

# High Throughput-Extruder for Pellet-Based Material Extrusion

*Enabling Industries Through Fast and Precise Large Scale Additive Manufacturing*



## Motivation and Relevance

- Manufacturing systems commonly used in AM are characterized by low deposition rates or insufficient print quality
- A higher deposition rate combined with sufficient print quality would improve the competitiveness of AM

## Approach

- Development of a customized screw design to decrease screw length
- Iterative development focusing on function, weight reduction, design and feeding accuracy
- Integration into the existing measuring machine setup

## Results

- Pellet-based plug and play extruder for existing measuring machine setup with extrusion rates up to 6 kg/h
- Production of polymer components in large dimensions

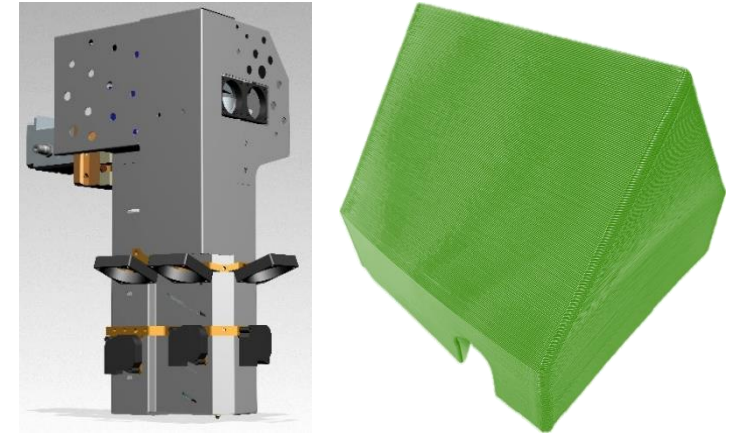
## Research Area

- Large Scale
- Pellet Extrusion
- Productivity
- Extrusion Quality

## Partners



## Picture



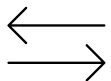






## Contact



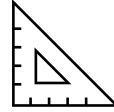
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# STIEFELMAYER HT-Extruder

	Discharge rate up to 6 kg/h
	Weight 6 kg
	Nozzle diameter between 0.8 mm – 4 mm (extendable up to 8 mm)
	Gear pump for precise dosing
	Up to 250 °C   3 heating zones
	Stepless adjustable 2-zone component cooling
	Compact design with 520 mm height



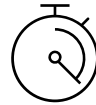
## Round and rapid – 3D-printed parts in record time!



Ø 50 cm | height 50 cm

Layer height: 1 mm

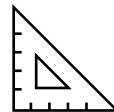
Nozzle diameter: 2.5 mm



80 min.

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## Sharp, precise, and ultra-fast – redefining 3D printing!



35x35 cm | height 35 cm

Layer height: 1 mm

Nozzle diameter: 2.5 mm



90 min.



# Multihybrid Solutions on STIEFELMAYER machines

EASY Line



FLOW Line



FORM Line



SENSE Line



Wireless Digital

Manual & CNC

Layout Mill

Tactile Scan