Thinwall Packaging

High performance systems for high performance parts



Benefits

- High performance production systems—fast, repeatable
- Lighter, more sustainable high performance parts
- Consistent part quality
- High productivity, low scrap
- Complete melt delivery systems with all elements optimized for each
- application:
- machine
- hot runner
- Altanium® controller
- Single point of contact for integrated workcell
- In-mold labeling solutions that help parts stand out on store shelves

With more than 50 years of experience in the thinwall packaging industry, Husky is a leader in developing high performance packaging solutions. Our complete highspeed systems are optimized to meet our customers' specific packaging needs while lowering overall part costs.

We are committed to being a long-term partner to help thinwall packaging customers grow their business. To achieve this, we maintain collaborative relationships with other industry-leading companies to deliver integrated, best-in-class thinwall packaging systems. Our dedicated global thinwall team supports customers on multiple levels offering skills, software and services that ensure the best return on investment. In the early product development stages, we offer a wide range of services, including part design, flow simulation analysis, finite element analysis and resin validation tests. Once in production, our locally-based Service and Sales network is accessible for 24/7 spare parts and technical support to keep systems running efficiently and with maximum uptime.



Thinwall systems tailored for performance requirements

HyPAC two-stage injection

HyPAC with two-stage injection is ideal for customers running the highest cavitation molds with the largest shot weights at fast cycles.



Standard Hylectric clamp

HyPAC reciprocating-screw injection The unique HyPAC injection unit design offers 30% more throughput and more than twice the melt acceleration for a given screw size. This means lighter parts at faster cycle times, resulting in significant cost reduction.

Hylectric for thinwall

Hylectric machines for thinwall applications can be configured to process a wide range of plastic materials to deliver optimal performance.



The Hylectric platform is configurable for different levels of performance for a variety of thinwall applications.

Helping produce successful, sustainable products

With more than 50 years of experience in the thinwall packaging industry, Husky is a leader in developing sustainable packaging solutions. Our experience in lightweighting allows us to help customers reduce resin costs and produce packaging that is more sustainable—using less resin and requiring less energy to both recycle and transport.

Husky systems further support packaging sustainability by greatly reducing scrap. Enhanced controls improve shot-to-shot consistency and expand the processing window. Complete melt stream ownership improves cavity-to-cavity balancing. Ensuring less variation means better part quality, which in turn, reduces scrap.

Application-specific technology

Husky offers complete injection molding systems that are specifically optimized for thinwall packaging applications and designed so all elements work together as an integrated package—machine, mold, hot runner and auxiliaries—to deliver faster cycles and lower part costs.

We select the injection unit that best satisfies each application's specific performance requirements:

 Hylectric® reciprocating screw injection units are available with a range of drive configurations and screw designs to provide excellent performance for most thinwall packaging applications

- HyPAC[™] reciprocating screw injection units are specially designed to run today's higher flow resins at extremely fast injection times, with twice the melt acceleration of competitive thinwall machines for a given screw size
- HyPAC two-stage injection units separate the plasticizing function from the injection function, allowing the extruder to be sized for maximum throughput while the shooting pot is sized for precise shot control

Husky hot runners

Advantages of complete melt stream control

By providing a complete integrated system, including both the hot runner, Altanium temperature controller and machine, Husky has total responsibility for melt delivery. This results in an optimized system that provides consistent melt quality to each cavity in the mold. Husky's packaging systems deliver more throughput, lighter parts and less scrap—resulting in significant cost savings.

Packaging-specific nozzles—best balance and thinner parts

Husky hot runner systems, including robust Ultra Packaging nozzles, produce thinner parts by combining the best balance with the ability to withstand high injection pressures. Our packaging nozzles are purpose-built to deliver the best part quality at the fastest cycles. Our Ultra 750 packaging nozzle features a rugged design that includes UltraSeal® technology providing leakproof operation over a wide operating window.

High pressure capabilities for thinner walls

Husky Ultra packaging nozzles can run up to 40000 psi (2700 bar)—essential to achieving the increasingly thinner walls and higher outputs required for thinwall packaging. For example, nozzle tips are engineered to reduce wear on the cavity interface and contoured manifold pockets with integrated pillars reduce plate deflection to prolong mold life.

Part-to-part consistency at fast cycles

Mechanically and thermally balanced manifolds and unique tip designs help to deliver part-to-part consistency at fast cycle times. Our stack technology generates increased productivity gains by maximizing output



A 4-level Ultra 750 packaging nozzle system for margarine lid.

from a single injection molding machine, while our innovative split sprue bar technology provides an efficient melt delivery system.

Altanium controllers

Husky is the only hot runner manufacturer with a line of integrated temperature controllers. This allows us to provide complete melt stream control, resulting in more precise and consistent melt quality. Recognized throughout the industry for their accuracy, ease of use and flexibility, Altanium controllers use Active Reasoning Technology (ART) to provide the most accurate temperature control possible. ART controls hot runner heat zones, maintaining precise set point temperatures for high quality parts.

Single point of contact for a complete, integrated workcell

We offer complete systems solutions that provide a single point of contact for machine, mold, hot runner and auxiliaries. Our easy-to-use Polaris® Controls technology improves operating efficiencies by allowing for the integrated control of the complete system.

In-mold labeling solutions

Husky has been providing customers with in-mold labeling solutions for close to 30 years, with more than 100 systems in production. When compared to alternative labeling methods, in-mold labeling significantly improves a product's shelf appeal and adds functionality to the package.

In-mold labels are imbedded in container walls, making them an integral part of the overall packaging design. The in-mold labeling process works by applying the label during molding. A label is placed in the open mold and held in position using vacuum ports or electrostatic attraction. The mold then closes and a molten plastic resin is injected inside where it conforms to the container's shape.

Benefits of in-mold labeling

- Greater durability—because an in-mold label is imbedded in the wall of the container, it is nearly impossible to remove
- Improved aesthetics—clear photographs, enhanced illustrations and vivid colors
- Streamlined process—all sides, including the bottom, can be decorated with one single label
- Superior quality—label material closely matches that of the container, eliminating issues like bulging and blistering
- Minimizes waste—plastic labels do not need to be removed prior to being recycled because they can be recycled with the container



Husky is able to provide flexible workcell solutions that enable converters the option to run different container and lid shapes and sizes, maximizing workcell utilization.

Faster cycle times and lower part weight

At K2007, Husky ran a HyPAC machine with an in-mold labeling system capable of achieving less than three second cycle times. The system ran a 250 gram rectangular container in a four-cavity mold and featured 10% lower part weight and 10% faster cycle times than the industry standard. The container design was made to allow complete coverage of the part with both wrap-around and bottom labels.

Superior quality labels with barrier solutions

Husky has collaborated on the development of an in-mold labeling system capable of running label-based barrier solutions containing EVOH, allowing improved barrier properties of the container. The solution is based on a standard in-mold labeling automation system capable of running standard labels and includes vision inspection for label placement check.

Contact Husky today for more information on our thinwall packaging solutions.

Husky Injection Molding Systems www.husky.ca

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