

THE BENEFITS OF ADVANCED MOLDING TECHNOLOGY FROM iMFLUX

WHAT IS iMFLUX?

iMFLUX is a Low Constant Pressure Platform. This box and software transforms injection molding from high pressure to low pressure and opens a world of possibilities.

THE iMFLUX SYSTEM

- comprised of software, nozzle, pressure sensor, and user interface
- compatible with virtually any machine from any manufacturer – *hydraulic, electric, hybrid, new or old*
- can be standardized across your operation, keeping it simple for your engineers and enabling state-of-the-art process control



ONBOARD™ / iMPORT™ / DIRECT INTEGRATION:

Integrate iMFLUX in three different ways...

- **Onboard™** – already integrated on new molding machines
- **iMPORT™** – easy installation kit to retrofit your existing machines
- **Direct Integration** – custom engineered solutions for older machines

WHAT ARE THE ADVANTAGES?

1 MORE PRODUCTIVE

Adapts to changing conditions without manual adjustment

- More Uptime
- Greater Process Stability
- Increased OEE & Capacity
- Less Scrap
- Faster Cycle Times
- Adjusts to MFI Variation

2 BETTER QUALITY

Packs as it fills for higher quality parts shot-after-shot

- Stronger Weld Lines
- Reduce Flash & Gate Blush
- Less Warp, Sink, & Flow Lines
- Lower In-Mold Stress
- Improved Aesthetics
- Better Dimensional Quality

3 MATERIAL & DESIGN FLEXIBILITY

Minimizes variation

- Run Wide-Spec Resins & Alternative Feedstocks
- Flow Thin to Thick
- Use Smaller Runners
- Balance Multi-Cavity Molds
- Design Thinner Walls
- Unlock Design Constraints
- Family Molds Possible

4 SUSTAINABILITY SOLUTIONS

Opens a wide range of sustainability advantages

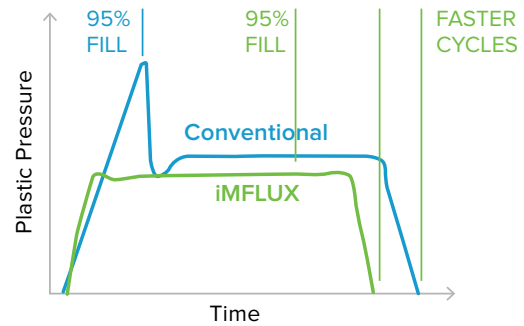
- Lower Energy per part
- Run Bio-Derived Materials
- Less Scrap & Waste
- Produce Lighter Parts with Less Plastic
- Run Higher Levels of Re grind and PCR
- Less Machine & Mold Wear

HOW DOES IT WORK?

The Green Curve

The Green Curve takes you from velocity control to low constant pressure control to pack as it fills the part with no flow hesitation and faster cycle time.

- re-invest lower pressure to run smaller presses
- up-cavitate your molds
- enable material flexibility
- design and run that impossible part



Packs as it fills

iMFLUX fills the mold slowly – so slowly that the material actually cools, densifies, and packs-as-it-fills.

Benefits of this process:

- improved quality, faster cycle time
- less sink
- lighter parts



No flow hesitation

Filling at low flow rates means flowing with no hesitation, since this would result in the material immediately freezing. The **iMFLUX** control ensures the flow front progresses in all areas of the mold, providing perfect laminar flow and no potential for flow hesitation.

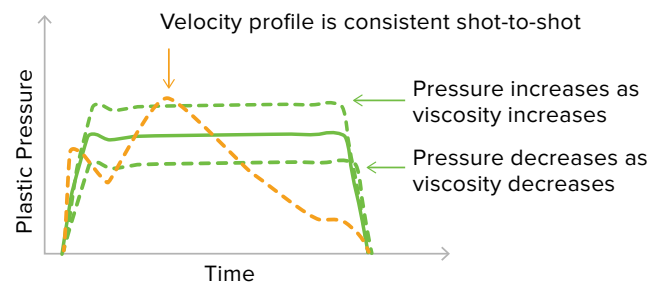
Benefits of this process:

- designers can now tackle more challenging design features
- mold thinner parts with longer flow lengths
- make difficult materials work for non-traditional applications
- mold impossible parts



Auto Viscosity Adjust™ (AVA)

Seamlessly adjust to virtually any source of process variation, such as highly variable materials, and machine, mold, and environmental variation. AVA intelligently makes real time decisions without operator intervention, keeping your production running smoothly.



Join the journey to autonomous molding

Similar to the automotive industry, which has a goal to build self-driving vehicles, **iMFLUX** is on a journey to make molding fully autonomous. **We see the future:** Injection molding machines operating without the need for constant operator adjustments, and molding machines that are able to make intelligent decisions on behalf of the operator. The future is now: **iMFLUX** is already adding intelligent control that automatically adapts to vast changes in a molding operation including large (even massive) viscosity variations, down cavities, leaking check rings, and shifting environmental conditions.



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