

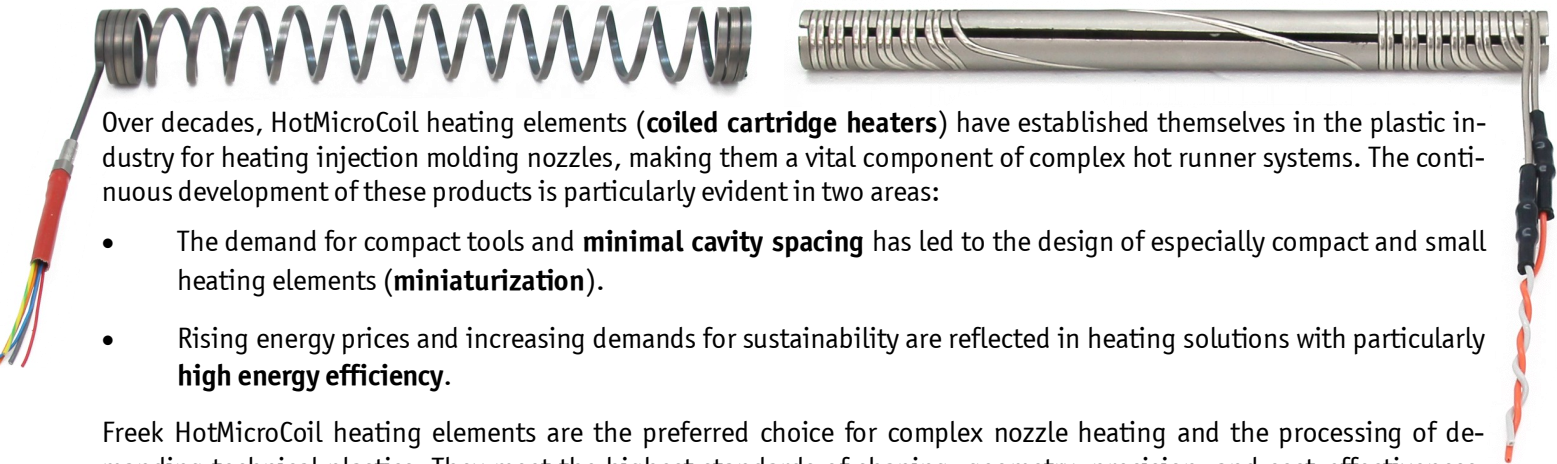


# Heating Elements for Hot Runner Nozzles

## HotMicroCoil-Heating Elements from Freek

### Demanding temperatur profile when injection moulding technical materials?

*Uniform temperature profiles with slim nozzles using Freek heating elements*



Over decades, HotMicroCoil heating elements (**coiled cartridge heaters**) have established themselves in the plastic industry for heating injection molding nozzles, making them a vital component of complex hot runner systems. The continuous development of these products is particularly evident in two areas:

- The demand for compact tools and **minimal cavity spacing** has led to the design of especially compact and small heating elements (**miniaturization**).
- Rising energy prices and increasing demands for sustainability are reflected in heating solutions with particularly **high energy efficiency**.

Freek HotMicroCoil heating elements are the preferred choice for complex nozzle heating and the processing of demanding technical plastics. They meet the highest standards of shaping, geometry, precision, and cost-effectiveness. Moreover, Freek excels in developing custom heating elements to ensure the optimal solution for each application.

#### Your Benefits at a Glance

- Individual consultation based on decades of experience
- Various designs and configurations tailored to your application
- Shorter cycle times through optimized heating solutions
- Very high energy efficiency of Freek hot runner heaters
- High process reliability due to integrated thermocouples
- Short delivery times and delivery starting from a quantity of 1

#### Complex Application? I'm happy to assist!



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#### Proven in Practice: High energy efficiency of Freek „Braze Together“ Heaters

##### The Application:

- 64-cavity tool in 24/7/50 operation, 250 W heater for each nozzle
  - Competitor heaters: 28% duty cycle
  - Freek heaters: 25% duty cycle
- Energy savings of 10%**



##### Your Savings:

$0,25 \text{ kW} * (28\% - 25\%) * 24 * 7 * 50 * 64 = 4.032 \text{ kWh savings}$  per year per tool

This saving for a single tool is equivalent to the annual electricity consumption of a four-person household.

#### Our Nozzle Heating Elements at a Glance

##### Coil Heater



Individual geometries

##### Reflection Tube



Flexible and cost-effective

##### Clamping Systems



Variable designs

##### Brazed Together



Highly efficient

##### Heat Transfer System



Homogenous heat transfer