



Hot Runner Solutions for Technical Moulding

An Introduction to Mastip Technology

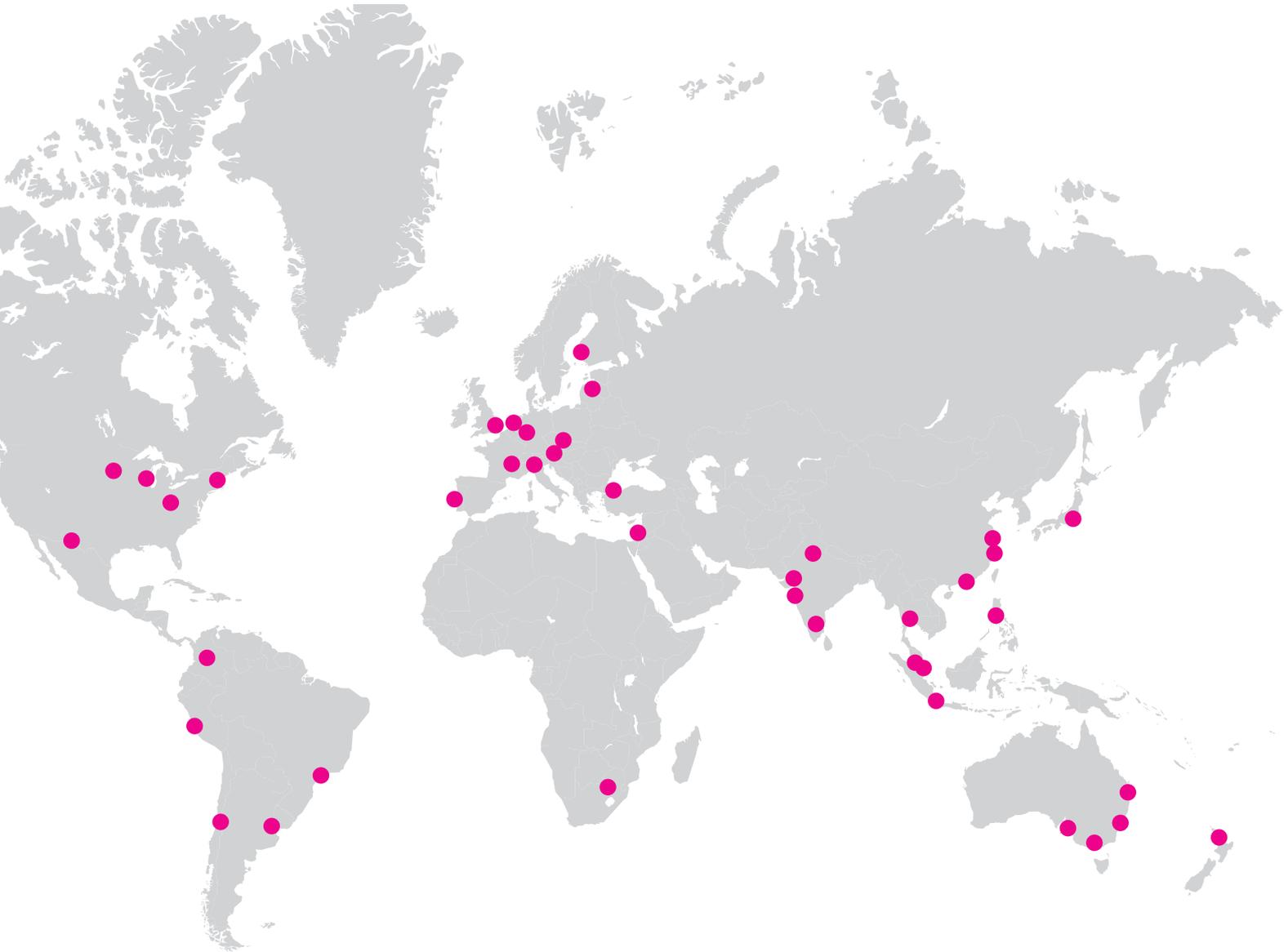
Mastip is a leading supplier of innovative hot runner solutions to the global plastic injection moulding industry.

The company believes foremost in providing service and support, throughout the life cycle of the hot runner. This means you can be confident that spares and technical support is always available.

Mastip has a comprehensive range of hot runner products from single nozzles through to complete hot half solutions, available in either thermal or valve gate to satisfy the most demanding applications.

At Mastip we strive to understand our customers exact moulding requirements in order to deliver reliable and high performing solutions. Every Mastip system provides faster cycle times and material savings while producing quality components, all leading to higher efficiencies and a better return on investment.





Global Support

Our global network provides complete support from initial enquiries through to post sales service for all Mastip systems. With a strong presence in every major region from Europe, the America's, Asia and the Pacific we are there to support your business.

Mastip produces solutions across many markets, including medical, optical, packaging, caps and closures, electrical, engineering, industrial, appliances and automotive components.

Mastip's solutions teams assess each application to ensure the correct nozzle configuration, manifold design and wear resistant components are utilised to achieve part quality, repeatability and long term reliability.

Medical

The medical market demands product that is free of contaminants, free of gate vestiges and high part quality. Mastip has a proven range of hot runner solutions that meet these demands. Mastip's range of nozzles, valve gates and manifolds will deliver the level of performance and quality expected of the medical market.

Key Products: MX Nozzle, MJ Nozzle, MVG Valve Gate, Hot Half

Caps and Closures

The caps and closures market requires maximum productivity, achieved through multiple cavities, short cycle times and close pitching. Mastip has a range of solutions ideal for this market. Our high cavity hot half solutions, in either thermal or valve gate configuration, ensures part quality is maintained even at fast cycle times.

Key Products: MX Nozzle, MJ Nozzle, MVG Valve Gate, Hot Half

Optical

The optical market requires parts that have exceptional clarity and consistent dimensional size. This means the hot runner must have uniform thermal distribution and deliver consistency from shot to shot. Mastip's solutions reduce residence time of the material and maintain a uniform thermal profile across the entire system, ensuring optimum condition of the molten plastic, resulting in optical part clarity and repeatability.

Key Products: MX Nozzle, MVG Valve Gate

Electrical

The electrical market requires components made from tough engineering resins often with additives that change the moulding profile. Mastip hot runner systems give you control of the moulding process, with a comprehensive range of nozzles and valve gate solutions, able to withstand the corrosive and abrasive nature of these additives.

Key Products: BX Nozzle, MVG Valve Gate

Appliances

The consumer appliance market needs components with great cosmetic finishes while maintaining structural integrity. The components often have long flow lengths requiring multiple injection points and sequential filling. Mastip engineer hot runner systems for large parts utilising valve gates to provide fast filling, lower injection pressures and ultimate control achieving moulding of large components with outstanding quality.

Key Products: BX Nozzle, SX Nozzle, MVG Valve Gate, SVG Valve Gate

Packaging

The demands of the packaging market range from fast cycling thin wall applications to thick wall long cycle products as used in the cosmetics industry. These quite different needs actually demand the same – excellent control of the melt flow and processing conditions. Mastip's valve gate solutions are ideal for the packaging market, delivering both the reliability and performance needed to succeed.

Key Products: BX Nozzle, MVG Valve Gate

Engineering / Industrial

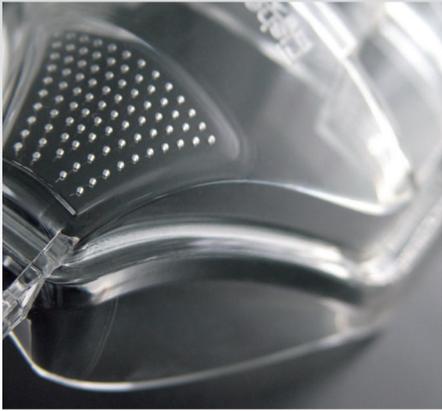
The engineering market requires product that demands a high level of technical expertise and experience. Most engineering mouldings require durable hot runner systems manufactured from high-grade materials to guarantee long-term reliable moulding. Mastip's range of nozzles ensures there is a solution that provides just that.

Key Products: BX Nozzle, SX Nozzle, MVG Valve Gate

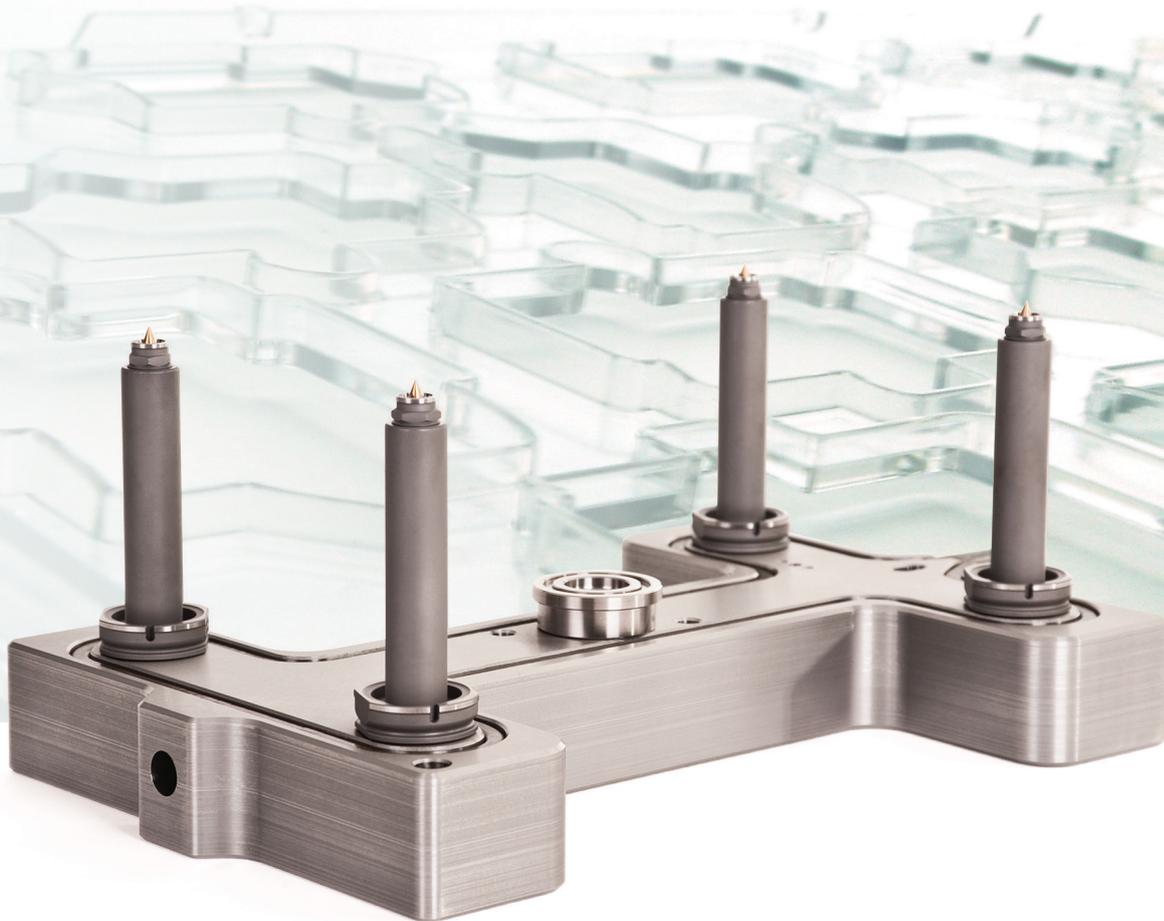
Automotive Components

The automotive component market ranges from highly visual cosmetic parts to structural engineering parts that often have to work in harsh environments. Mastip's extensive experience in these type of products means we can deliver a solution customised to your specific needs which will provide long term reliability and performance.

Key Products: BX Nozzle, SX Nozzle, MVG Valve Gate, SVG Valve Gate



Mastip supplies solutions; this means each of our systems is custom made to meet your exact requirements. Our engineers will work with you to assess the needs of your project ensuring the right solution is achieved for your application.



An integral part of supplying the solution is to provide full 3D models of the hot runner system and required machining details ready for integrating into your mould design. We will detail all the critical areas needed to achieve a leak proof system that will provide long-term reliability.

Whether your needs are close pitching, fast colour change, fast material change or short cycle requirements, Mastip has the right solution. Mastip's solutions will provide material savings and low cost of ownership making your production more efficient.



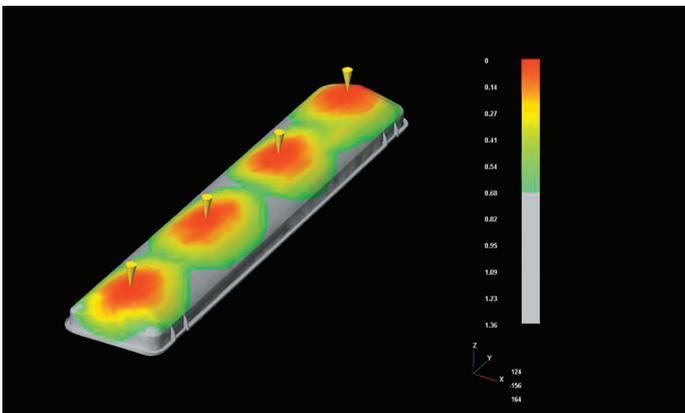
Sequential Filling Solutions

If your product requires sequential filling, Mastip has the right solution. Mastip will deliver a solution that provides precise control of the melt flow, allowing you to manage weld lines ensuring moulded parts with improved surface appearance and strength.



Multi Material Systems

Mastip has extensive experience in supplying solutions for multi material and multi colour applications. From simple high cavitation plastic packaging to technically advanced components such as structural and engineering parts for the automotive industry.



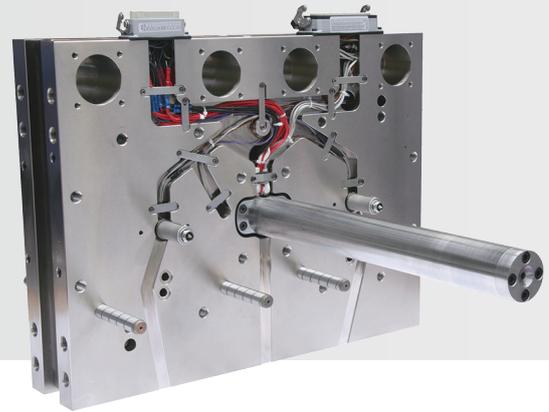
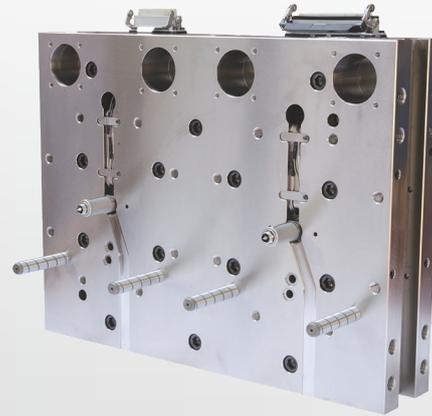
Thermal & Flow Analysis

Mastip utilises leading edge flow, thermal and strength analysis software to achieve high performing solutions. These software packages are also an integral part of our new product development programme. This gives us in-depth understanding of our products ensuring we can deliver reliability and performance; net result to you is maximum return on investment.



Hot Half Solutions

Mastip delivers a complete hot half solution to integrate with your tool design. All aspects of the hot half design, manufacture, assembly and testing is completed by our team of engineers to Mastip's exceedingly high standards ensuring we provide reliability and performance. A Mastip hot half is backed by a three year leak proof warranty.



Stack Mould Solutions

For maximum efficiency Mastip can design and build stack mould hot runner systems to suit your application, whether it is a manifold system or a complete hot half solution.



Manifold System Solutions

All Mastip manifolds are designed to deliver a uniform melt to each nozzle, ensuring cavity-to-cavity consistency. This is achieved through natural balancing of the flow channels and ensuring constant temperature profiles are maintained across the manifold block.



MJ Nozzle

The MJ Nozzle is ideal for the processing of small parts or where space is minimal. Optimised for multi cavity hot half configurations the nozzle utilises a unique thermocouple position and heater profiles to ensure precise temperature control. The small gate pocket allows injection into restricted areas while enabling superior cooling of the gate area, thus providing improved part quality and cycle times.

MX Nozzle

The MX nozzle is the ideal solution for high cavity hot half systems including those requiring close cavity pitching. Due to its excellent thermal consistency the MX nozzle is able to process a wide range of plastics, from the easy ethylene's to tough engineering resins.

BX Nozzle

The BX nozzle is a general purpose solution for low to medium cavitation applications not requiring hot half construction. The BX nozzle provides the same moulding performance as the MX nozzle, just in a rear loading configuration. Available in a large variety of sizes and lengths the BX nozzle is a versatile product suitable for a wide range of applications, which delivers excellent performance under demanding moulding conditions.

SX Nozzle

The SX nozzle is a dedicated single nozzle solution giving outstanding performance for all single nozzle applications. Utilising two independently controlled heater zones achieves uniform temperature distribution along the length of the nozzle, making it the ideal nozzle to process demanding engineering and temperature sensitive resins.



Valve Gate Solutions

Valve gates are used to achieve superior part quality, better flow and cosmetic gates. Mastip's Valve Gates are proven solutions that deliver this in a compact, reliable and easily serviced package. By using a Mastip Valve Gate you will achieve reduced moulding pressure, increased moulding window, lower mould filling stress all leading to better part quality.

MVG – The Mastip MVG manifold valve gate system is the perfect choice whether processing easy or engineering resins, or when requiring close cavity pitching. The MVG valve gate provides easy machining of plates, ease of maintenance and easy integration into the mould design. It is fully compatible with the MX and BX nozzle ranges.

The MVG system is available in three sizes. The MVG25 is ideal for small to medium applications, compatible with the MX and BX nozzle range in the 13 and 16 series. The MVG40 system is designed for medium applications, compatible with the MX and BX nozzle range in the 13, 16, 19 and 27 series, or when requiring easy pin adjustment. The MVG55 is ideal for medium to larger shot weight applications or resins that contain fillers and is compatible with the BX nozzle range in the 27 series.

SVG – If you need a single nozzle valve gate our Single Valve Gate (SVG) is the system of choice. The SVG provides outstanding performance and reliability, by utilising the BX range of nozzles, maintenance and spare parts are made easy. SVG is the ideal solution for applications using engineering grade resins, fast flow rates, large volume parts and requiring dimensional accuracy.

Controller Solutions

Mastip offers Temperature and Sequential Controller solutions to suit your application needs. Controllers come in both modular and integrated formats.

Mastip Controllers provide high quality long term reliability and accuracy. Designed to work under demanding conditions, the controllers are easy to set up, simple to operate and functionality allows for the precise control of your system.





Mastip Head Office New Zealand

Physical Address

558 Rosebank Road, Avondale
Auckland 1026, New Zealand

Postal Address

PO Box 90651, Victoria St West
Auckland 1142, New Zealand

Phone: +64 9 970 2100

Email: mastip@mastip.com

Mastip Regional Office Europe

Phone: +33 0 809 400 076

Email: europe@mastip.com

Mastip Regional Office North America

Phone: +1 262 644 9400

Email: northamerica@mastip.com

Mastip Regional Office China

Email: china@mastip.com

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