

(2MBN SBHR SG)

SELF-BALANCING HOT RUNNER WITH INDEPENDENT FLOW AND PRESSURE CONTROL

ABSTRACT

The present invention relates to a method for use in injection molding with the capability to have precise and adjustable control of the molten plastic flow when molding at least two (2) non-identical (i.e. with more than 50% difference in weight or form) or identical complex-shaped and intricate plastic parts at the same time, utilising a mold with at least two (2) parting layers via a standard conventional injection machine. This invention incorporates the principle of having two (2) valve pins in which their movements are back-to-back and can be independently opened and closed as controlled by stepper, servo or linear motors linked to a separate independent tool controller. The two (2) valve pins are positioned at the floating half of the mold for sequential, stack or multi-layer mold with multiple cavities.

Use Figure 1.