

**æerlikon**  
hrsflow

# Hot Runner expertise in every sector

Experience our cutting-edge hot runner technologies  
for all your challenging applications



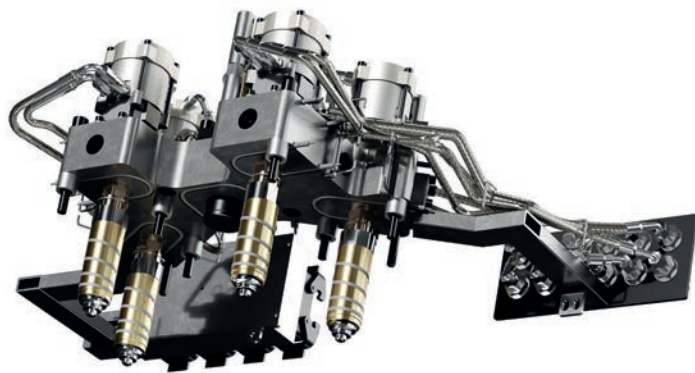
# Who we are

Oerlikon HRSflow is a worldwide company that designs and manufactures hot runner systems for a wide range of applications in the plastic injection molding industry.

We welcome the challenge of complex design requirements for the markets of Logistics & Environmental, Domestic Appliances, Technical Applications, Mobility, Houseware & Gardening.

Our main goal?

Leading our customers to produce complex and accurate plastics parts: from the most standard components to the applications requiring high design flexibility, fast color change, high structural performance and low weight.



# Markets



## Logistics & Environmental

We customize robust hot runner solutions for every single space and needs: lightweight pallets requiring high structural performance, use of recycling material without pin block issue, modifiable mold using a single hot runner layout.

### Which sectors?

Industrial storage, industrial packaging, waste management and all types of transportation systems, boxes and luggage.

### Your benefits

- Fast color change
- Uniform wall thickness of the components
- High structural result of the entire part without internal stress
- Complete filling of all the ribs and walls following our rheological analysis
- Warp-free parts with high class surfaces, free of flow lines or visible weld lines
- High process repeatability



## Domestic Appliances

We design dedicated and compact hot runner systems for different kind of applications: from the smallest parts for hair dryers to the biggest components for industrial refrigerators.

We can provide several applications for the product development:

- Family mold technology to increase the production volume of a range of parts.
- 2K and 3K technologies (multi-materials, multi-components, overmolding, etc) to improve the aesthetical result of the part and the injection process.
- Rectangular valve gate system to improve the quality on the gate area.

### Which sectors?

Whitegoods and household appliances.

### Your benefits

- Fast color change
- Technical expertise to manage materials with additives (UV resistant, flame-retardant, etc)
- Excellent finish and cosmetic surface
- Uniform wall thickness of the components
- High structural result of the entire part without internal stress
- Warp-free parts for a better assembly of the parts
- High process repeatability

### Technical applications

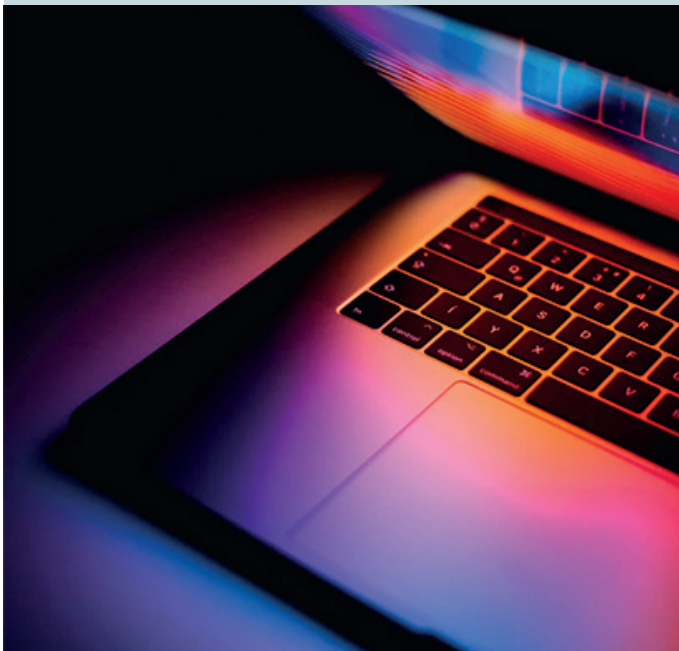
We develop dedicated hot runner solutions suitable for advanced techno-polymers with mechanically or chemically abrasive loads and with very reduced molding windows.

#### Which sectors?

Electronics, electrical, hydraulics, construction and lighting field (for domestic and industrial usage).

#### Your benefits

- Excellent finish of the molded part
- High dimensional stability and high structural performance any risk of deformation.
- Uniform thermal profile
- Suitable for reinforced polymers
- Capable of high temperature operation
- High process and product repeatability



### Houseware and Gardening

The most critical aspect for houseware applications? Fast color change. Thanks to our expertise, we design compact hot runner systems suitable for reducing the time taken for fully color change, ensuring an excellent finish, high process repeatability and production reliability.

#### Which sectors?

Garden and bricolage machines and the flexible market of consumer goods.

#### Your benefits

- Specific solutions for multicomponent or multi-material parts
- Reduced scraps
- Fast color change
- High quality finish and safety
- High structural performance
- Warp-free parts



## Mobility

We develop hot runner technologies and lean solutions for the “non-conventional vehicle” market sharing the same aesthetical and technological requirements of the Automotive sector but with completely different productivity volumes.

Oerlikon HRSflow products offer high design flexibility for the mold maker and a simple lean concept to save time. The systems are designed to facilitate operations of assembly and maintenance.



### Which sectors?

Bikes and motorbikes, tractors, 3 wheelers cars, sport vehicles, etc. We consider also all the sport items and protective devices.

### Your benefits

- Reduction in number of control zones
- Reduction of hot runner pocket dimension in the mold
- Ease of installation and maintenance
- Excellent finish and cosmetic surface
- Uniform wall thickness of the components
- Material replacement from metallic composition to technical molding materials



# Our solutions for your best products

## FLEXflow Family

includes the electrically driven valve gate systems, FLEXflow and FLEXflow One. The electrical technology is designed for the independent adjustment of each valve pin with precise control of stroke and force during opening and closing phases. This solution assures accurate, easy to operate, flexible control of pressures and flow rates at each individual gate during the injection process and ensure the best part performance.

## SA Series

is the ideal solution for technical applications with reduced weight (> 0.5 g) and thickness for all future challenges. Main benefits include: high flow rate, compact solution, high pressure resistance, high aesthetic quality, suitable for techno-polymers.

## Rectangular Valve Gate

White appliances require the best aesthetic result without a visible injection point on the part. Rectangular Valve Gate is suitable to inject directly in ribs of small dimensions and thickness. Main benefits: cold runner removal, no visible injection point on the part, mold dimension reduction.

## Color change

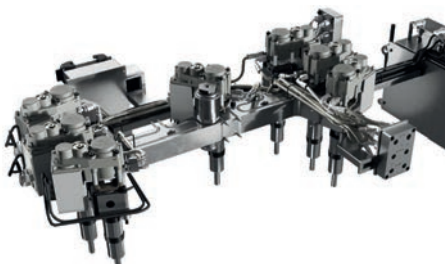
Optimization of color change affects the entire hot runner, with special focus on the nozzle. The bore channel sizing and channel finish, is designed according to the type of material to be processed. Simply and robust system, efficient color changes, reduction of production waste. And with FLEXflow, color change optimization become fast and in one touch!

## Family Mold

No more unbalancing and warpage control constraints with our Family mold solution. Servo valve gate technology lets to control stroke and force of each individual pin independent of one another. This prevents overfeeding and flash formation on different-sized parts while all cavities are filled simultaneously. This servo-driven solution helps maximizing efficiency and decreasing costs managing the work-in-process (WIP) with large part variances

## Compact stack mold

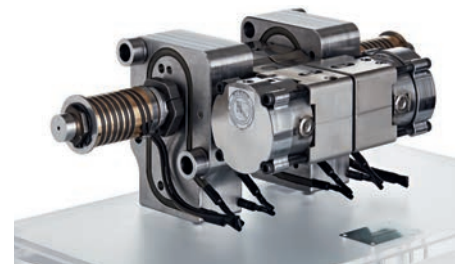
The space optimizing solution thanks to mold digging out reduction. Suitable for smaller injection pressing machines and PP, ABS and PC/ABS polymers. Perfect for big size automotive components like bumpers and other sectors applications like waste bins and pallets



FLEXflow servo driven valve gate



SA Series



Compact stack mould

# Our support

## SSE

Our Sales Support Engineers will follow your project before and after sales

Located in our production plants and in our branches, the SSE is the first technical interface between the Company and the customers. He evaluates the technical feasibility of the project managing the changes during the design phase and suggesting some alternative solutions, if required. He supports you even during the after sales phase for any further information about Oerlikon HRSflow hot runner system use.

## Rheological analysis

Our rheological analysis by using state-of-art software and simulation techniques supply the most accurate results as possible

Consulting service is available for different type of processes including GAIM (Gas Assisted Injection Molding), 2 shot Sequential Overmolding, ICM (Injection Compression Molding), Foaming and Multi Component Molding.

## Identical global standard world wide

Our production performance is the same all around the world, since our factories boast identical equipment and standard processes. Our design, production and quality procedures are identical, wherever they are located.



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