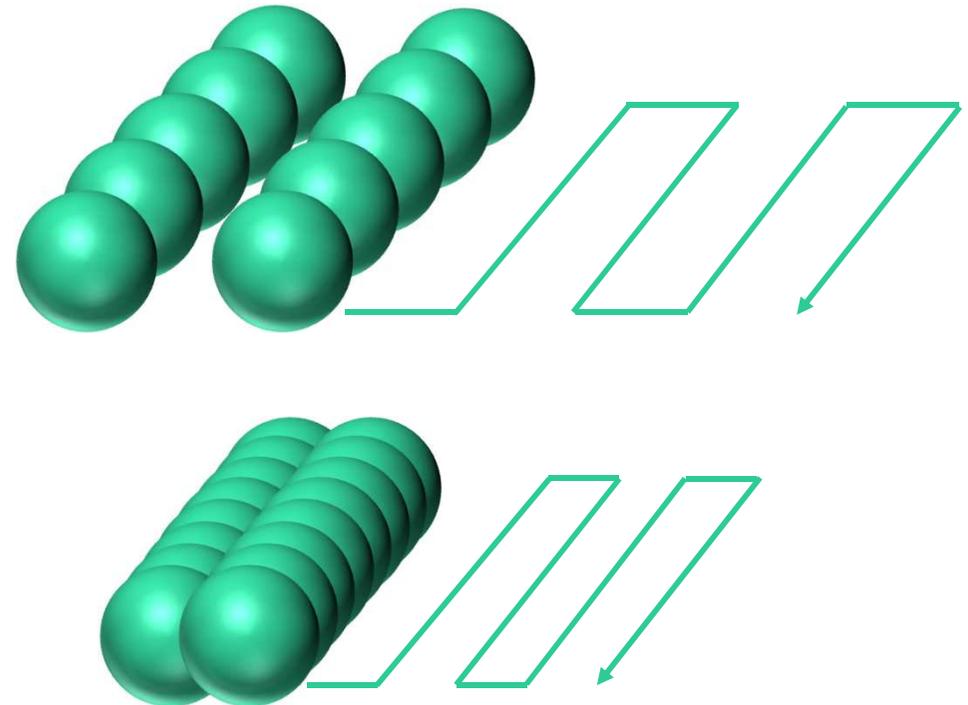
SPECIFIC SETTING OF COMPONENT STRENGTH

- High density
 - Determine density with CT scan
 - High mechanical values can be achieved
- Low density
 - Design and process optimized for weight and materials
 - Stability and strength at the same time



PART PROPERTIES CAN BE INFLUENCED

- Reproducible control of droplet discharge
- Variable density within the part
- Adjusting mechanical characteristics according to requirements



SOFT MATERIAL IN MANY DEGREES OF HARDNESS



**FDA certified
soft material**
contact with skin and blood



Resilient, tear proof, tight
suitable for daily
functional use

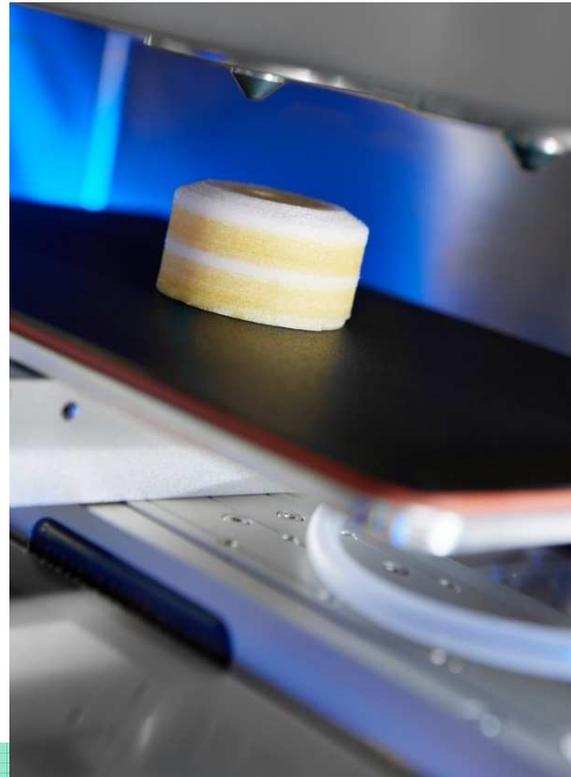


Resilience behavior
comparable to injection
molded component

BELLOWS

Material: TPU Elastollan C78A (80 Shore A)

- Elastic, reversible, tear-resistant and impermeable
- Used in sealing and vacuum technology
- Additive manufacturing allows any part geometry to be produced in single-unit batches



„SPIDER MEMBRANE“

Material: TPU Desmopan 9370 AU

- Thin membrane has layer height of only 0.2 mm
- Extremely stretchy and tear-resistant



RIBBON CABLE

Material: TPU WT 65 S 720/1

- Integrated conductor tracks
- Electrically conductive and flexible



SOLE FOR SNEAKERS

Material: TPU Desmopan

- Part thickness individually adjustable
- Products specifically designed for the customer



SOFT-TOUCH TOOTHBRUSH

*Material: ABS Terluran GP 35 +
TPU Desmopan 9385 A (80 Shore A)*

- 3-component application incl. support material
- Complex resilient hard-soft combination
- Haptically optimised part – accelerated time-to-market



NOSE MASK

*Material: TPE Medalist MD-12130H
(30 Shore A)*

- Medically approved TPE
- Very soft material
- Reversible, tear-resistant and impermeable



IMPLANTS

*Materials: Purasorb PL 18
Resomer LR 708
Resomer LR 706S-TCP*

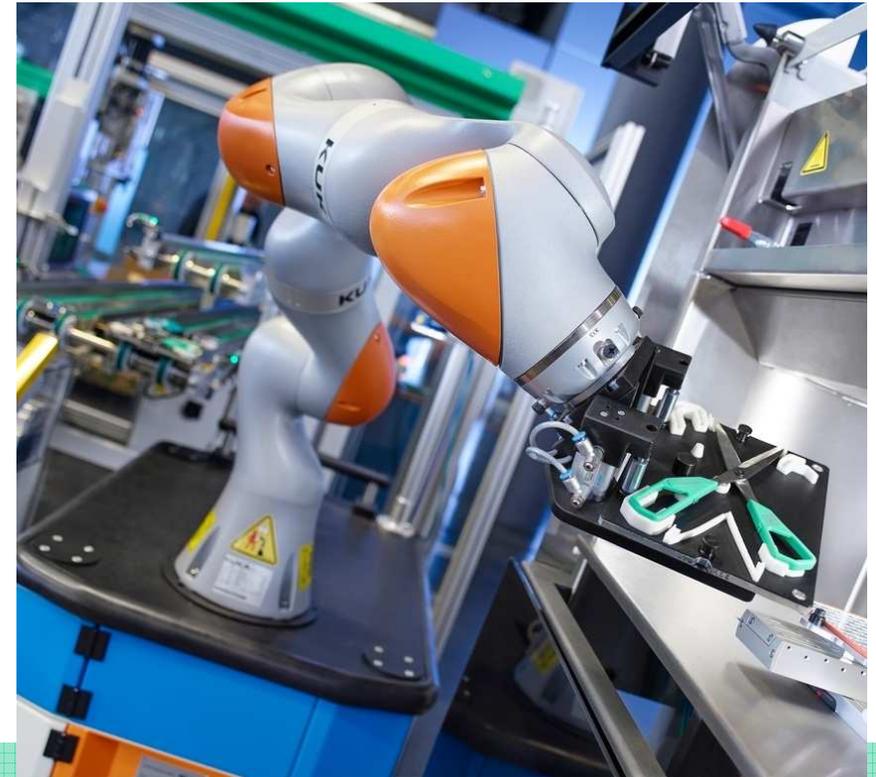
- Resorbable implants
Plastics made from medical grade polylactide (PLLA) dissolve in the body in a defined way
- Gentle processing to ensure resorbability
- Composites possible*



INDIVIDUALISED OFFICE SCISSORS

Material: PP Moplen

- Injection moulding combined with additive manufacturing
 - Injection-moulded high-volume product
 - 3D lettering applied in an additive process
- Automated additive manufacturing



OUTLOOK: HIGH-TEMPERATURE APPLICATION

- Suited for Air and Space applications
- Material: Ultem 9085
 - Permanently flame retardant and low smoke
 - Processing possible on freeformer 300-3X



THINKING ADDITIVE



Customized products



Integration of functions



Bionic structures

UNIQUE FREEFORMER SYSTEM

- **Open system** – targeted influencing of part properties
- **Material database** – diversity is constantly increasing
- **Reliable partner** – we continually develop the system further
- **Requirement** – get involved with the technology



QUALITY KNOW-HOW
MACHINES TECHNOLOGIES

THE HOME OF INJECTION MOULDING

MARKET LEADERSHIP
PASSION VISION
INNOVATION

WIR SIND DA.