

# Injection Blow Moulding

Injection blow moulding is a process used to make hollow products, such as drinks bottles, in large quantities.

The process is divided into three stages:

- injection
- blowing
- ejection.

**Injection Stage** Molten polymer is injected into a heated preform mould. The preform is the partly shaped product that will be used to make the final hollow product by being blown into shape. The preform consists of a fully formed neck with a thick tube of polymer attached.

**Blowing Stage** The preform is passed to the hollow, chilled blow mould. Compressed air is blown through the core pipe into the preformed polymer, inflating it and forcing it against the sides of the mould.

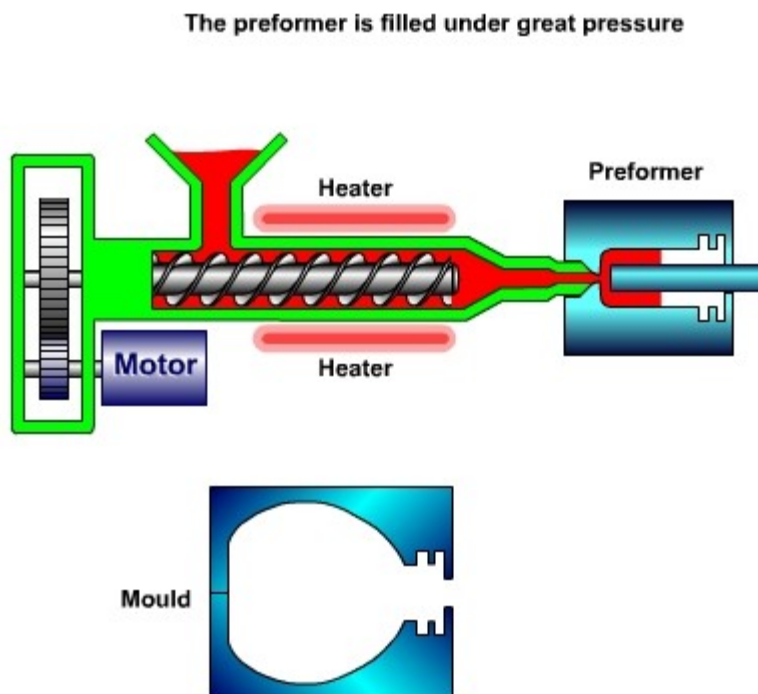
**Ejection** The blow formed polymer is allowed to cool. It is then removed from the blow mould and stripped off the core pipe. The product then passes to the quality control section and is tested for leaks.

Typical plastics used for injection blow moulding include:

- Polyethylene - Terephthalate (PET)
- Polypropylene (PP)
- Polyethylene (PE)
- Polyvinyl Chloride (PVC)

## Step 1

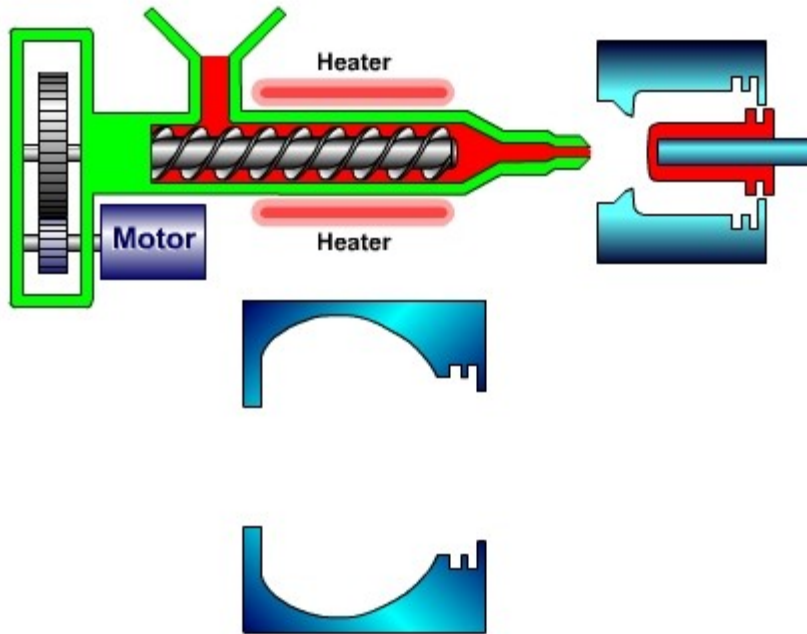
**Molten polymer is injected into a heated preform mould.**



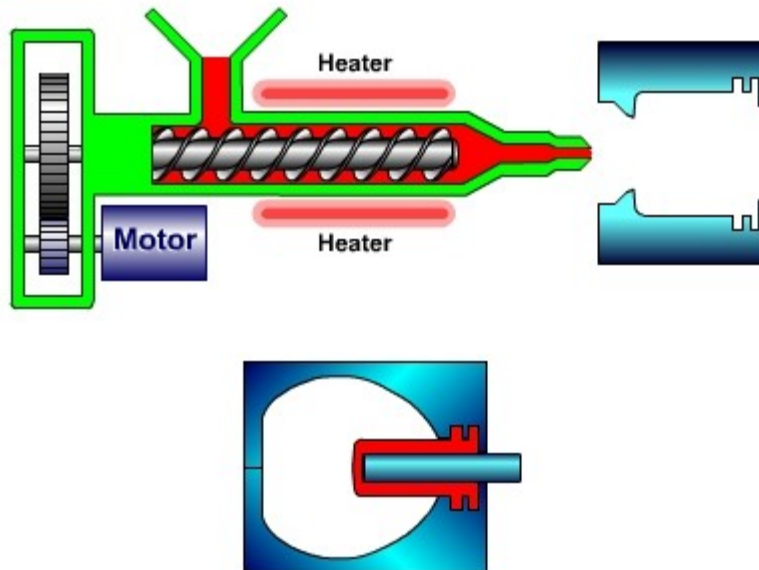
## Step 2

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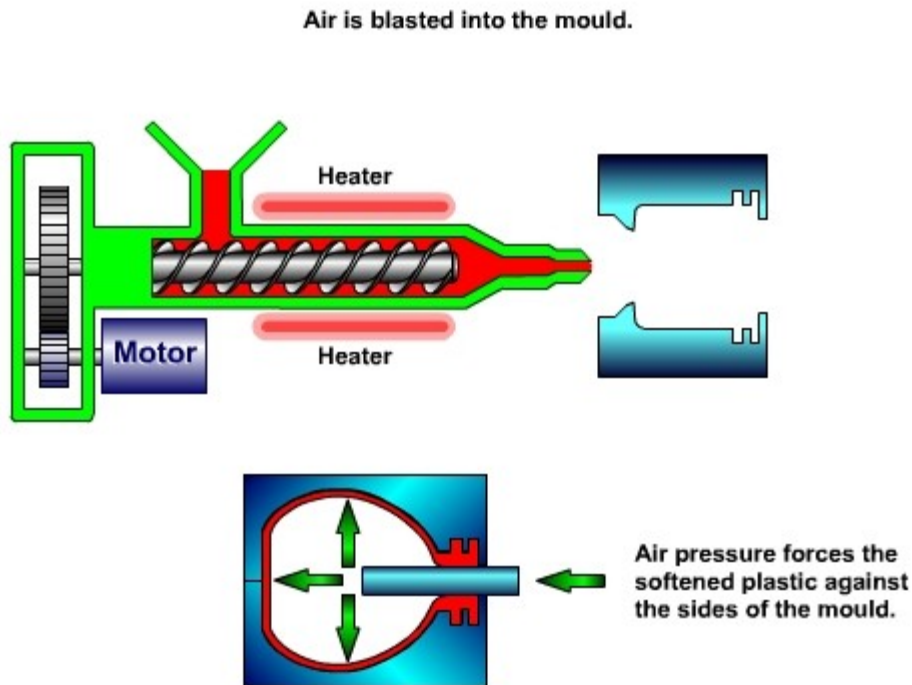


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### Step 3

The mould is closed, clamping the preform neck in the mould. Air is blasted through the core pipe into the mould, inflating the preform and forcing it against the sides of the mould.



### Step 4

The cold mould chills and solidifies the inflated polymer moulding. The mould is opened and the moulding is stripped off the preformer core pipe. The preformer core pipe is returned to the preformer, in preparation for the next injection blow moulding cycle.

