

WHY Intellimold, and WHERE is the NOVELTY?

If **MELT PRESSURE** is used for deciding to scrap a part or not in most of today's Manufacturing **MONITORING** and Information Systems such as KISTLER, RJG, MPX, etc., ***why are we not controlling It ??***

I.) The **Intellimold control option** gives processing people the tools to **mold plastics "from the materials point of view."**

II.) The novelty is that for the first time the **non-linear behavior** of the molten plastic is electrically "**toggled**" or **linked** with the non-linear behavior of the machine through screw velocity adjustments **in real-time**. This is **CRITICAL** in order to achieve and maintain melt pressures specified by the material suppliers for optimum **composition and morphology**, which maximizes the materials properties used in part performance specifications.

III.) This option will **expand** your machine **capability** to control in real-time with feed-back from the melt site, which will **ALIGN** with the materials testing methods and specifications developed by the material suppliers. This **gives your customers the possibility to utilize all the data from part development, material, tool, and process selection stages**. (See examples From GE Plastics Design Guides and Flow Calculator.)

As you can see from the GE literature, most of the material testing methods (See File attachment: GE descriptions of MV, MFI, Shear, and shrinkage testing) are **based on melt pressure**. The current tools used by your customers for part design and to gain insight into manufacturability, **ALSO** are using melt pressure (injection pressure) to calculate flow, gate sizes, fill times, wall thickness optimization, cost analysis, etc. (See links attached below commonly used for MV, MFI, PVT, etc. calculations.)

IV.) This option will give the machine control the ability to **compensate** for commonly known process variations attributed to **check ring behavior, oil temperature variations, worn screws and barrels, material viscosity changes, percentage of regrind, and much more**.

V.) Intellimold has more than 500,000 morphology and composition analyses to back up correlation between machine behavior and plastic materials. We have our own on-site lab with FTIR and TEM to perform analyses and solve processing or material issues for customers.

VI.) Last, but not least, we are the oldest company to offer closed loop melt pressure control, (more than 15 years of experience), and our management personnel have more than 110 years of combined materials, tooling, and process experience to draw upon.

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