



## MiQ 5

### THE MATERIAL DRYING UNIT

The MiQ 5 is the new material drying unit from innovatiQ. The dryer, designed as a base cabinet, also functions as a storage chamber for the filament material. The material is fed internally into the printhead as part of an encapsulated process. In 3D manufacturing, drying is an established upstream process for better processing of plastic filaments. In additive manufacturing with filament material, it is important that the filament remains “dry” throughout the entire printing process. innovatiQ has chosen the

most sophisticated method using the MiQ 5 to bring the filament into an optimal state prior to extrusion.

Two functions are combined in the MiQ 5. The “heating” and the “active dehumidification” run completely autonomously in the drying chamber. Thus, the improved properties of the filament are consistently maintained. Perfect starting criteria for your everyday print jobs.

## MATERIAL DRYING

### MATERIAL DRYING IS CARRIED OUT IN 3 STEPS:

1. The material drying chamber is constantly heated to a maximum temperature of 55°C. The heated air allows the individual polymer chains of the plastic to open and the stored water to escape.
2. The heated air is actively dehumidified. To this end, the air in the chamber is made to rotate permanently and is channelled past two Peltier elements.
3. In closed state, the moisture is discharged to the outside in a controlled manner via an extraction mechanism and it evaporates. The user does not have to open the drying chamber or manually empty the container.

### WHY IS MATERIAL DRYING IMPORTANT?

Filament material basically absorbs moisture. Water in the filament causes poorer printing results. Known effects from 3D printing such as stringing, oozing and bubble formation are intensified. The more the material absorbs moisture, the more detrimental this is when it comes to reliable printing of the component.

The main advantages of material drying are obvious: improved appearance, better mechanical properties and a more reliable printing process.



In the MiQ 5: Optimum material drying of the



Component without material

### TECHNICAL DATA FOR MiQ 5

<b>Humidity:</b>	<8 % to 4 % relative humidity	<b>Filament diameter:</b>	Suitable for all
<b>Material intake</b>		<b>Material (filament):</b>	All hydrophilic filaments
<b>Print area:</b>	one spool per extruder = 2	<b>Operating temperature:</b>	Max 55 °C in the material chamber
<b>Storage area:</b>	5 small or 3 large spools	<b>Network connection:</b>	Stand-alone dryer
<b>Power consumption:</b>	0.3 kW, approx. 50 % in continuous operation	<b>External dimensions (WxDxH):</b>	1134 x 726 x 643 mm
<b>Voltage:</b>	230 V, 16 A	<b>Weight:</b>	approx. 115 kg
		<b>Technology:</b>	Material drying

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