



HOT RUNNER NOZZLE | NEEDS LESS. GIVES MORE.  
BlueFlow<sup>®</sup>



## Slimmer. More powerful. More efficient.

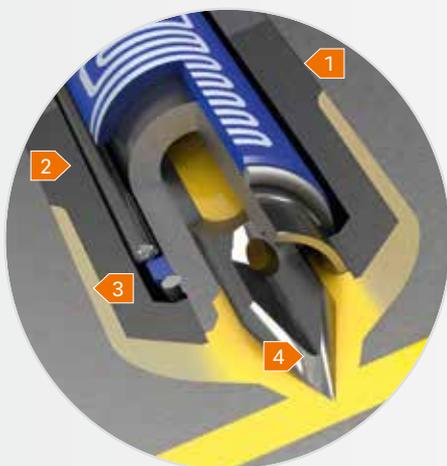
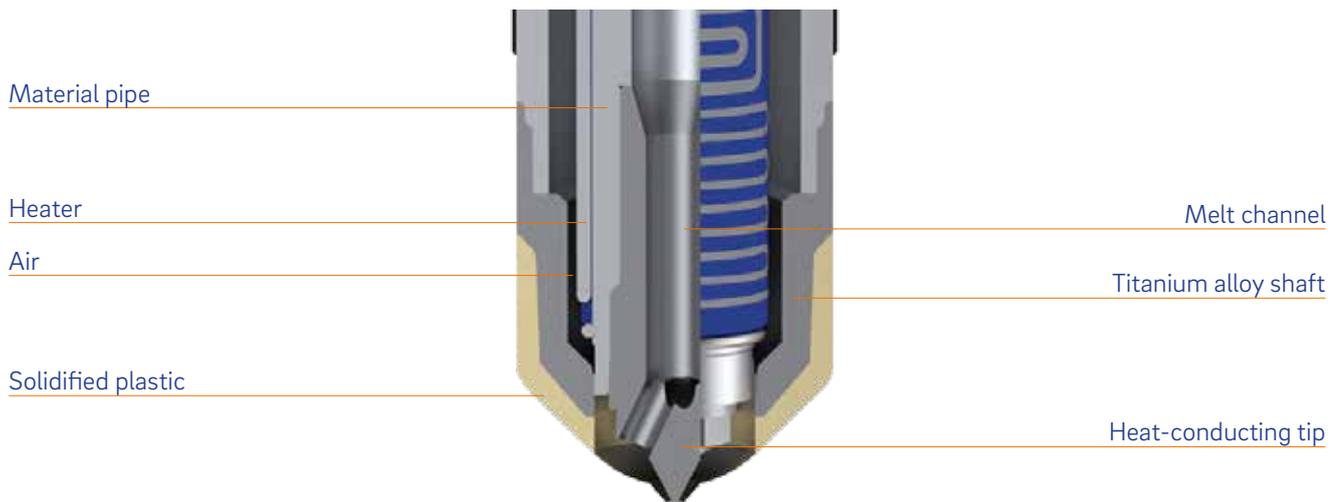
As experts in hot runner systems, we are already accomplishing future tasks today with a pioneering technology which optimizes your energy consumption. Save up to 50% energy with the highly efficient BlueFlow® hot runner nozzle.

This ideal solution for moulds with multiple drops impresses with its innovative GÜNTHER thick-film heating, which, together with the two-part shaft, ensures maximum energy efficiency.

The two-part shaft reduces heat transmission to the mould thanks to choice of a suitable material. This ensures optimum cost efficiency and allows process-reliable, energy-efficient hot runner systems to be created for injection moulding processes.

### High quality. High efficiency.

- Processing temperature reduced thanks to excellent nozzle tip heat conduction into the gate point
- Easy to install, protected against leaks and minimal time required for installation and removal
- Exceptional insulation in the front nozzle section thanks to the patented two part shaft. This significantly reduces the heat loss between nozzle and cavity.
- Excellent vestige quality as there is minimal heat transfer in the gate/part geometry section



#### For a homogeneous temperature control in hot runners

Thanks to their two part shaft, GÜNTHER standard hot runner nozzles impress with their outstanding thermal separation. This ensures outstanding insulation in the front shaft section and therefore extremely minimal heat loss between the hot runner nozzle and the cavity.

- 1 Sealed in use/leak protection
- 2 Titanium alloy
- 3 Solidified plastic
- 4 Heat-conducting tip



## Maximum stability and precision

You will achieve the best possible energy efficiency with the combination between the two-part shaft and thick-film heating. See the other advantages of thick-film technology for yourself as it sets new standards in the quality and design of moulded parts made of thermally sensitive plastics. During production, hot runner nozzles are heated with thick-film heating elements in the form of sleeve heaters to keep the plastic melt in a free-flowing state. The advantage over conventional heating elements is the far slimmer main body and significantly faster heating-up rate. The thick-film heating elements are also non-hygroscopic and thus ready for use at any time.



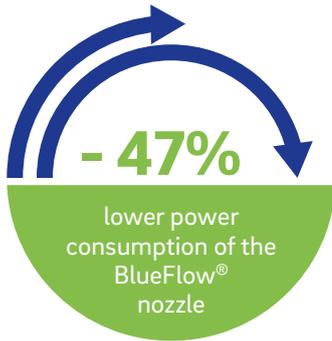
The thick-film technology allows precise and homogeneous power distribution over the entire length of the nozzle. This prevents peaks in temperature in the melt-conducting material pipe and provides high power concentration in the front nozzle section.



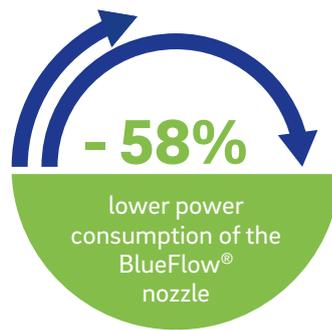
The reduced space requirements compared to conventional heating technologies ensures narrower cavity spacings and, consequently, the use of the hot runner system on smaller, more efficient injection moulding machines.



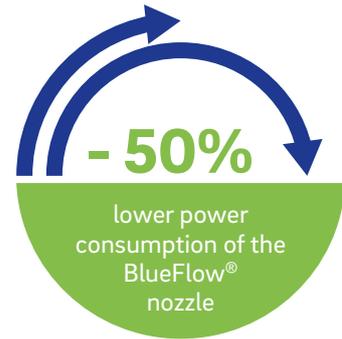
We make the difference – the BlueFlow® hot runner nozzle in an energy usage comparison



**Nozzle 1 comparison**  
Power consumption (average):  
BlueFlow®: 305 °C/40.59 W  
Competitor: 305 °C/76.5 W



**Nozzle 2 comparison**  
Power consumption (average):  
BlueFlow®: 295 °C/39.26 W  
Competitor: 295 °C/94.43 W



**Nozzle 3 comparison**  
Power consumption (average):  
BlueFlow®: 280 °C/39.30 W  
Competitor: 280 °C/78.53 W

Save up to

**50%**  
**energy.**



**Our expertise.  
Your advantages.**

- + Maximum energy efficiency
- + No preheating
- + Smaller size
- + Smaller shaft diameter
- + Narrower cavity spacing
- + Non-hygroscopic
- + More precise temperature control
- + High dielectric strength
- + Easy to install



# Operate efficiently. Operate more sustainably.



## Always the right temperature.

The innovative thick-film technology ensures perfect homogeneous temperature control and a rapid thermal response. This brings numerous advantages, such as lower energy consumption, reduced cycle times due to the lowering of melt temperatures, and expanded processing options, even for thermally sensitive plastics.

## Small does great things

The slim nozzle design and its consequently smaller shaft diameter ensures a higher part quality thanks to greater flexibility in the temperature profile. The small size also allows greater freedom for the direct gating design and reduces the amount of space required within the mould.

The BlueFlow® hot runner nozzle also makes a difference when it comes to cost: the more compact design, the small shaft diameter and the narrow cavity spacing achieve savings on investment, materials and energy.

## Heat that lasts

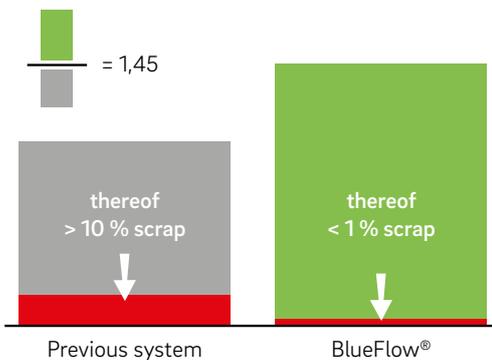
The exceptional thermal separation in GÜNTHER hot runner nozzles is truly impressive thanks to their two part shaft. This ensures outstanding insulation in the front shaft section and, consequently, extremely minimal heat loss between the hot runner nozzle and mould. This delivers a more precise, more energy-efficient hot runner design and a more effective injection molding process.



### Needs less. Does more.

As a leading supplier of hot runner technology, we demonstrate our expertise in a wide variety of market sectors such as electronics, consumer goods, and medical technology. The innovative BlueFlow® hot runner nozzle ensures careful production of high-quality moulded parts for sectors such as the automotive industry.

This is the case with microfilters made of unreinforced PA66 injection molded in a single work step. This method replaces the previous process, during which a preexisting screen mesh needed to be extrusion-coated to produce a finished component. This change resulted in a cost saving between 60 and 80 percent, depending on the product.



### Productivity as demonstrated by microfilters in the automotive sector

Average filling cavities in an 8-drop system,  
 GÜNTHER good parts/good parts from previous  
 system = 1.45  
 » 45% greater productivity



### The microfilter in detail

The slim BlueFlow® hot runner nozzle offers another advantage in that the mould can feature more drops than comparable designs. In this way, more parts can be produced with each mould in the same amount of time.

The microfilter in detail: Thread size 0.13 mm and 1,848 openings measuring 0.007 x 0.007 mm. The opening surface is about 9 mm<sup>2</sup>. The maximum permitted burr formation is 4.5 µm.



### Multi-drop mould for the consumer sector

The rapid thermal response and the stable temperature control in the BlueFlow® hot runner nozzle reduce cycle times in production. Efficiency increases as a result of the faster injection moulding process and the lower average melt temperature.

## GÜNTHER thick-film technology – suitable for varied areas of use

GÜNTHER thick-film heating elements provide a solution for numerous applications and are tailored to your requirements.

More info at [www.thickfilm.tech](http://www.thickfilm.tech)



### Would you like to benefit from the technical advantages of the BlueFlow® hot runner nozzle?

If so, contact your sales representative or contact our Technical Application Consultation Service on

T +49 6451 5008 510  
[atb@guenther-heisskanal.de](mailto:atb@guenther-heisskanal.de)

#### Our service for you

- Comprehensive consultation during design
- Support during project planning
- Custom-made system for your individual requirements

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 **GÜNTHER**<sup>®</sup>  
HOT RUNNER TECHNOLOGY