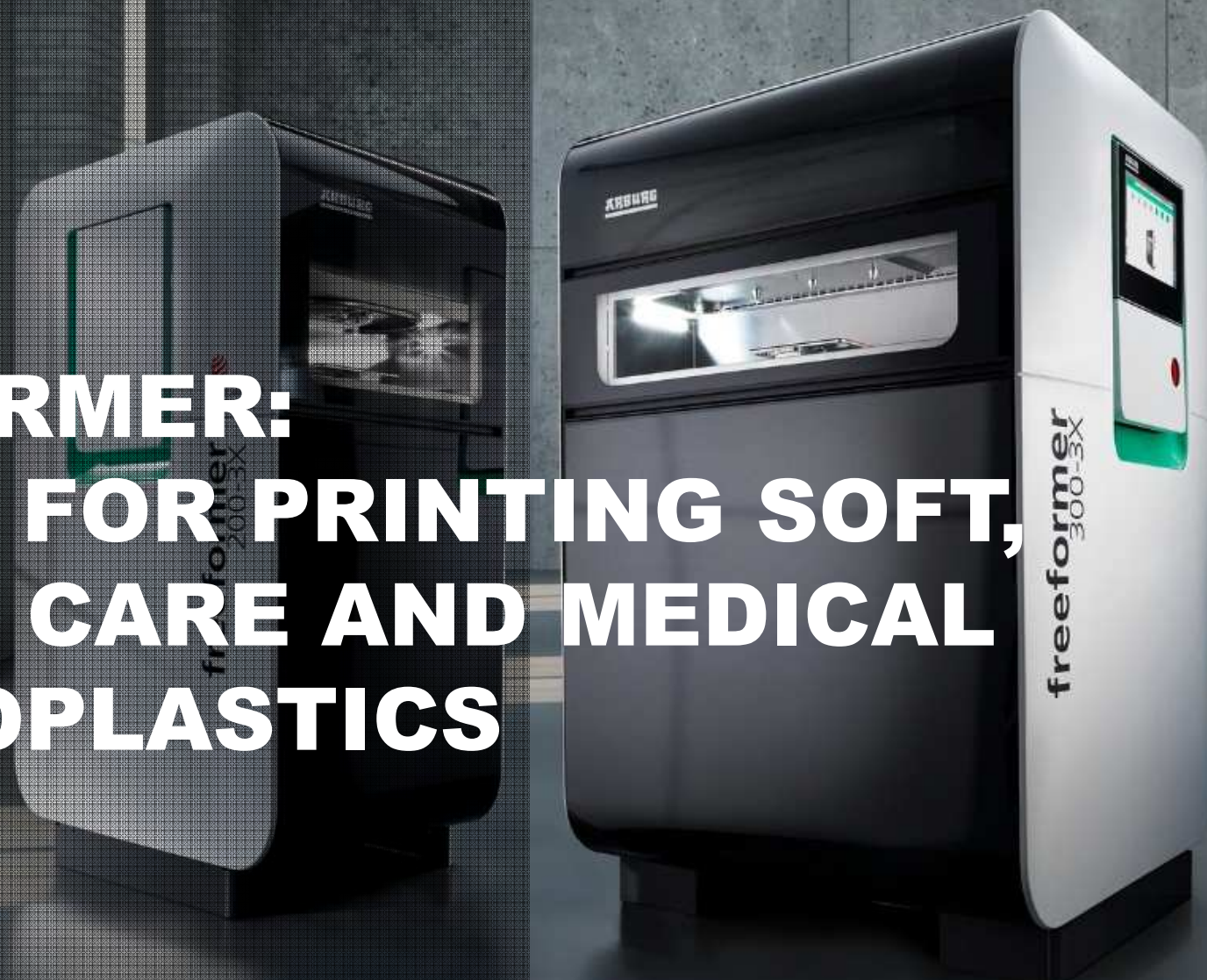


**ARBURG**

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







**ARBURG**

Headquarters in  
Germany  
on approx. 180,000 m<sup>2</sup>

~ 3.200 employees worldwide

Consolidated turnover  
2018: EUR 754 million  
2019: EUR 738 million

Export share ~ 70 %

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# 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



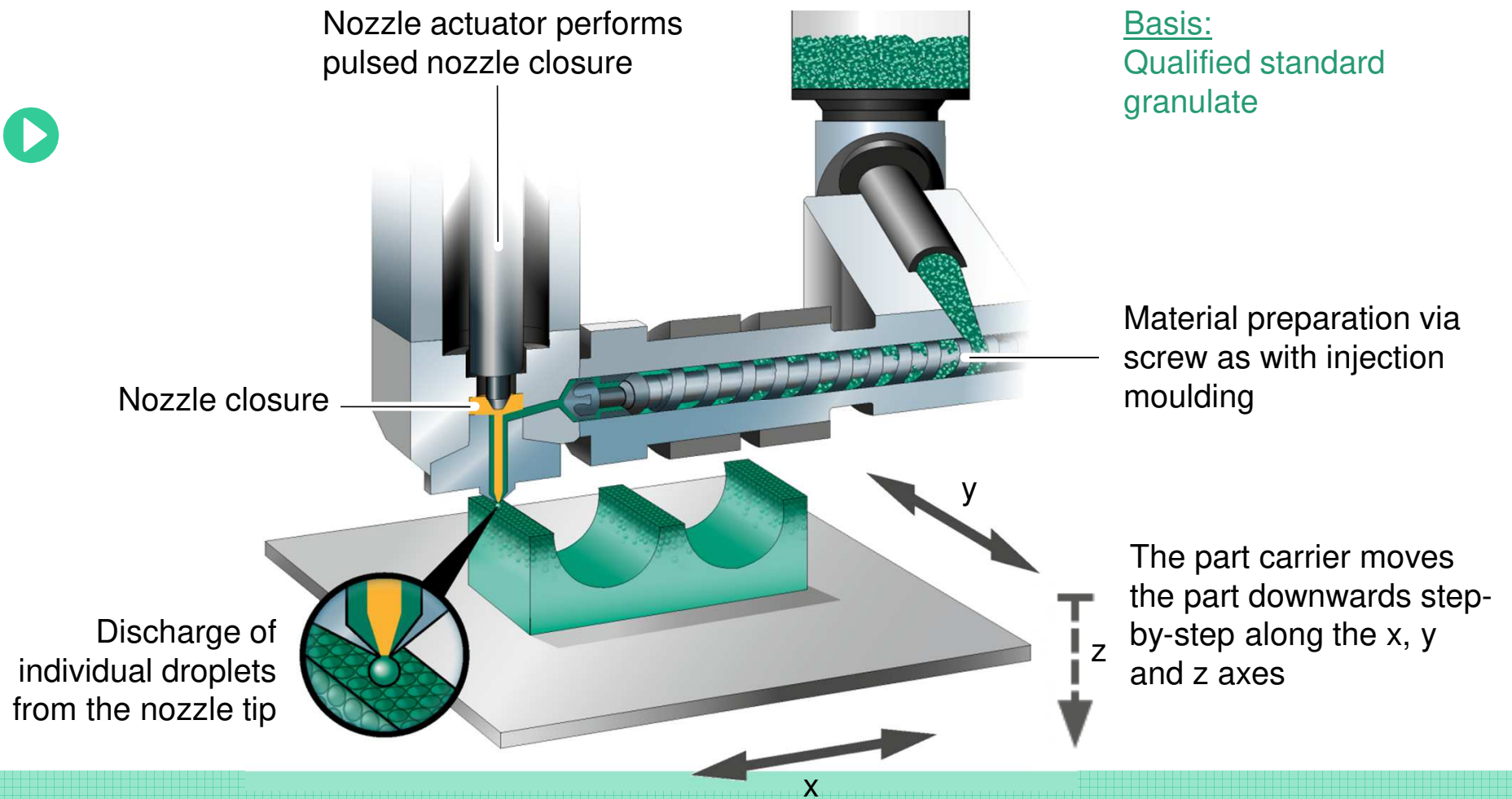
Integrated machine  
control system



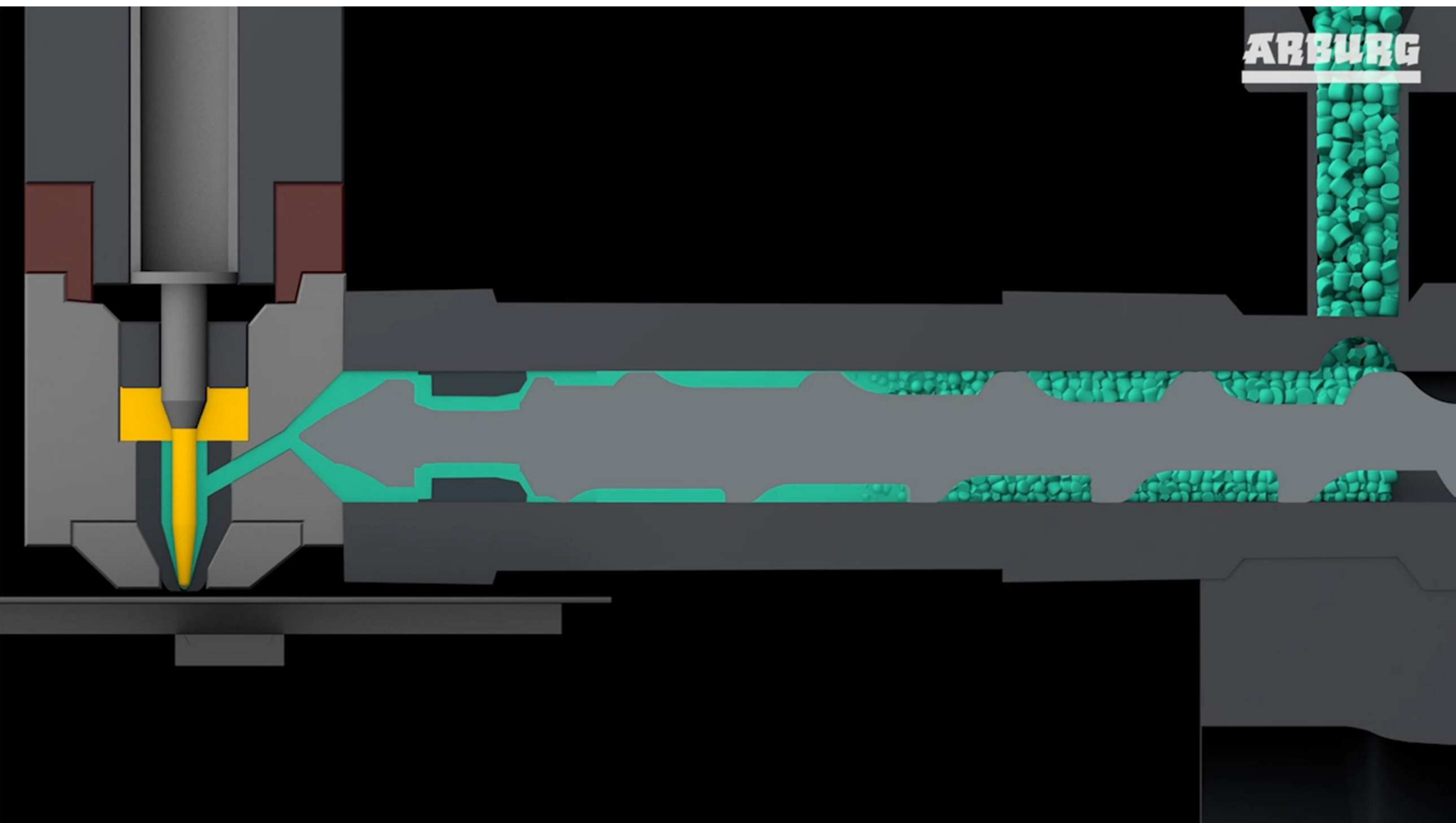
Efficient production  
management

“arburgXworld”  
online customer portal



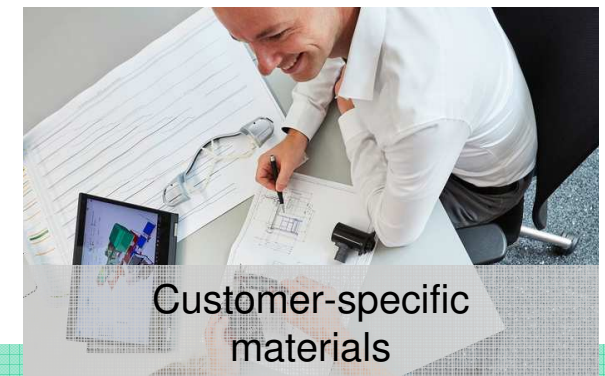
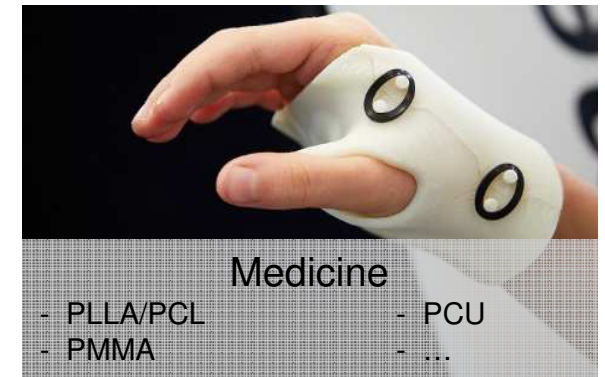


**ARBURG**





# EVER-EXPANDING RANGE OF MATERIALS



# AVAILABLE SIZES

## freeformer 200-3X

Discharge units **2**  
Installation area **200 cm<sup>2</sup>**  
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 cm<sup>2</sup>**  
Part carrier **3-axis**

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

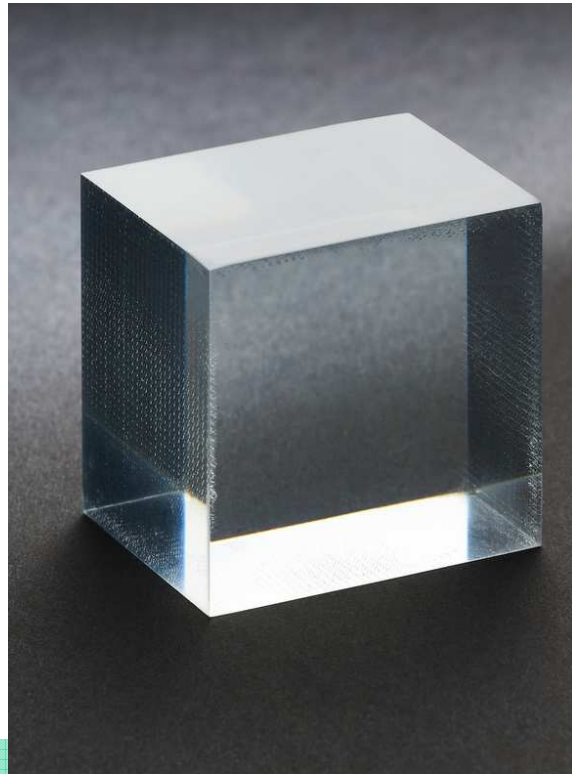


Combination of up to  
three components in a  
single part

Low-emission technology for  
clean-room-production

# SPECIFIC SETTING OF COMPONENT STRENGTH

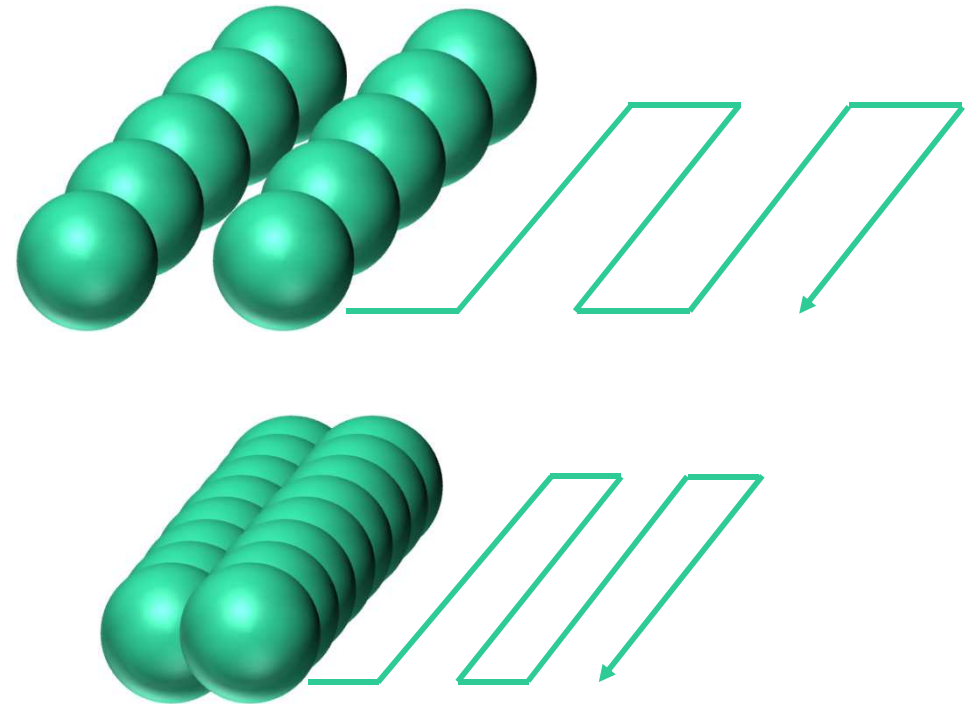
- High density
  - Determine density with CT scan
  - High mechanical values can be achieved
- Low density
  - Design and process optimized for weight and materials
  - Stability and strength at the same time





## 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



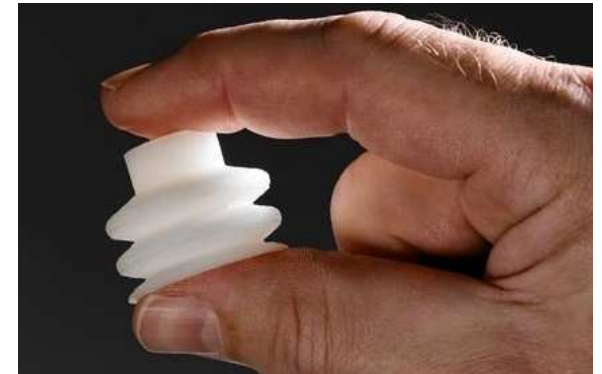
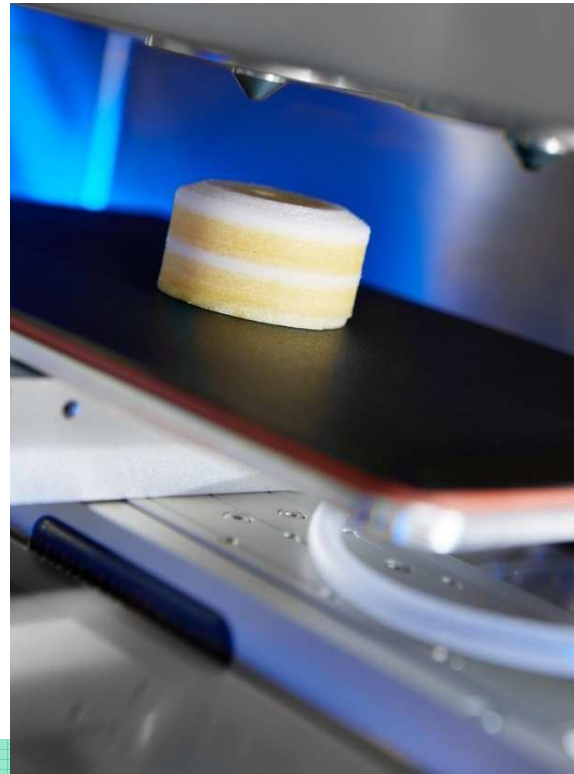
**Resilience behavior**  
comparable to injection  
molded component



# 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

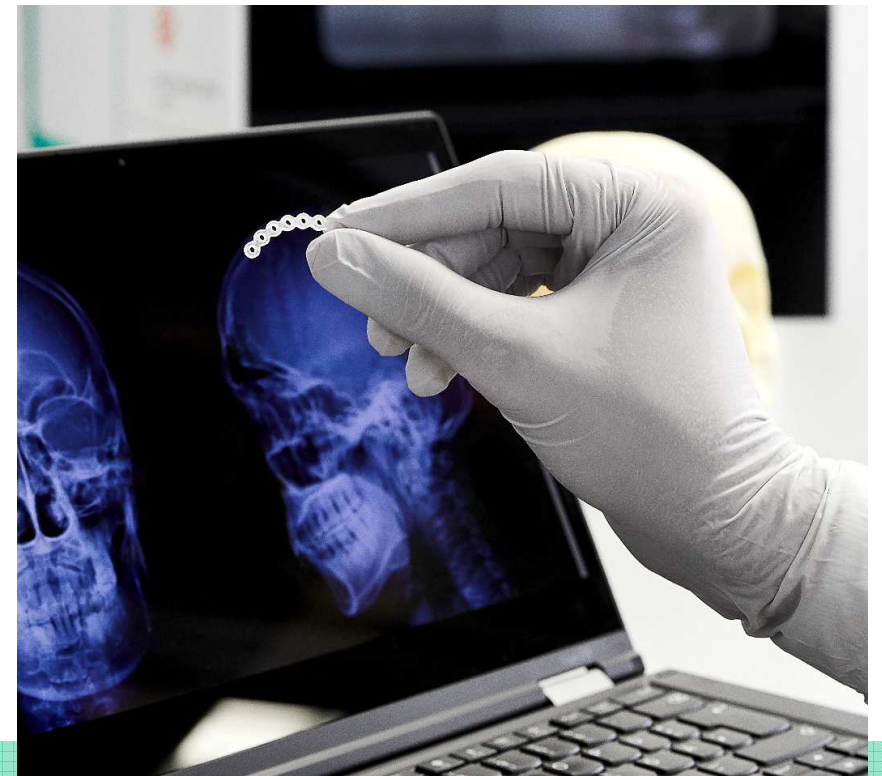




# IMPLANTS

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

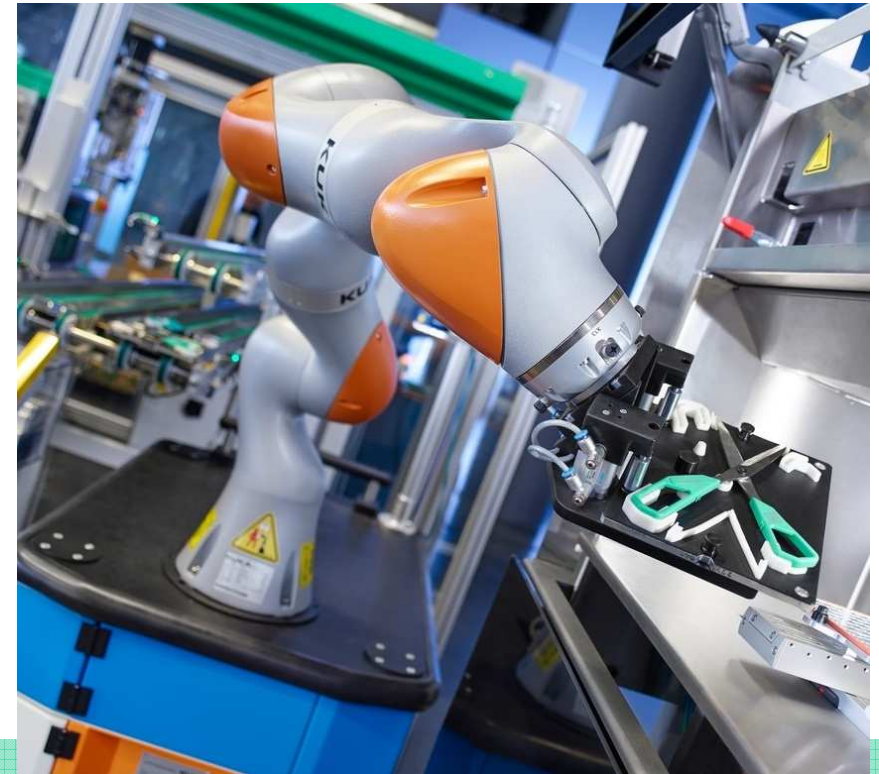
- Resorbable implants  
Plastics made from medical grade polylactide (PLLA) dissolve in the body in a defined way
- Gentle processing to ensure resorbability
- Composites possible\*



# 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.