



GLOBAL TOOL MAKER  
AND INJECTION MOULDER

# WHY INJECTION MOULDING?

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## WHY INJECTION MOULDING?

### THE BENEFITS OF PLASTIC INJECTION MOULDING AND POST MOULDING ASSEMBLY

Plastic injection moulding is a long-established and widely used manufacturing process. WSM Industries has over 25 years' experience providing an in-house tool making and injection moulding service across many industry sectors.

Our complete understanding of how injection moulding can provide real benefits and commercial advantages as seen us establish long-term partnerships with our customers.

There are many reasons for having components manufactured using this versatile process, including:

- Injection moulding can be used to create precise shapes.
- Injection moulding is an ideal process for manufacturing complex plastic shapes, with precisely formed details, patterns and geometries.
- An added benefit is "lightweighting". Using plastic components helps reduce the weight of comparable metal components. Plastics materials such as high-strength, lightweight thermoplastics can be used to replace metal components with virtually no difference in strength or dependability, even in harsh and testing environments.

WSM Industries has built up many years' experience in this field and specialise in utilising complex engineering thermoplastics for a range of industries.

Plastic injection moulding can produce extremely large volumes of plastic parts quickly and repeatedly, often with very low unit costs. Plastic injection moulding machines run with fast cycle times and depending on the size of the moulded part and tool can produce multiple parts in every cycle.

WSM Industries can help with in-house product design expertise coupled with experience in material selection to suit any requirement. Much of the injection moulding process is automated by machines and robots, and controlled by small teams. This streamlines labour costs and greatly reduces the risk of rework caused by part defects or human error. Meanwhile, automation helps to reduce manufacturing costs as overheads are significantly reduced.

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WSM Industries' continuous improvement programmes strive to further reduce costs whilst improving efficiencies and quality.

Compared to other processes, injection moulding has very low scrap rates. A well-designed tool with appropriately specified material and tightly controlled and monitored production results in extremely low scrap rates. Any waste from the feed systems' sprues and runners can be recycled and used back in the process, resulting in almost zero waste.

Plastics components lend themselves to a variety of secondary operations.

In many cases, the plastics component from the machine is finished to a level that meets the requirements of the customer and can include highly polished finishes, matte finishes and unique textures to engraving. However, there are many post moulding techniques that can add value to, or are essential to the function of, the finished component.

WSM Industries specialises in pad printing onto many types of plastics. This can simply add a logo or can outline essential information and can be added in multiple colours.

Metal inserts can be moulded into the component or added afterwards by either press fit or ultrasonic welding or two plastics components can be welded together to form more complex assemblies.

In addition, complete assembly can be undertaken using a range of components, both moulded and bought-in while electronic components can be added, soldered and the assembly fully tested where necessary.

WSM Industries has many years' experience in all these fields and is equipped to handle any assembly requirement.