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hrsflow

MULTIflow Systems for Thin Wall Packaging

LIGHTER AND THINNER PARTS FOR A SUSTAINABLE TOMORROW.

High injection performance. Increased design flexibility.

Weight reduction, **energy efficiency and sustainable polymers**: the trends towards a greener future pose new challenges for the thin wall packaging industry. Together with you, we develop the best technical, economical and sustainable solution for your packaging applications providing you with the comprehensive support during all project phases.

MARKET NEEDS

- Improved wear resistance
- Easy maintenance
- Plug & Play systems
- Expertise for challenging applications
- Engineered for PCR and sustainable compounds

Our advanced solutions for thin wall packaging.

SHORT CYCLE TIME

The superior thermal profile of the nozzle combined with a **dedicated end ring** and, when required, the use of a special **cooling bushing**, ensure short cycle times and increase the injection molding performance.

Special end ring benefits:
Great results with direct injection on label (IML applications)
Designed for high production volume (hard tip core and pin pre-centring ring)
Easy start up

Dedicated cooling bushing benefits:
High durability due to material choice
Designed for a minimal footprint
Easily replaceable in case of wear

OUTSTANDING THIN WALL THICKNESS

The plastic parts are designed to be lighter and thinner. The new Xp nozzle series has been designed for fast cycle time and challenging thicknesses while ensuring a reliable process and an increased productivity at the lowest cost per unit.

>> BEST PRACTICE

The thin-walled **150 ml IML yogurt cup** (5.4 g), produced with the new Xp nozzle series, has a **wall thickness** of **0.32 mm**.

This high-performance application runs with **3.9 s cycle time**.

The cup is made of a certified renewable PP polymer and decorated with the new generation label NextCycle IML™.

The evolution towards a fully recyclable packaging
Partnered with: IML Solutions, MCC Verstraete, Netstal, Sabic

Innovative Stack Mold system for thin wall packaging applications.

The system is equipped with nozzles of the new Xd series, engineered to withstand high filling pressures. The stack mold system includes a **patent-pending solution** and fits a **maximum plate thickness of 220 mm.** It is the most compact solution for fast injection and cycle times in a stable process with high part-to part weight consistency.

MAIN FEATURES

- Assembly is extremely simplified thanks to the **patent-pending design**
- **Plug & Play system**
- **Fast** and **friendly maintenance** avoiding long and costly production line stoppage
- Designed to withstand **high filling pressures**
- **Fast injection** combined with high process repeatability
- Conceived to process also **PCR** and **sustainable compounds**

Demo Tool available in our Test Lab Area.

A sustainable approach for eco-friendly applications.

Sustainability is a key element of engineering modern thin wall packaging applications. We provide hot runner solutions to:

- Process post-consumer resins (PCR) and resins of next generation
- Strategic partnership with the main bio-based polymers producers
- Reduce part weight without compromising product integrity
- Maximize production efficiency and minimize scrap

Due to the high thermal and shear sensitivity of biobased and biodegradable polymers, the main challenges are avoiding material degradation and shortening the cycle time by yielding a good gate quality.

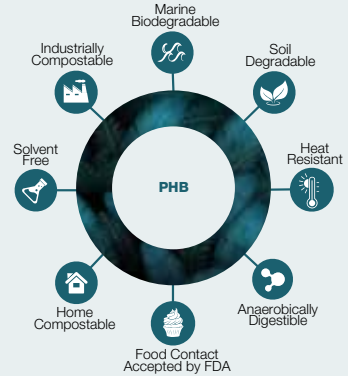
The optimal solution is a balanced hot runner system with a proper gate configuration, a correct channel dimension and a uniform thermal profile.

>> Best Practices

Drinking cup with copolymers of next generation.

The first bio technopolymer 100% natural

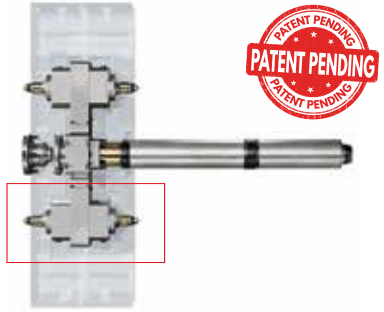
Drinking cup made of PHB by i)amNature®



Try the most suitable polymer for your application!

HOT RUNNER SYSTEM FEATURES	
Molded Material	PP, PCR Sustainable compounds
Cavities N°	4
Injection Type	Valve Gate
System Type	Stack Mold 2+2 drops Xd series

PART DESCRIPTION	
Molded Part	Single Serving Cup 210 ml
Part Weight	5.9 g
Wall Thickness	0.3 mm (0.4 mm frame)



Mold by COLLOMB

PART FEATURES

patented mosaic design frame allows a robust structure despite the part weight reduction

100% Bio-sourced spoons

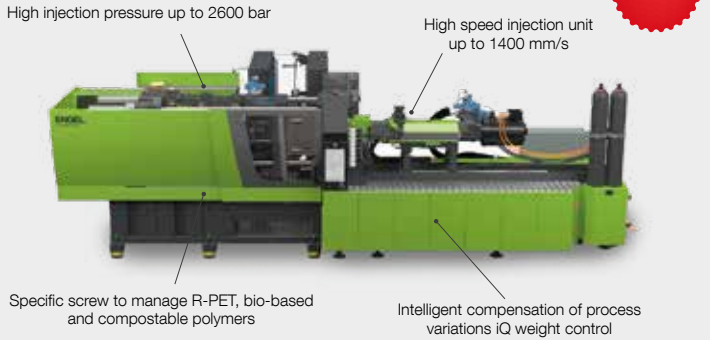
Hot runner system optimized to process PLA:

- Special system design to control material shear rate
- Materials and coatings especially conceived to minimize corrosion effects

Part weight: 1.32 g
Part thickness: 0.7 mm
System type: 48 drops system Tp series
Injection type: Cylindrical valve gate

The R&D test lab has been equipped with a **new hybrid** ENGEL e-Speed 280 to practice our **expertise in thin-wall packaging**. It's particularly suitable for processing the next generation polymers, in compliance with the new EU Packaging and Packaging Waste Regulation (PPWR).

NEW !



Customer Support

Our team provides you with **complete support**, from the rheological analysis and design phase to try-out and maintenance. For special applications, we can define the optimal system configuration and predict part quality through advanced hot runner systems available in our **Test Lab**.
Plastic samples according to the weight, thickness and geometry of your application can be delivered for a preliminary analysis.

TEST – LAB EQUIPMENT AT YOUR DISPOSAL

- Prototype tools available to try your most challenging polymers
- Full range of nozzles and flow types based on your specific application
- Injection Molding Machines from 50 to 300 tons

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Rev.00 12/2023