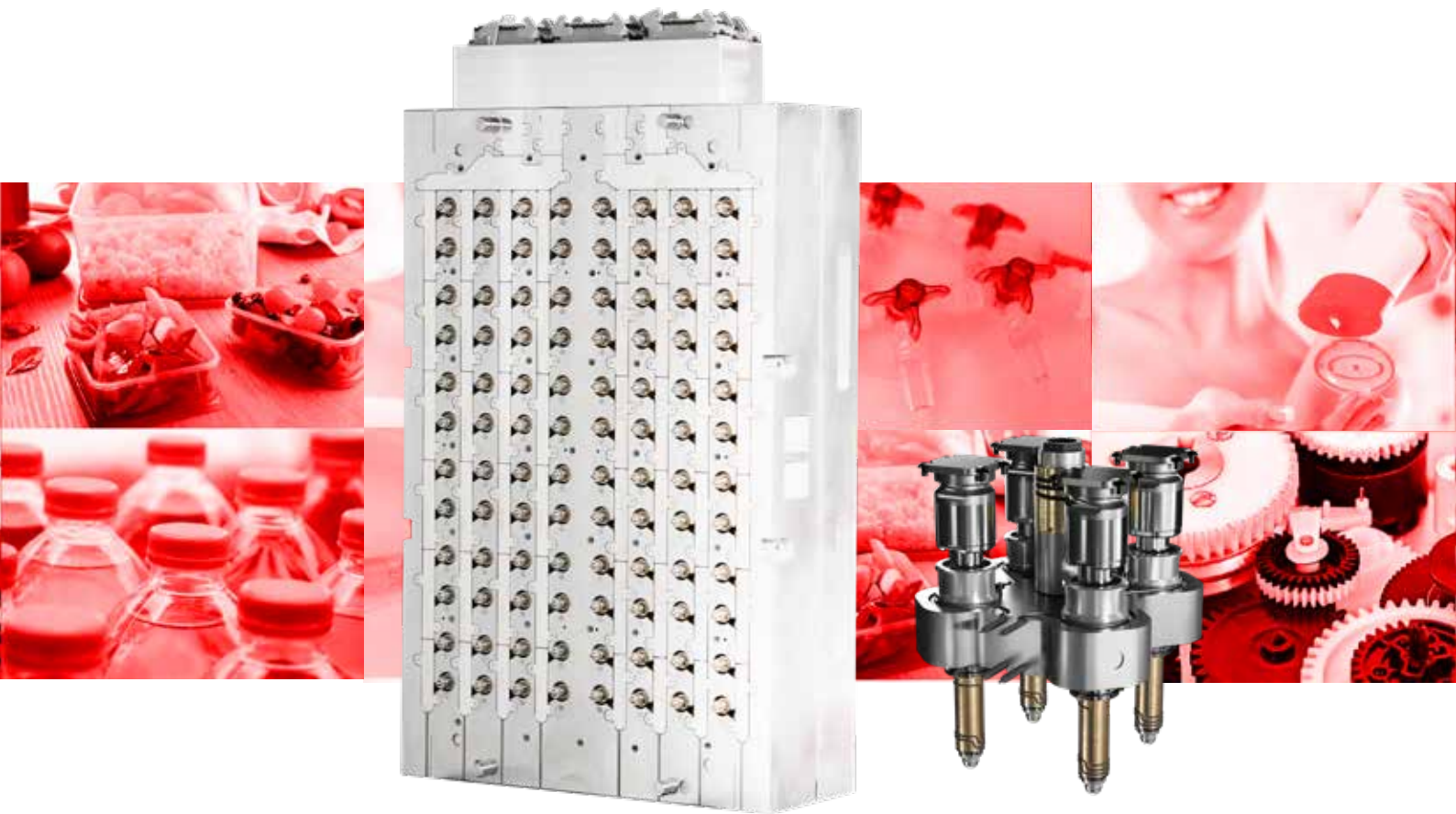


Hot runner systems for low shot weights

Maximum precision combined with fast cycle times



Your reliable partner for the most challenging applications

THIN WALL PACKAGING

sustainable solutions for low thicknesses

Our hot runner systems for thin wall packaging are designed to withstand high injection pressures and improve the aesthetic finish of the part. Moreover, we ensure an easy maintenance and corrosion-resistant nozzle components.

The accurate thermal control of the injection gate allows a fast cycle time and an optimal injection quality also with IML-decorated products.

Main benefits

- Fast cycle time
- Improved wear resistance
- High production volumes
- Developed for heavy duty applications
- Engineered for PCR and Bio Resins



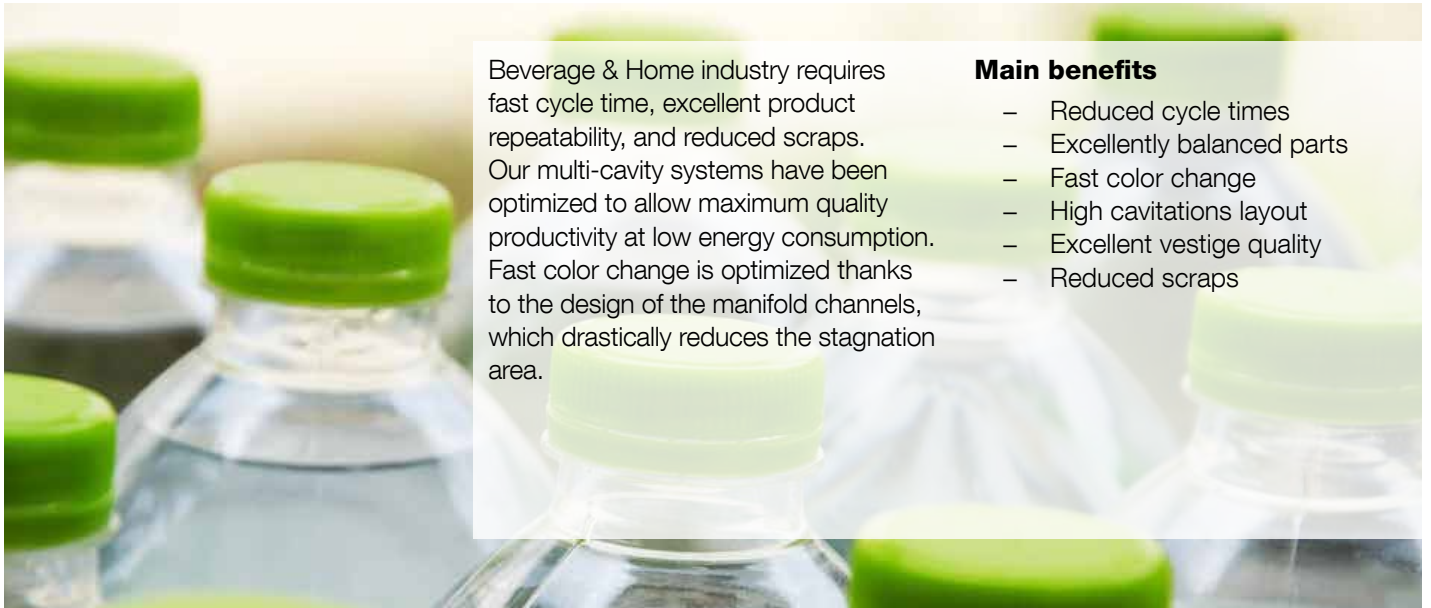
THE RIGHT "BLEND" OF TECHNOLOGY

We provide dedicated hot runner solutions for the challenging market of single serving capsules requiring:

- short cycle time
- excellent gate appearance
- part-to-part weight consistency
- high production volume
- fast color change

BEVERAGE & HOME

fast cycle time, excellent repeatability



Beverage & Home industry requires fast cycle time, excellent product repeatability, and reduced scraps. Our multi-cavity systems have been optimized to allow maximum quality productivity at low energy consumption. Fast color change is optimized thanks to the design of the manifold channels, which drastically reduces the stagnation area.

Main benefits

- Reduced cycle times
- Excellently balanced parts
- Fast color change
- High cavitations layout
- Excellent vestige quality
- Reduced scraps

BEAUTY AND PERSONAL CARE

impeccable functionality



Beauty and personal care applications must be flawless but robust at the same time. Due to their daily use, they are subject to a high degree of handling stress, specifically in the functional areas. Our multi-cavity systems are conceived to produce high quality parts also characterized by high transparencies or uncommon thickness. Optimized results with high aesthetical copolyesters come from our experience in design and process setting.

Main benefits

- High aesthetic of the parts and injection gate
- Fast start up production
- Reduced scraps
- Designed for crystal clear transparent parts
- Engineering solutions for metallized polyolefins

MEDICAL

consistent parts shot-after-shot



We design advanced multi-cavity systems equipped with dedicated solutions to meet the most challenging needs of the medical device world: complex geometries as well as excellent quality of the part surface, high sanitary standards, maximum product safety.

Among our dedicated solutions we offer:

- MVP – Multivalve plate to ensure a perfectly synchronized control of the injection gate through all cavities for a high part-to-part weight consistency.
- Specific solutions to process a wide range of polymers including PVC

Main benefits

- Dedicated technology for manifold conformal channels to enhance systems balance and reduce stagnation areas
- Stable and reliable process
- Exceptional accuracy on vestige
- Part to part consistency
- Excellent quality parts
- Experience with complex polymers

TECHNICAL APPLICATIONS

for high performance industries



The main challenges of technical applications are represented by advanced techno-polymers, with mechanically or chemically abrasive fillers, tight process window and high molding temperatures. Our hot runner solutions are ideal to manufacture quality parts with structural performance and dimensional stability, keeping under control warpage and part deformation.

Main benefits

- Easy start up
- Wear and tear and high corrosion resistance
- Consistent process window over time
- Suitable for high abrasive and corrosive polymers
- Easy and fast maintenance

High performance systems for small precision parts

Our multi-cavity line for small applications is designed for low shot weights ranging from 0,5 to 60 gr according to the polymer used. For open gate the minimum gate to gate pitch is 22 mm with the smallest nozzle pocket of Ø 16 mm. For the valve gate the minimum pitch is 40 mm using the on plate cylinder (it gets to 25 mm with MultiValve Plate). With the cylinder on manifold the minimum pitch between drops becomes 37 mm.

Our hot half is a fast plug and play solution for the injection molding

machine. The internal geometry is suitably profiled to guarantee excellent resistance to bending and torsion, even with high cavitation numbers. Our dedicated channel design and a specific coating significantly increase the wear and tear of components, performing also optimized corrosion resistance.

OUR COMMITMENT TO A STRONG SUSTAINABLE FUTURE FOR OUR PLANET







Biopolymers and PCR resins have dedicated technical solutions, as they are often characterized by narrow process windows due to thermal or shear sensitivities.

Our systems are furthermore conceived to prevent damages caused by foreign particles accidentally present in the PCR compound, to avoid any streaking or flow marks that could jeopardize the cosmetic and functional result of molding.



Nozzle series overview

face-to-face & screwed-in

NOZZLE SERIES OVERVIEW FACE-TO-FACE & SCREWED-IN				
SYSTEM TYPE	FACE-TO-FACE	SCREWED-IN	FACE-TO-FACE	FACE-TO-FACE
APPLICATIONS	Multicavities	Technical applications low cavitations	Multicavities	Multicavities
SERIES	Sp	Sa	Tp	Vp
NOZZLES				
NOZZLE LENGTH / BORE	L 45 – 205 / Ø16	L 50 – 160 / Ø20	L 55 – 205 / Ø24	L 55 – 205 / Ø28
SHOT WEIGHT	0.5 – 15 gr	0.5 – 15 gr	0.5 – 20 gr	2 – 60 gr
INTERNAL BORE	Ø4 – Ø6	Ø4 – Ø6	Ø5 – Ø7	Ø7 – Ø9
MIN PITCH TG/VG	22 TG 40 (25*) VG	22 TG 37 (25*) VG	29 TG 40 (29*) VG	39 TG 56 (39*) VG
ACTUATOR	ON plate with adjustable needle position	ON plate ON manifold	ON plate with adjustable needle position	ON plate with adjustable needle position

(*) With Multivalve Plate

Dedicated nozzle solutions for specific sectors

face-to-face

NOZZLE SERIES OVERVIEW FACE-TO-FACE		
SYSTEM TYPE	FACE-TO-FACE	FACE-TO-FACE
APPLICATIONS	Fast cycle Caps & Closures	Thin Wall Packaging
SERIES	Vf	Xp
NOZZLES		
NOZZLE LENGTH / BORE	L 78 – 98 / Ø28	L 55 – 305 / Ø32
SHOT WEIGHT	0.5 – 8 gr	20 – 60 gr
INTERNAL BORE	Ø7 – Ø8	Ø8 – Ø10
MIN PITCH TG/VG	39 TG	56 VG Single Face
ACTUATOR	ON plate with adjustable needle position	ON plate (Single Face)

VF NOZZLE SERIES

Designed for the market of caps&closures, the Vf nozzle series is engineered to improve the heat barrier towards the cavity by reducing the size of the contact area between the mold plates. Equipped with a special nozzle tip, this solution ensures fast cycle times and an optimal thermal distribution at the gate area reducing the mold cavity surface wear even with high production volumes.

XP NOZZLE SERIES

Engineered for thin-wall packaging applications, the Xp series of valve gate nozzle is designed to withstand high filling pressures (up to 2300 bar). It enables fast injection and cycle times in a stable process with high part-to-part weight consistency. A patent-pending solution for stack systems has been developed. This hot runner system fits a maximum plate thickness of 220 mm.

Our Services

Rheological analysis to duly supply the most accurate results

Simulation consulting service helps you optimize system performance, process parameters and part design. An advanced rheological analysis allows to reduce trial time and time to market, preventing any issues due to the molding process reliability

Full solution provider in plastics processing

Thanks to the combined experience with our sister brand **Oerlikon Balzers**, we can offer innovative surface coating protection for all molding surfaces. This solution helps customers reach the perfect quality results despite high production volumes.



Internal Test Laboratory available for customer trials

We have an Internal test laboratory with designated Injection Molding Machines equipped with unique demo tools easily customizable according to test requirements. Our customers can get a prompt feedback about polymer processability, part quality and the optimal hot runner layout for their applications. A front polymer testing allows to obtain the best molded part avoiding unplanned expensive downtime.



SLM Technology Selective Laser Melting

We can offer conformal cooling circuits, conceived and built by in-house SLM Technology in case of challenging applications whatever the market segment destination.

Optimising mold cooling results in reduced cycle times, unblemished part surfaces thanks to the uniform thermoregulation, lower residual stress and, consequently, any potential warpage of the finished part.



Driven by a high automation level and a lean approach

Our strong points are digital workflow, machines available 24/7, standardization of management and manufacturing processes. Our production area - characterized by a high automation level and a lean approach - is equipped with cutting-edge machinery for the production of high precision hot runner components where very tight tolerance is our must.

Quickly at your side 24/7

Our team of technical experts is always available to support you, 24/7. We can ensure system installation and maintenance, process tuning and optimization through try-out with skilled technicians, and standard spare parts shipment within 24 hours. Moreover, we can offer customized technical training.



Oerlikon HRSflow Italy

Production Plant
Headquarter
Via Piave, 4 - San Polo di Piave
31020 Treviso
Phone +39 0422 750 111
info.hrsflow@oerlikon.com - www.hrsflow.com

24/7 Service Hotline

Phone +39 0422 750 555
service.hrsflow@oerlikon.com

Oerlikon HRSflow China

Production Plant
INglass Tooling & Hot Runner Manufacturing
(China) Co. Ltd
No. 385, Road No. 18, Xiasha, Hangzhou Econ. &
Tech. Devel. Area Zhejiang 310018
Phone +86 571 86686900
china.hrsflow@oerlikon.com

24/7 customer service for Asian countries

Phone +86 18858181211
service.china.hrsflow@oerlikon.com

Oerlikon HRSflow USA

Production Plant
Oerlikon HRSflow USA, LLC
920 74th Street - 49315 Byron Center, MI
Phone +1 616 228 6900
usa.hrsflow@oerlikon.com

24/7 Service Hotline

Phone +1-855-HRS-FLOW
(1-855-477-3569)
service.usa.hrsflow@oerlikon.com