



# Ultra Helix™ Valve gate

Simply incredible gate quality and gate life



## BENEFITS

Gate life lasts for millions of cycles

Industry-leading thermal consistency

Continuous stem guidance

Guaranteed stem concentricity  
with gate hole virtually eliminates  
mechanical wear

Reduced cost of mold integration

Suitable for engineering and  
commodity resins

Husky is a leading global supplier of manufacturing solutions and services for plastics processors. We design, manufacture and integrate the industry's most comprehensive range of injection molding equipment, including machines, molds, hot runners, controllers, auxiliaries and integrated systems.

# Gate vestige so clean it is nearly unmeasurable

Our new Ultra Helix™ nozzles are a giant leap forward in valve gate technology. With advanced manufacturing capabilities and unique patented designs, it is now possible to direct gate parts with gate vestige so clean it is nearly unmeasurable.

Gate quality will be noticeable from the moment you start up the system and you can rely on that level of performance for millions of cycles—in many cases for the life of the mold.

## A New Approach to Valve-Gating

Our Ultra Helix™ nozzles were designed using a first-principles approach to understand exactly how gate vestige is formed. This insight, combined with advanced manufacturing technologies, resulted in a revolutionary valve gate that:

- Guarantees stem to gate orifice concentricity, virtually eliminating mechanical wear on these components
- Provides an incredibly consistent thermal profile, which results in outstanding cavity balance performance and very wide processing windows
- Simplifies machining for mold integration, saving mold makers time and money and shortening molders validation times

Ultra Helix™ also incorporates an innovative heater design that provides the performance of an integrated heater with the maintainability benefits of Husky's removable heater. The consistency and performance of these heaters decouples short shot balance from nozzle heater performance, reducing the potential for balance changes when replacing a heater. This improved drop-to-drop balance provides unmatched thermal consistency and can significantly reduce mold qualification time and cost. This new heater is available for all nozzle sizes and gate styles.

## Working with UltraSync-E™

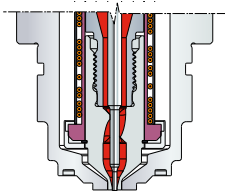
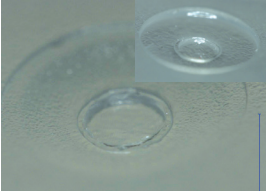
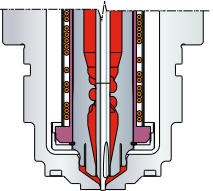
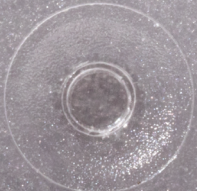
Using Ultra Helix™ together with UltraSync-E™, our market leading servo valve stem actuation, enables the best performance for the complete mold. This combination of technologies also makes it possible to run for over five million cycles without having to replace any moving parts. This combination also eliminates the use of compressed air, which minimizes the energy requirements and cost of valve gate molding.

## By combining UltraSync-E™ with Ultra Helix™ you benefit from:

- Improved gate quality and extended gate life
- Direct servo driven synchronized plate actuation which helps eliminate variability associated with valve stem motion.
- Reduced operational costs with lower maintenance and energy savings compared to pneumatic actuation.

NOZZLE SIZES AVAILABLE	
Nozzle	Throughput
Ultra Helix 350	5–20 (g/s)
Ultra Helix 500	10–20 (g/s)
Ultra Helix 750	50–250 (g/s)

## Ultra Helix Nozzle Comparison

Ultra Helix™ VG		Ultra Helix™ VR	
			
Features	Benefits	Features	Benefits
3.0 mm outside diameter of tip	Small footprint enables tip to fit on a wide range of parts	Fits current Ultra gate detail	Retrofitable with existing cold halves
All critical gate geometry is contained in the tip	Best possible concentricity between valve stem and gate for the highest gate quality	High tolerated continuous guidance	Virtually eliminates mechanical wear by keeping stem centered on gate
Tip contouring and texturing are possible	Minimize visual impact of witness on part surface		

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