Using T-mould to raise productivity

By Tat Ming Technology Co. Ltd.
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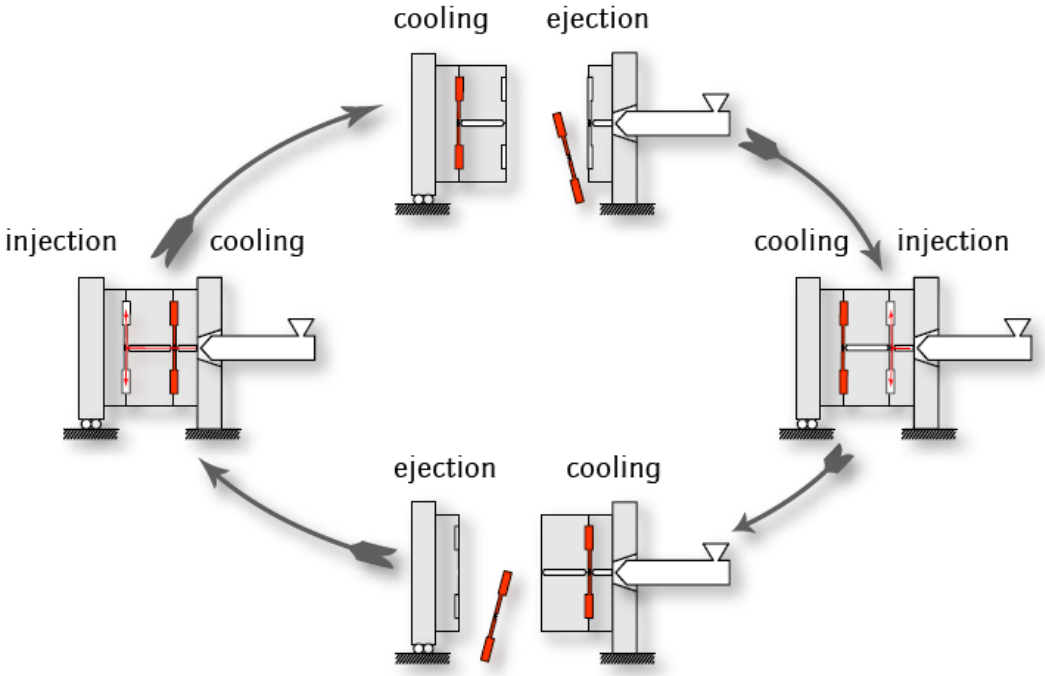
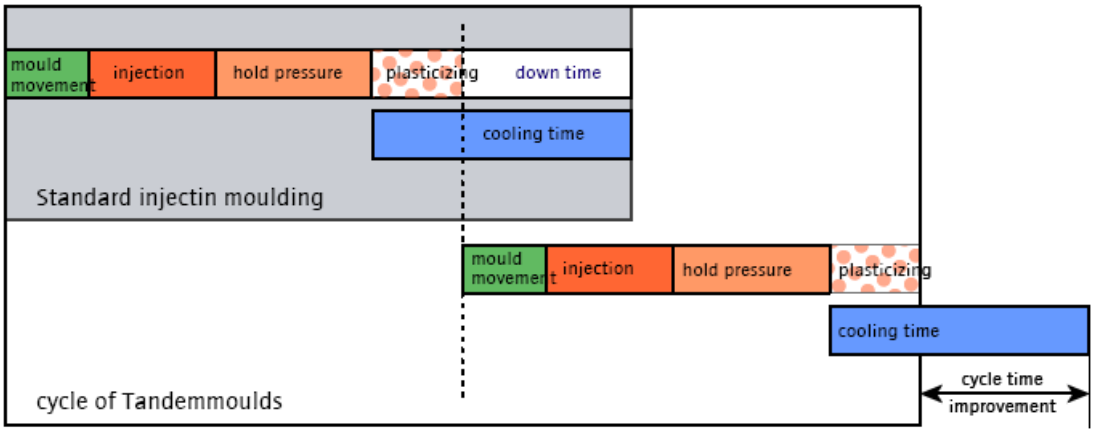
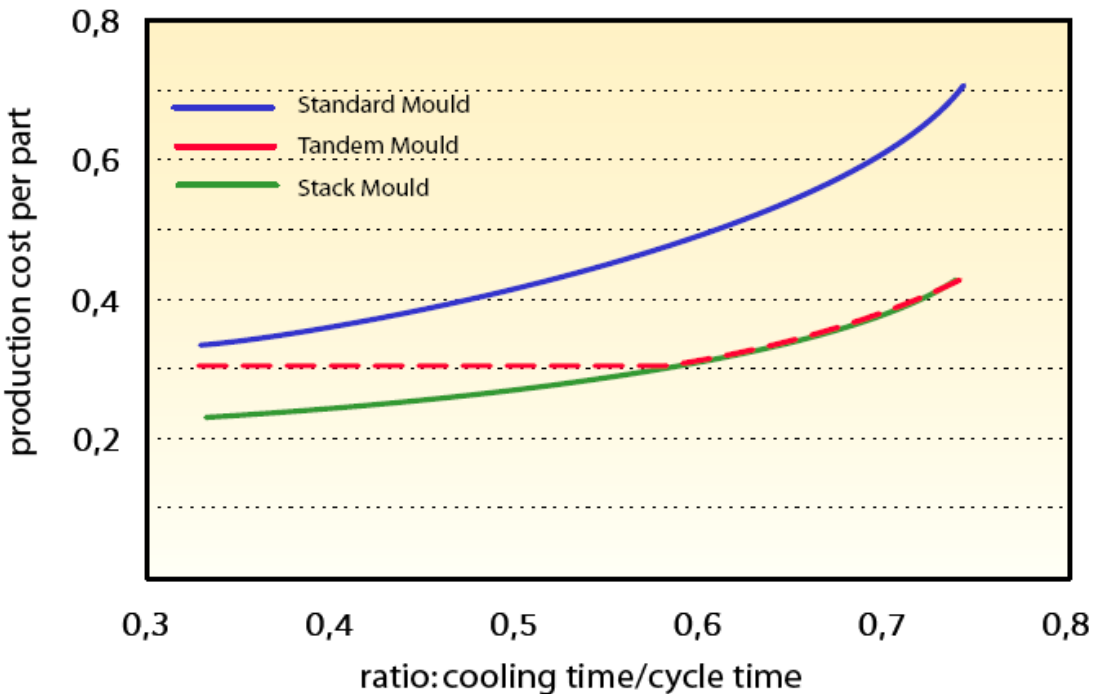
T-mould was first introduced at the 2001 K-show. This technology has recently arrived Asia.

T-mould has double the number of cavities on two parting levels. On a standard injection moulding machine, it utilizes down time (cooling time – plasticizing time) to raise productivity up to two times, but it differs from stack moulds in a few ways.

The two parting levels open alternatively. When parting level 1 is locked, parting level 2 is processing (plasticize, mould open, eject, mould close, inject and hold). In the meantime, the parts in parting level 1 is cooling. If cooling time > 0.6 cycle time, productivity could be doubled.

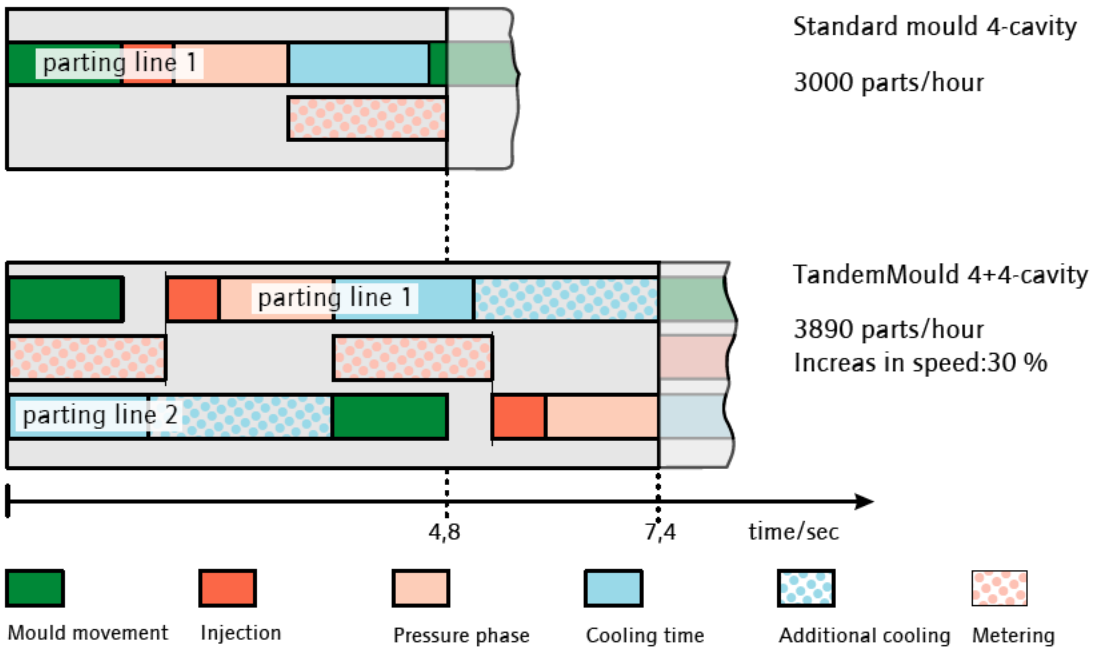






When making thinner parts in which cooling time is short, if the machine could plasticize during mould opening and ejection, the mould opening and ejection time could be saved. For disposable cutlery, productivity could be doubled.

In the following example, mould movement time is 1.1 seconds which is shorter than plasticizing time, so it is hidden within plasticizing time. The 4.8 second cycle time of the standard mould is effectively reduced to 3.7 seconds. Note the saving is done despite the fact that cooling time is shorter than plasticizing time.



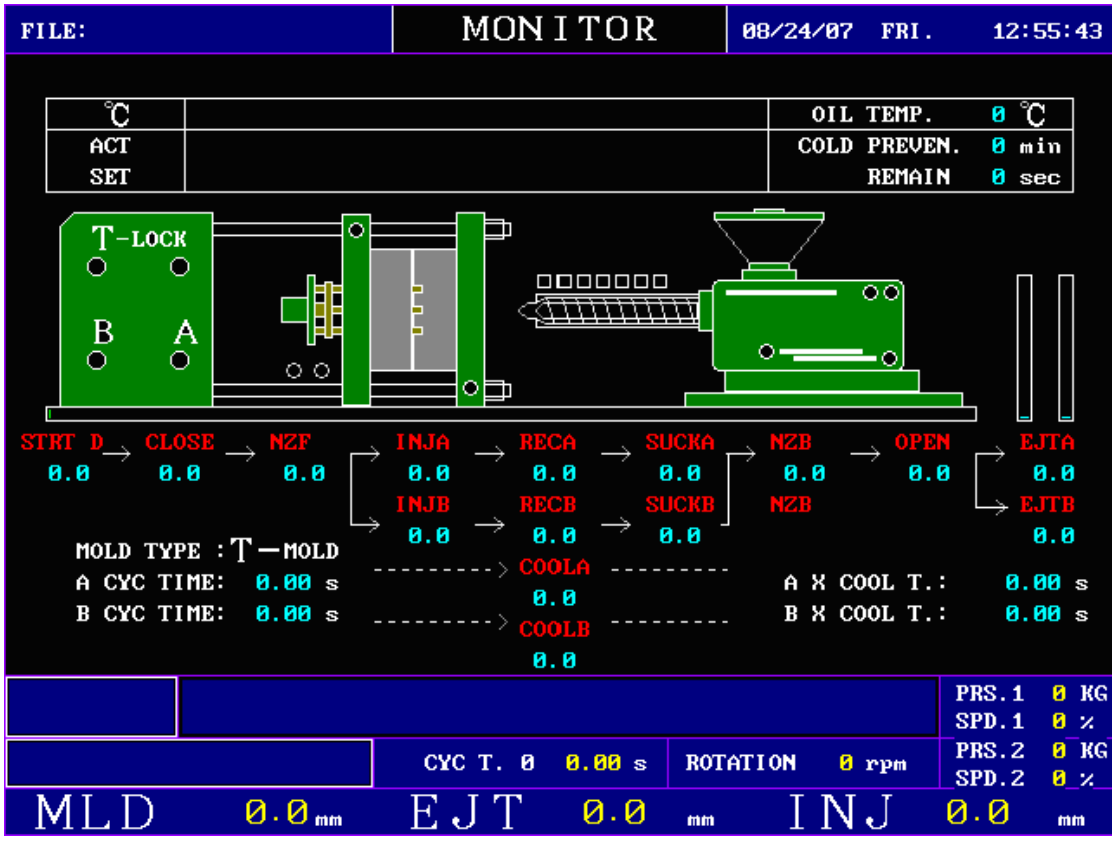
Since mould opening and closing, injection and plasticizing on the two parting levels are done alternatively, mould opening stroke, shot size, injection rate and plasticizing capacity do not have to be double, which distinguish T-mould from stack mould.

As the two parting levels each has its own set of moulding parameters, T-mould is suited to making parts that form a pair, e.g. cover and base, front and rear parts, left and right parts, with the same parts all located in the same parting level of the mould In a stack mould, the different parts share one set of moulding parameters.

Tat Ming Technology Co. Ltd. has since July, 2007 successfully developed the program on the CAP series of injection moulding machines to use T-mould. Together with a T-mould made by Man Fung, we have started to test T-mould, collect data and accumulate experience in order to study this technology and see whether it is suited to users in China, promote the concept to potential customers and look for the most suitable applications.

One of the distinguishing features of the CAP series is its big maximum mould height. For example, the 150-ton clamping force CAP32 DP has a maximum mould height of 680 mm, as it was designed for stack mould.

CAP32 DP is a dual-pump machine. It could plasticize at the same time as mould opening and ejection. It is an ideal match with T-mould. The pictures below show the machine during T-mould testing, and the Monitor screen of the T-mould program.
CE certification has been obtained. Non-CE version is also available. Please give us a call at (852) 2790 4633 to find out more. Our email address is tatming@netvigator.com.



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Please visit the www.t-mould.com website for more information on T-mould.

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