# Print Heads for Viscous Fluids & Pastes





SOLUTIONS FOR YOUR EXTRUSION BASED ADDITIVE MANUFACTURING.





## **OUR PRINT HEADS**

VIPRO-HEADS ENABLE ADDITIVE MANUFACTURING WITH MATERIALS SUCH AS SILICONE – WITH SUPERIOR QUALITY BEYOND COMPARISON.

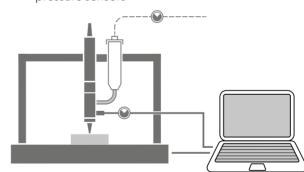
Technical data	vipro-HEAD 1-COMPONENT	vipro-HEAD 2-COMPONENT
Theoretical volume flow (ml/min) (2, 4)	0.03 to 6.00	0.06 to 12.0
Layer thickness (µm) (1)	Approx. ≥ 100	Approx. ≥ 100
Dosing accuracy (%) <sup>(3)</sup>	±1	±1
Most used materials	PCL Ceramic pastes Biomaterials Conductive inks Etc.	Silicones Polyurethanes Epoxy resins Acrylates Etc.

- (1) Depends on viscosity and primary pressure.
- (2) Higher speed causes increased wear.
- 2) Dananda an matarial
- Volumetric dosing as absolute deviation in relation to one dispenser revolution.
  Depends on the viscosity of the material.



#### **EASY INTEGRATION INTO YOUR MANUFACTURING PROCESS**

- Easy mounting to existing 3D printers
- Actuation via stepper motor driver signals (24 V) or Step/Direction-Signals (3.3 V/5 V)
- Control via G-Code
- Compatible with most common slicers
- Option to monitor the printing process through pressure sensors



#### **EASY SCALING UP OF THE PRINTING PROCESS**

- Emptying systems (various container sizes)
- Handling systems (homogenization, degassing, etc.)



#### ALSO AVAILABLE IN MEDICAL GRADE

- Autoclavable
- Stainless steel 1.4404
- Polymers FDA approved

Optional heating of material and print head up to 110 °C.









For more details and in-depth insights into the world of ViscoTec dosing technology:

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