

PERFECT CONTROL FOR TOP-TIER QUALITY IN SILICONE INJECTION MOLDING

Let's Talk About
**Smart
Silicone
Solutions**

SMARTshot

COLD RUNNER SYSTEMS

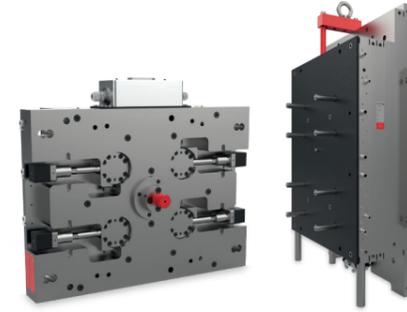


SMARTshot
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PRODUCT OVERVIEW COLD RUNNER SYSTEMS

TECHNOLOGY TAILORED TO PART REQUIREMENTS
EXACTLY CONTROLLED MATERIAL FEED
PRECISE & WASTE-FREE PRODUCTION



| | | SMARTshot i | SMARTshot E | SMARTshot P | SMARTgate |
|---|---------------|---------------|---------------|-----------------------------|-----------------|
| Needle valve system | | ■ | ■ | ■ | ● |
| Nozzle size | S | ● | ● | ■ | ■ |
| | M | ■ | ■ | ■ | ■ |
| | L | ● | ● | ■ | ■ |
| ∅-Injection point | | ∅ 1,2 mm | ∅ 1,2 mm | ∅ 0,9 - 1,2 mm | ∅ 0,25 - 0,5 mm |
| Minimum nozzle pitch | | 44 mm | 44 mm | 50 mm | 12 mm |
| Max. number of nozzles | | 16 | 16 | 32 | 128 |
| Position accuracy of the needle | | 2 µm/0,002 mm | 2 µm/0,002 mm | 2 µm/0,002 mm | - |
| Max. opening stroke of the needle | | 4 mm | 4 mm | 3,8 mm | - |
| Needle drive | Electrically | ■ | ■ | ● | - |
| | Pneumatically | ● | ● | ■ | - |
| Needle position monitoring | | ■ | ■ | ● | - |
| Automatic start-up | | ■ | ● | ● | ● |
| Start-up time after product change / commissioning | | 20-30 shots | - | - | - |
| Balancing | Automatically | ■ | ● | ● | - |
| | Manually | ■ | ■ | ■ | - |
| Automatic balancing of a family mold with different cavity volumes* | | ■ | ● | ● | ● |
| External control unit | | ■ | ■ | ■ | - |
| Monitoring isothermal state | | ■ | ● | ● | ● |
| Nozzle vacuum | | ■ | ■ | ■ | ■ |
| Interchangeable nozzle tips ¹ | | ■ | ■ | ■ | ● |
| Remote Support | | ■ | ● | ● | ● |
| Minimum cold runner height | | 266 mm | 266 mm | 189 - 231 mm | 127 - 172 mm |
| Compressed air | | - | - | 6 bar / 87 psi ² | - |
| Water cooling (constant 20–25°C / 68–77°F) | | ■ | ■ | ■ | ■ |
| Vacuum (50 mbar absolute) | | ■ | ■ | ■ | ■ |
| Warranty | | 12 months | 12 months | 12 months | 12 months |

SMARTshot – Precision and process reliability in cold runners

Direct injection without material loss

Direct injection enables waste-free processing without reworking and ensures high process stability.

Precise needle technology for perfect injection points

Twist proof needles and adjustable contours enable precisely defined injection points and uniform, material-friendly cavity filling.

Individual fine adjustment of each nozzle

Separately adjustable nozzles compensate for different flow lengths and cavity conditions, ensuring optimally balanced processes and consistent part quality.

Thermal separation

The structural separation of the cold runner and hot area ensures stable, reproducible temperatures, safe LSR processes, and minimizes energy losses.

Short setup times and low-maintenance

The service-friendly plate-based design and easily accessible components reduce setup and maintenance times and increase system availability.

Multi-component injection molding

The precise and balanced process enables waste-free production and particularly short start-up times, ensuring efficient, clean, and economical manufacturing.

Intelligence in the mold

The SMARTshot i is the entry point into an intelligently supported injection molding process. The system already enables automatic balancing and continuous monitoring of the injection process, ensuring high process stability with reduced manual effort.

The mold is designed for future expansion. Planned features such as real-time rheometry and self-learning automation form the basis for further efficiency gains and high process reliability – even in demanding LSR applications.

Consistent quality over long series

Precise needle technology, stable temperature control, and individual balancing ensure consistent part quality – even with high volumes.

SMARTgate – Simple design, quick cleaning and high process reliability

The compact mold design enables short cleaning times and efficient handling. The investment remains economical without compromising process reliability. Depending on requirements, direct or indirect injection via film or tunnel gate is possible, allowing flexible adaptation to geometry and material.

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SMART SILICONE SOLUTIONS

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