

**oerlikon**  
hrsflow

# Hot Runner Solutions for Beauty & Personal Care

**BALANCING ELEGANCE  
AND SUSTAINABILITY.**



# Hot runner solutions tailored to your needs



Our hot runner solutions are engineered to produce high-quality cosmetic components for the Beauty & Personal Care industry, combining **exceptional aesthetics** with strong mechanical performance.

With deep expertise in mold design and process optimization, our team provides **360° support** throughout every stage of your project—from concept to production.

## KEY BENEFITS

- High-quality cosmetic components
- Suitable for crystal clear parts, even with substantial wall thickness
- Tailored solutions for metallized polyolefins
- Fast and efficient color changes
- Ideal for processing sustainable polymers

# For every challenge, our technology

## Specialized solutions for hard-to-reach gate locations

Designed for tight-space applications with low shot weights, the innovative **Up nozzle series** enables direct gating in areas with limited access.

### KEY BENEFITS

- Compact 15 mm gate-to-gate pitch
- Optimized for hard-to-reach gating areas (such as caps, lipsticks, lip gloss and mascara)
- Exceptional performance with low-weight parts
- Core cooling with in-house SLM technology
- Easy start up
- Optimized for cosmetic polymers with narrow process window



Compact cut-out of Ø12mm



# Advanced technology for luxury, eco-friendly applications

Our hot runner solutions are specifically engineered for **high-end cosmetic applications** using the latest generation of PET and co-polyesters even with high percentage of recycled content that are fully compatible with most stringent European advanced PET bottle recycling stream.

## KEY BENEFITS

- Glass like shine with luxury appeal
- Impressive wall thickness up to 12 mm
- Prevention of typical flow marks in thick-walled parts
- High process repeatability

## AT YOUR SIDE THROUGH EVERY PHASE OF YOUR PROJECT

- Mold design support with tailored gate optimization
- Rheological analysis to develop material-specific solutions
- Assistance with molding process fine-tuning
- Support during production stage



# Experience the results of our technology firsthand

## Case study: Glittered Flip Top Cap

High-quality gate, even with a free-flow tip

### HOT RUNNER SYSTEM FEATURES

Molded Material	PP glittered
Cavities N°	4
Injection Type	Thermal Gate (Torpedo)
System Type	4 + 4 drops system Tp Series

### PART DESCRIPTION

Molded Part	Glittered Flip Top Cap
Part Weight	9 g + 13 g
Part Thickness	1.20 mm

### HIGHLIGHTS

- No flow lines, even when using glittered material
- Dedicated system solution engineered with double colour independent runners



# Case study: Foaming Pump

Uniform cooling, optimal results

## HOT RUNNER SYSTEM FEATURES

Molded Material	PP
Cavities N°	32
Injection Type	Torpedo
System Type	Oerlikon HRSflow Hot Half, Tp series

## PART DESCRIPTION

Molded Part	Foaming pump cylinder
Part Weight	7 g
Part Dimension	Ø 37 x 75 mm

## HIGHLIGHTS

Thanks to the uniform cooling on the core insert:

- Optimal tolerance on wall thickness and diameter
- No warpage
- Better ejection of the part
- Reduced cycle time



# Case study:

## Lip gloss with cap

High-quality gate finish on parts, even with direct injection

### HOT RUNNER SYSTEM FEATURES

Molded Material	PET
Cavities N°	8
Injection Type	Cylindrical Valve Gate
System Type	8 drops Xp series

### PART DESCRIPTION

Molded Part	Lip gloss with cap
Part Weight	20 g (bottle), 6 g (cap)
Part Thickness	5.6 mm

### HIGHLIGHTS

- High-quality gate finish, even with direct injection
- Dedicated hot runner solution preventing crystallization spots
- Optimized gate configuration to minimize shear stress due to PET's high viscosity
- Specialized hot runner design for bottle and cap injection (different weights/thicknesses) under ideal pressure conditions
- Exceptional cylindrical straightness ensured by uniform melt flow



# Customer Support

Our team provides you with **complete support**, from the rheological analysis and design phase to try-out and maintenance. For special applications, we can define the optimal system configuration and predict part quality through advanced hot runner systems available in our **Test Lab**.

Plastic samples according to the weight, thickness and geometry of your application can be delivered for a preliminary analysis.

## TEST - LAB EQUIPMENT AT YOUR DISPOSAL

- Prototype tools available to try your most challenging polymers
- Full range of nozzles and flow types based on your specific application
- Injection Molding Machines from 170 to 300 tons



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