

Husky PET Preform Manufacturing Solutions

Complete workcells for every application and volume



Benefits

- Husky preform solutions reduce total part cost resulting in a higher return on investment
- Quality manufacturing and unparalleled service allow you to get up and running faster and keep you running more efficiently saving time and money
- Cavity-to-cavity and shot-to-shot repeatability ensures the most consistent, highest quality parts
- Easy to operate fully integrated workcells reduce variability in the injection molding process
- Latest generation HyPET systems maintain backwards compatibility with your existing Husky molds

Husky has been the leader in the preform manufacturing equipment industry for over 35 years with more than 4,000 systems running in the field. Our PET preform injection molding solutions deliver the industry's lowest total production costs for the widest range of preforms and production volumes.

As a trusted partner, Husky can take responsibility for the complete workcell, overseeing configuration, supply and start-up, as well as providing global support, service and parts. Husky also offers a diverse range of services, including preform prototyping, preform lightweighting, mold conversions and refurbishing to get our customers up and running faster and to keep you running at the highest capacity possible.

Husky's PET preform systems are available in various tonnages for molds between two and 144 cavities. All components of our solutions are specifically designed to work together as a fully integrated and optimized workcell. This delivers the most stable process and reliable operation, resulting in the fastest cycles and leading preform quality.

HUSKY[®]

Keeping our customers in the lead

Leveraging the latest technology for the ultimate turnkey solutions

Bringing the best new preform technologies to market, Husky has the expertise, knowledge and infrastructure to help our PET preform customers succeed.

Husky's PET preform manufacturing solutions deliver:

- Faster cycle times
- Reduced resin waste
- Easier and faster start-up
- Highly repeatable shot-to-shot performance
- Remote connectivity through ServiceLink™
- Easier integration and control of entire workcell from a single interface
- Integrated alarm handling and notification for easy troubleshooting

Optimized technology

A wide range of extruders and clamp combinations are available to optimize systems for your needs. HyFLO™ plasticizing screws minimize acetaldehyde (AA) generation and increase mixing and plasticizing performance.

Polaris Controls

Husky's Polaris™ Controls simplify and integrate all functions of our PET molding systems. Optional packages to integrate auxiliaries and downstream part handling equipment reduce the need to invest in highly skilled labour.

PET auxiliaries and equipment

Resin dryers, chillers, dehumidifiers and material handling are designed specifically for the needs of PET and optimized as an integral part of the workcell. For PET auxiliaries, Husky will oversee configuration, supply and installation, as well as provide complete support, service and parts complemented by a comprehensive warranty.

CoolPik for faster cycles and leading preform quality

Husky uses an integrated part handling system called CoolPik™, available on all HyPET models. Unlike competitive

post-mold cooling systems on the market, which only cool the outer surface, CoolPik features up to four cycles of balanced cooling on the preform's inner and outer surface resulting in faster cycles, better part quality and improved effectiveness of handling equipment.



Choosing Husky PET auxiliaries provides improved energy consumption and enhanced controls together with advanced feature capability.

H-PET All-Electric (AE) system

Husky's H-PET™ All-Electric (AE) system is available in a range of configurations to match low volume output and application needs. These combined benefits allow H-PET AE to provide the best return on investment and the lowest investment risk for customers entering into or expanding their presence in the beverage packaging market.

H-PET AE systems deliver:

- Proven, reliable design and technology
- An efficient, quiet and low maintenance solution
- Up to three stages of post-mold cooling
- An optimized standard auxiliary package for a complete workcell infrastructure
- Full integration through Polaris Control (HMI)

Complete turnkey solution

H-PET AE is a truly integrated complete turnkey solution. The system is optimized as a whole to maximize performance, increase quality, reduce waste and lower energy consumption. H-PET AE includes the machine, mold, hot runner, post-mold cooling, resin dryer, mold dehumidifier, chilled water system, piping, electrical distribution and platform. H-PET AE is managed through Husky's integrated Polaris Control, centralizing operation of the complete workcell through a single interface.

System flexibility

H-PET AE's straightforward design provides a flexible configuration for preform and bottle producers who need to use a single machine for multiple applications. The system has been designed to allow for

quick and easy application changes, giving you the ability to increase productivity and lower conversion costs when changing molds. The system's standard mold uses a common module size capable of molding threads up to 43 mm for all cavitation and machine sizes.

Local expertise and support

Husky's extensive global network makes it possible to provide the most responsive local service, which includes a team of Husky PET sales and service specialists in more than 40 countries worldwide. Husky

systems are renowned for producing the highest quality preforms in the industry and are used by the top global brands and PET preform manufacturers in the world.



HyPET system

Husky's HyPET™ preform injection molding system offers industry-leading technology that is proven and reliable. The system is backed by Husky's more than 35 years of preform equipment experience and unmatched global knowledge of the PET market.

Reduce variability with HyPET

HyPET is the next step in system-level elimination of waste and variability, resulting in the delivery of greater value and profitability. Performance options allow customers to optimize the system for your specific needs.

Increased energy efficiency

The latest generation HyPET has several system refinements which enable improved energy efficiency and reduced maintenance.

HyPET systems deliver:

- Reduced variability and increased part quality
- Lowest energy consumption per part produced
- Easy operation through Polaris Control (HMI)
- Fully integrated workcells to get up and running faster and keep running more efficiently
- Backwards compatibility with your existing Husky molds*

* Feature only available with the latest generation HyPET or HyPET HPP systems

Mold and machine integration

Husky's intelligent Mold ID integrates the machine, cold half, hot runner and post-mold cooling for optimized system parameters like tonnage and cycle. The Mold ID sets operating parameters for each tool and allows for porting of that optimized process from machine to machine. This results in correct start-up and operating procedures eliminating potential human error.



Next generation HyPET system reinvented for superior part quality

HyPET High Performance Package (HPP)

An extension of Husky's proven platform, the HyPET™ High Performance Package (HPP) is specifically designed to provide industry-leading high output preform injection molding.

HyPET HPP systems deliver:

- Highest capacity system with faster rate of return
- Reduced variability and increased part quality
- Preform lightweighting by enabling thinner-wall sections
- Resin savings on every shot consistently for the life of the system
- Lowest energy consumption per part produced
- Up to 7% system-level energy savings versus HyPET
- Integrated system that is easy to operate and gets up and running faster
- Backwards compatibility with your existing Husky molds*

*Feature only available with the latest generation HyPET or HyPET HPP systems

System-level integration

Refinements to the entire HyPET preform system, including mold, robot, injection unit, clamp and auxiliary equipment have made it possible to deliver industry-leading cycle times and increased energy efficiency, while maintaining the highest levels of reliability, repeatability and preform quality.

Improved productivity

HyPET HPP offers several advantages, including greater process stability and superior part-to-part consistency. The productivity improvements offered by HyPET HPP further reduce the cost of PET packaging, making it competitive with glass, metal and carton alternatives.

Increased energy efficiency

Recognizing the importance of streamlining operations, Husky has also made several system refinements to improve energy efficiency and reduce regular maintenance.

Lighter, thinner preforms

HyPET HPP optimizes management of the melt stream from pellet to part, resulting in higher preform quality and a significantly improved ability to mold thinwall preforms.



Full suite of product services and support



Husky experts work with customers to ensure the highest level of equipment performance.

Husky takes responsibility for supporting our customers from start-up through the lifecycle of the system. Husky offers the experience and resources to keep our systems running at peak efficiency and is the only supplier in this output range to provide a full suite of services and support.

Preform molds

As the world's largest moldmaker, Husky is able to deliver global tooling programs for new molds or conversions of any size. Preform molds are produced at dedicated facilities in Canada, the United States and Luxembourg. Husky regularly invests in these state-of-the-art facilities to increase capacity, reduce lead times and maximize part quality.

Refurbishment, conversion and lightweighting

The success of preform and bottle producers depends, in part, on taking advantage of lightweighting opportunities, thread conversions and new preform and bottle designs. Husky lightweighting and

mold conversion services are designed to meet these needs in a timely and cost-effective way. Husky is the only moldmaker with the capacity to manage large-scale, market-wide programs while also responding to the needs of customers who want to convert a single mold.

Manufacturing Advisory Services

The Husky Manufacturing Advisory Services team provides operational consulting, design and project management services to help customers increase the operating efficiency of your plastic injection molding facilities. Husky design services are typically used by customers exploring the feasibility of plant expansion, relocation, consolidation or those looking to build a new facility. Husky's factory planning and optimization study uses a structured approach to create a roadmap for a customer's molding business that will help to maximize efficiencies and build in the flexibility necessary to meet future requirements.

Husky's Bottle Development Center (BDC) can help bring a customer's new package design from concept to complete bottle quickly and cost-effectively. We offer a complete range of confidential preform and bottle development services to ensure our customers' next preform designs are optimized for injection molding, performance, and tooling flexibility. We provide industry-leading solutions in optimized preform design, preform and bottle sampling, proto-typing hardware and quality testing.

Husky is also one of a select few manufacturers to have a testing facility approved by Coca-Cola. Preforms meeting specification and quality standards in Husky's facility do not require further testing by Coca-Cola. This designation represents an extremely high level of trust between Coca-Cola and Husky.

Shotscope NX for PET preform manufacturing

Improve your profitability by using Shotscope NX™, the PET industry's only integrated process and production monitoring system that provides "at a glance" information to help manufacturers control processes and improve productivity while minimizing variability, downtime and improving part quality.

Shotscope NX delivers:

- Integration with Enterprise Resource Planning (ERP) software
- Best part quality by establishing process control and improving process stability
- Faster cycle times and improved uptime
- Improved plant utilization through simplified reporting and expedited information
- Increase in on-time deliveries through simplified plant scheduling

Intelligent SPC tool

Shotscope NX provides statistical process control (SPC) capabilities. The system collects all of the shot variables from every cycle and retrieves them for later analysis using run charts, histograms, X-bar and R-charts and scatter diagrams.

The Process Analyzer allows for a quick job set-up. Job reference profiles are stored and recalled when jobs are rerun. Shotscope NX will overlay reference curves (position pressure) with those from new jobs for easy machine adjustments. The Process Analyzer also helps troubleshooting by analyzing trends and detecting common problems before they become serious issues.

Capabilities

- Automatically stores processing parameters on every shot in real-time
- Web-based architecture makes information available across existing internal network
- Multi-plant capabilities
- Job scheduling/Production planning
- Predictive and preventative maintenance
- Real-time information and alerts
- Flexible production reporting
- Process monitoring tools
- Shot profile/waveforms
- SPC/SQC

Real-time monitoring and analysis

Shotscope NX collects and saves data for each cycle on every machine. The system compares and analyzes process data against a job's process limits by using historical analysis capability and provides real-time and historical measurements of machine, yield, cycle efficiency and OEE (Overall Equipment Effectiveness).

Process monitoring and control

The Shotscope NX system has the tools to help improve part quality. By controlling the process to reduce variability, you can minimize your overall production costs and improve profitability.



Shotscope NX provides real-time, web-based information, as well as remote monitoring

Broadest product range in the industry

		Applications						
		H-PET AE180	H-PET AE230	HyPET 120	HyPET 225	HyPET 300	HyPET 400	HyPET 500
		Cavitation output (mm/yr)						
	500 mL (17 oz.) Carbonated Soft Drink Neck finish: 28 mm PCO Weight: 21–25 g	32 59	48 85.9	32 85	48 163.0	72 236.6	96 312.1	144 485.3
	500 mL (17 oz.) Bottled Water Neck finish: 26 mm PCF Weight: 10–14 g	32 112.5	48 163.1	32 147.7	48 296.2	72 418.7	96 547.7	144 791.7
	500 mL (17 oz.) RTD tea / hotfill Neck finish: 28 mm Weight: 20–27 g	32 70.1	48 76.4	32 67.4	48 127.3	72 186.0	96 246.0	144 362.8
	473 mL (16 oz.) Dairy Neck finish: 30–38 mm Weight: 22–26 g	32 70.1	48 76.4	32 67.4	48 127.3	72 186.0	96 246.0	144 362.8
	500 mL (17 oz.) Aseptic juice Neck finish: 38 mm Bericap Weight: 18–24 g	32 70.6	48 102.9	24 64	32 108.7	72 236.6	96 312.1	128 407.4
	591 mL (20 oz.) Hotfill juice Neck finish: 38 mm VHS Weight: 29–32 g	24 49.6	48 71.5	24 34.8	32 55.6	72 123.0	96 163.0	128 215.0
	1.5 l (51 oz.) Sparkling Water Neck finish: 25–30 mm Weight: 25–36 g	24 50.4	32 57.9	32 75.5	48 154.4	72 224.4	96 296.2	144 435.4
	330 mL (11 oz.) Beer Neck finish: 28 mm PCO Weight: 22–30 g	32 76.5	48 83.3	32 73.9	48 139.5	72 203.4	96 268.8	144 395.8
	946 mL (32 oz.) Food Jar Neck finish: 63 mm SP400 Weight: 37–40 g	12 25.2	16 33.6	8 13.1	16 33.6	24 49.3	32 65.3	48 96.7
	3–5 gal (384–640 oz.) Water Neck finish: HOD Standard Weight: 300–380 g	— —	— —	— —	8 4.8	16 9.6	16 9.6	24 14.5



H-PET AE



HyPET



HyPET HPP

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