Ulisses

UNIVERSITY OF LISBON
INTERDISCIPLINARY STUDIES
ON SUSTAINABLE ENVIRONMENT AND SEAS

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Injection Moulding

Injection moulding is accomplished by forcing molten plastic under pressure into a cavity formed between two matched metal mould halves. Once the plastic cools, the moulds are opened and the part is removed.
Complex and intricate shapes are possible with injection moulding.
Injection moulding is the most widely used moulding process for thermoplastics.

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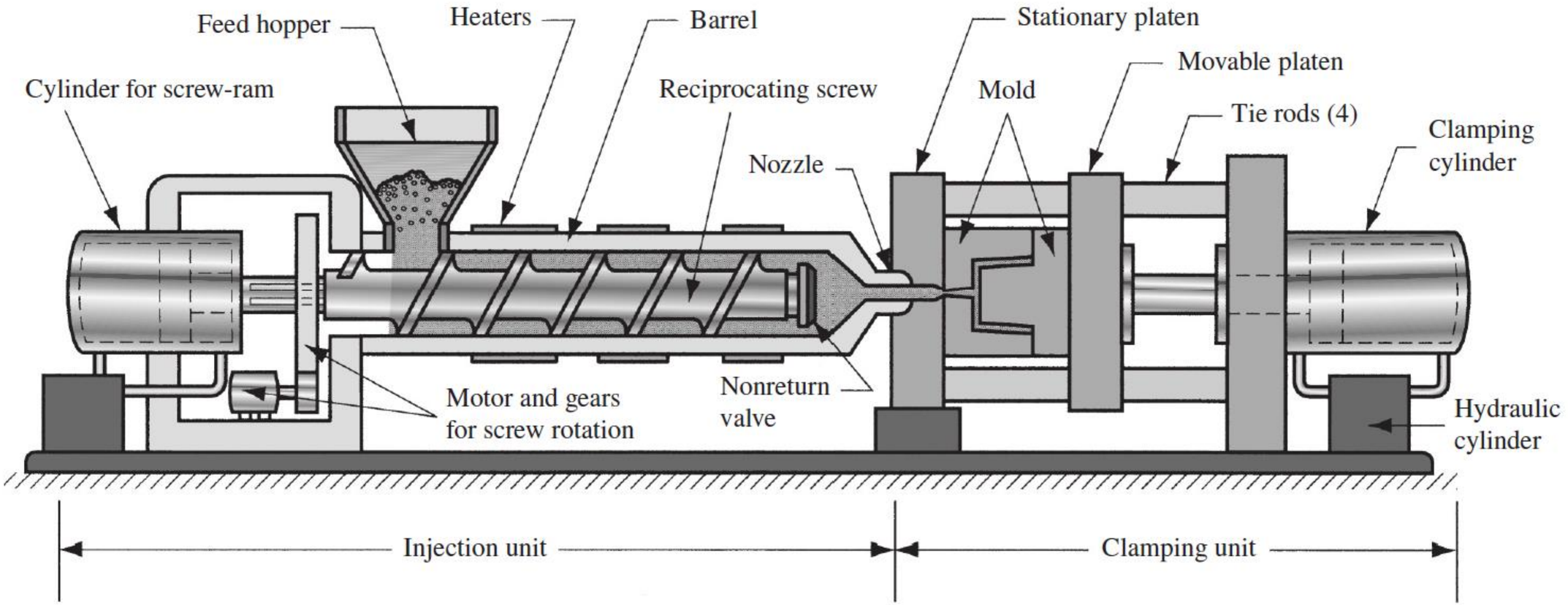
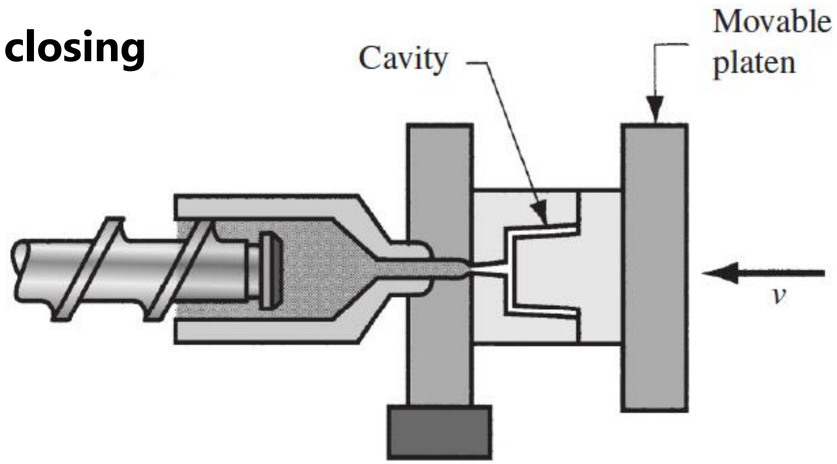
Injection Moulding

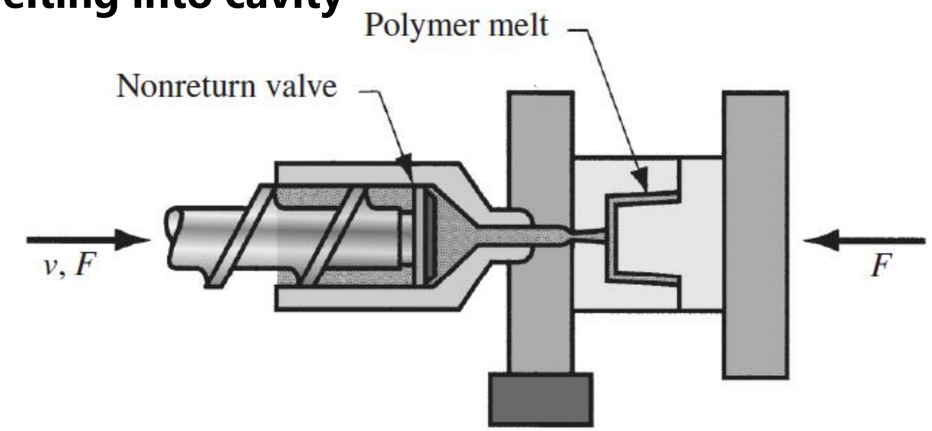


Injection Moulding

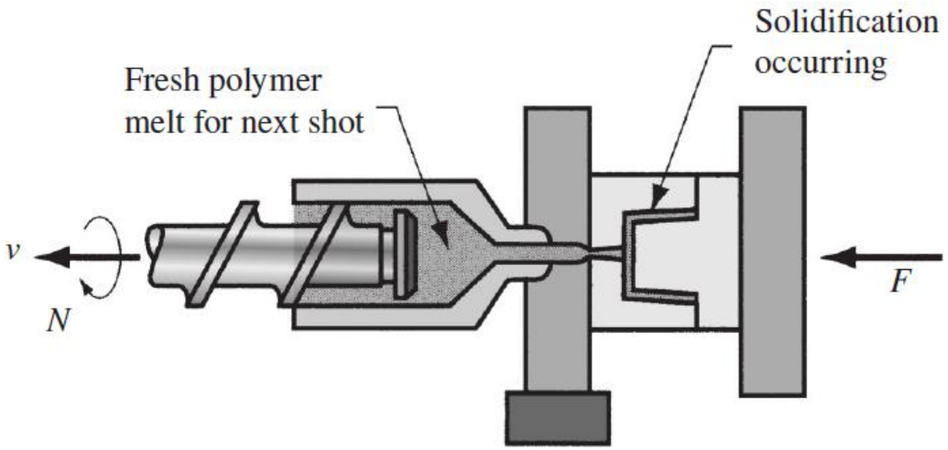
1. **Mould closing**



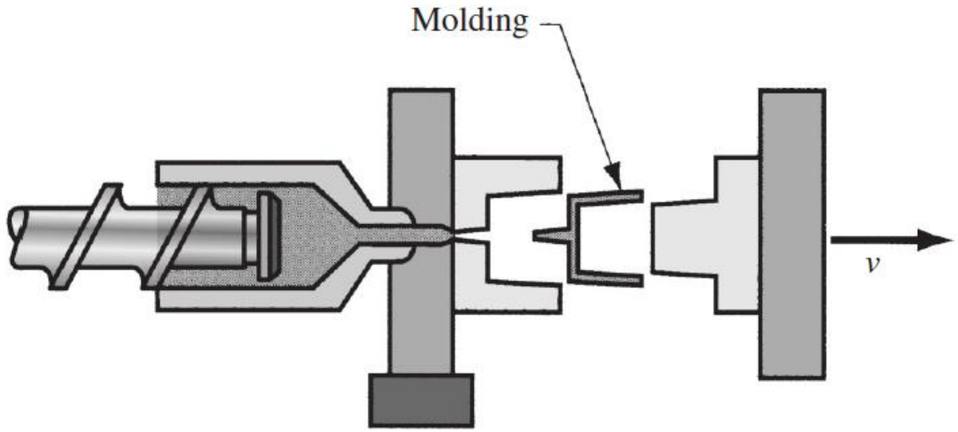
2. **Melting into cavity**



3. **Screw is retracted**



4. **Mould opening and ejection**



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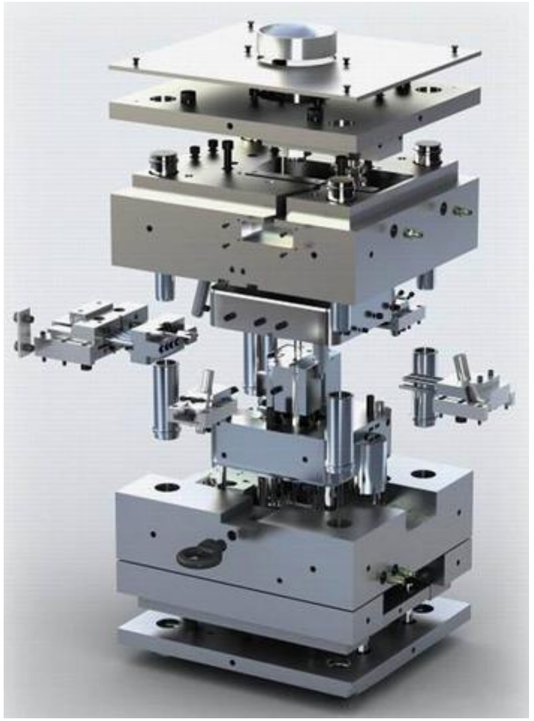
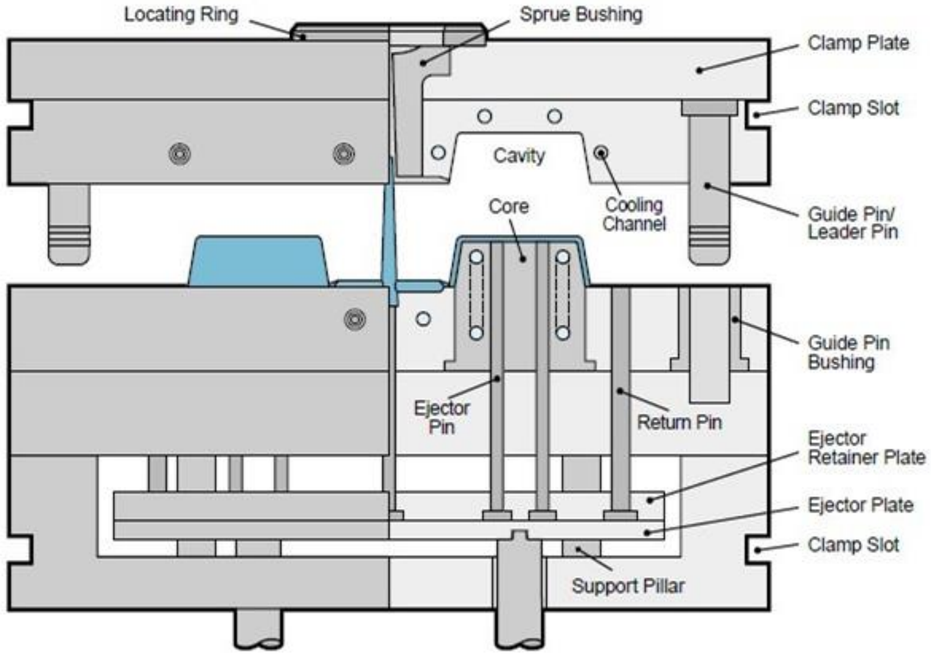
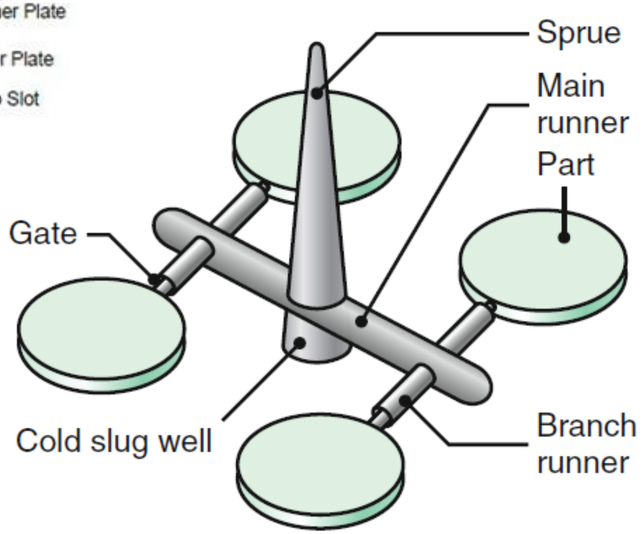
Injection molding

For the production of plastic PARTS

Injection Moulding







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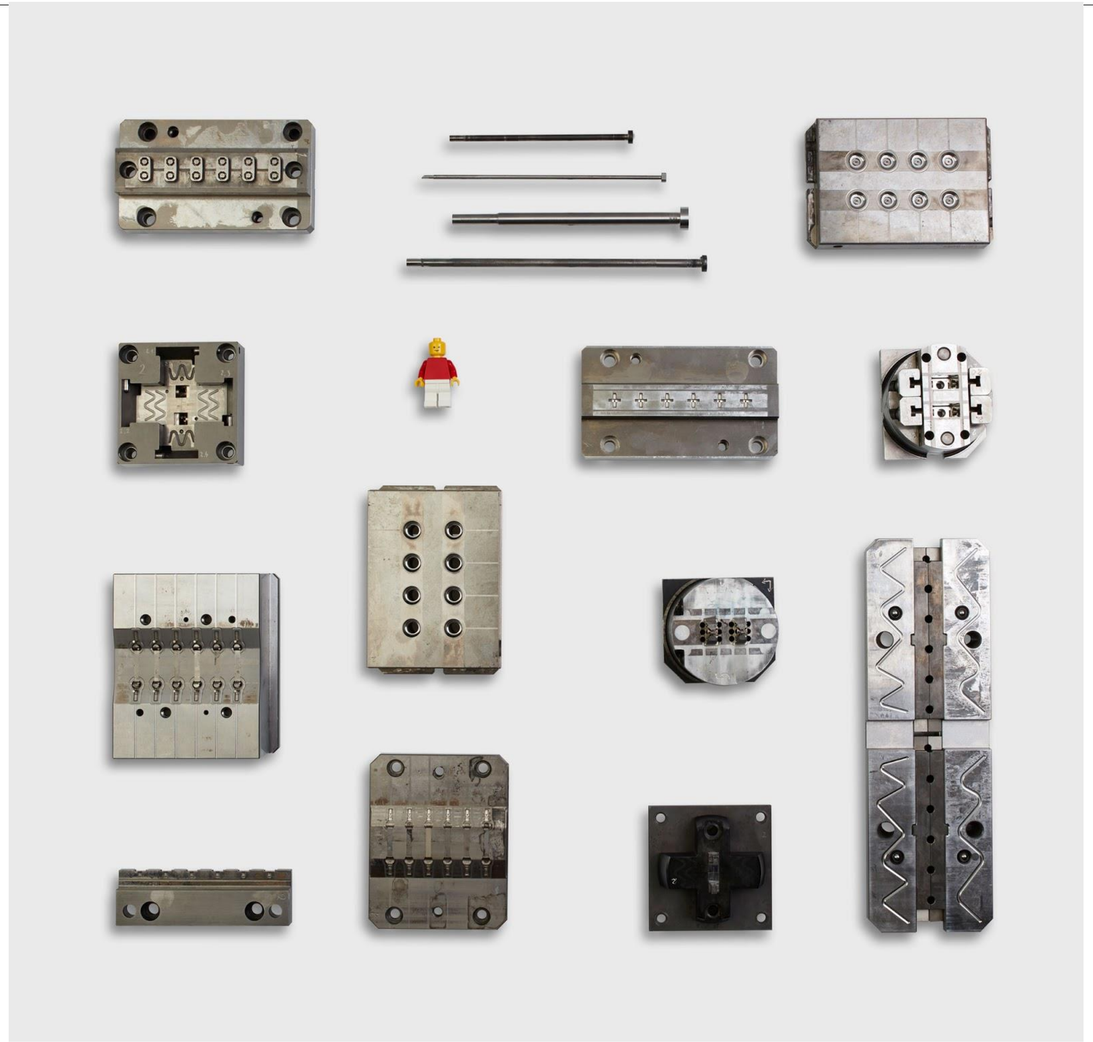
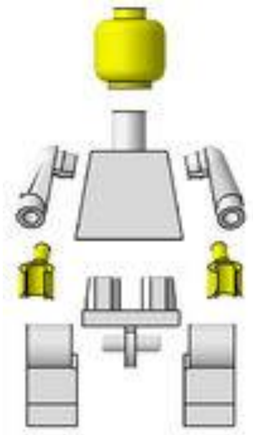
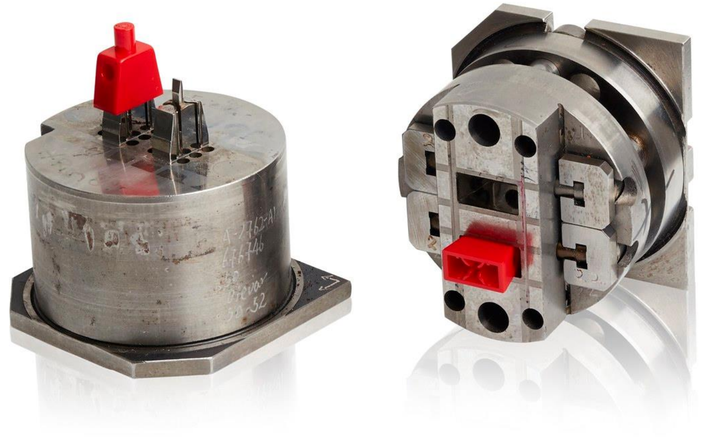
Injection Moulding







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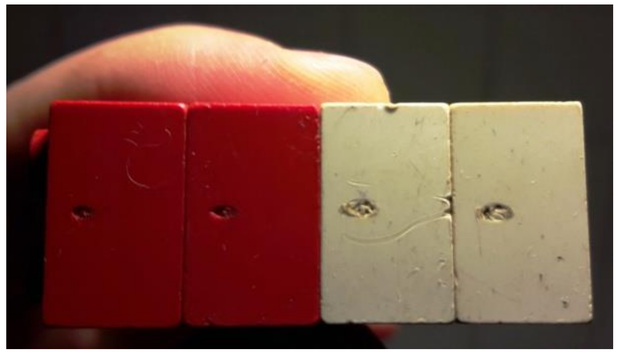

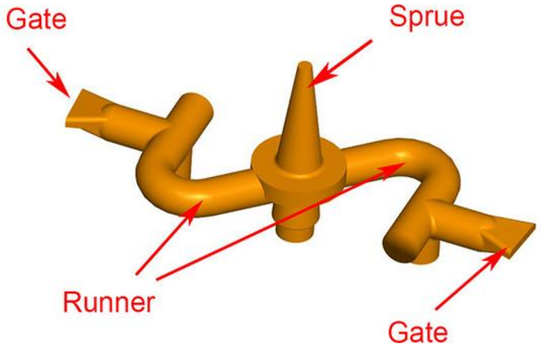

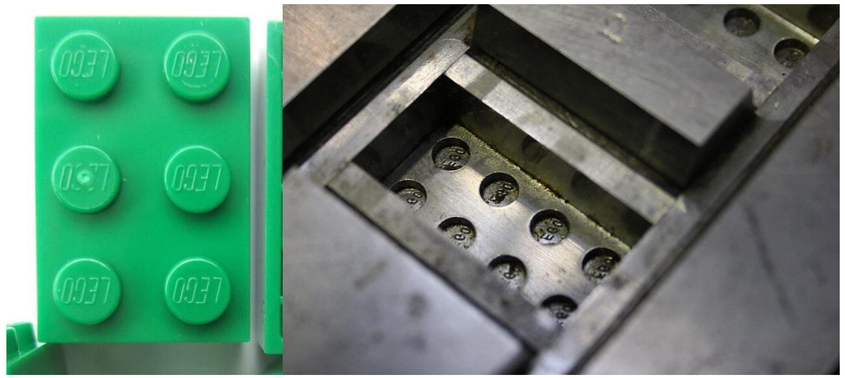

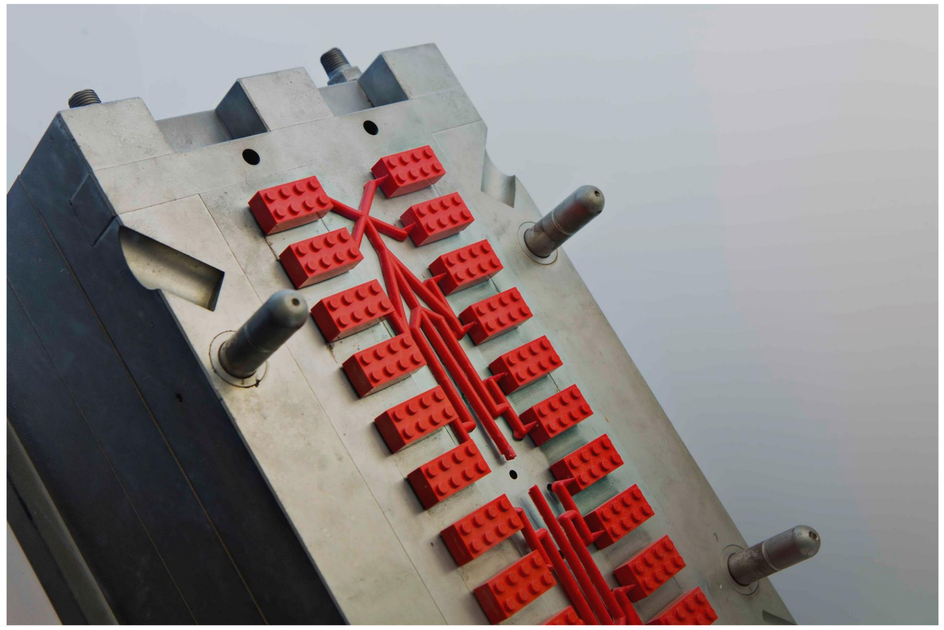

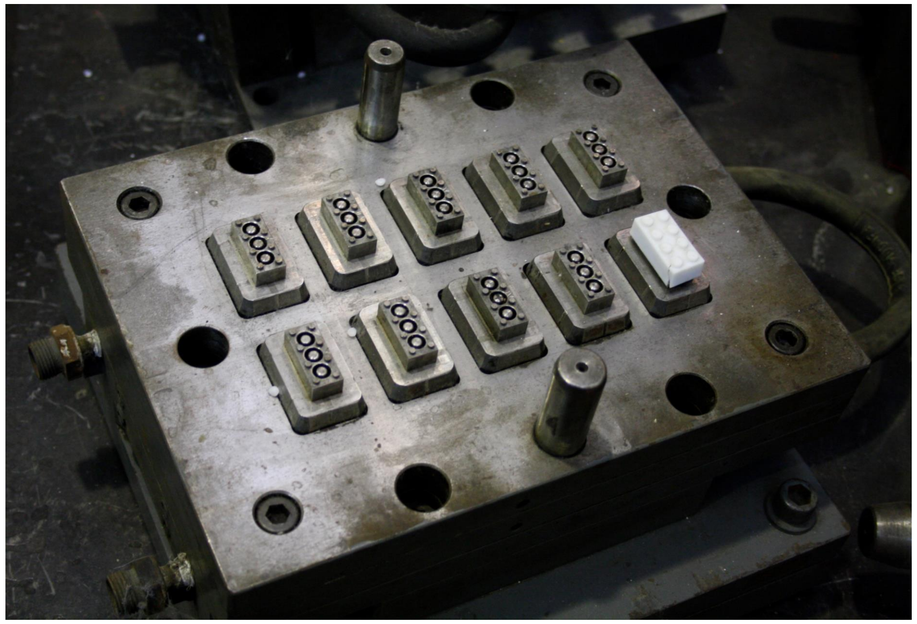

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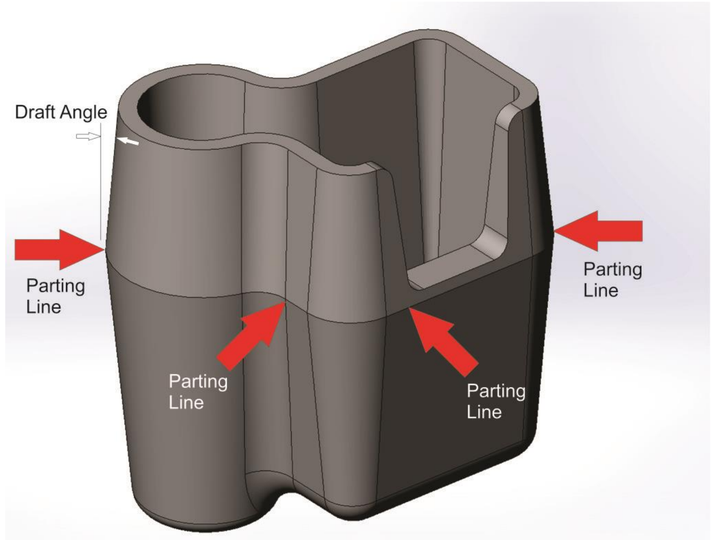
Injection Moulding



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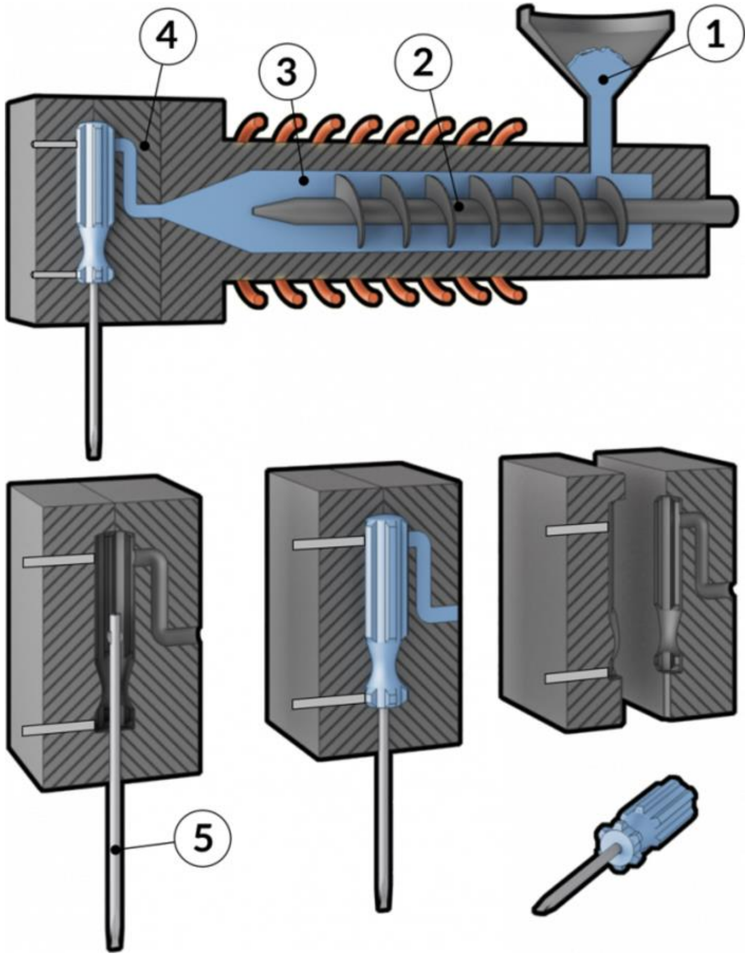

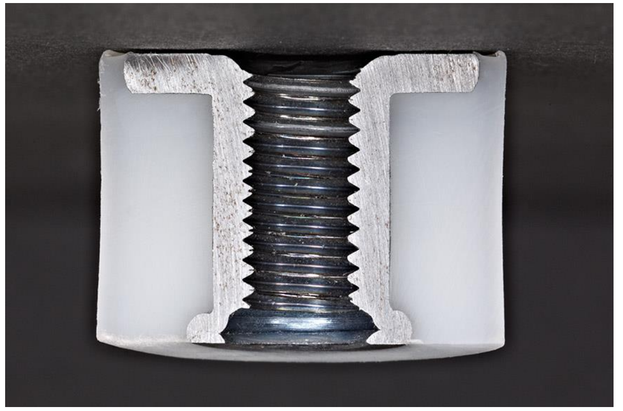

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Injection moulding

Advantages

- High volume manufacturing of plastics
- Very high productivity
- Wide range of materials
- Great repeatability and tolerances
- Low scrap rates
- High-output production
- Ability to include inserts

Disadvantages

- High tooling costs
- Long set up lead times
- Part design restrictions
- Small lots can be costly
- Design changes are costly

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