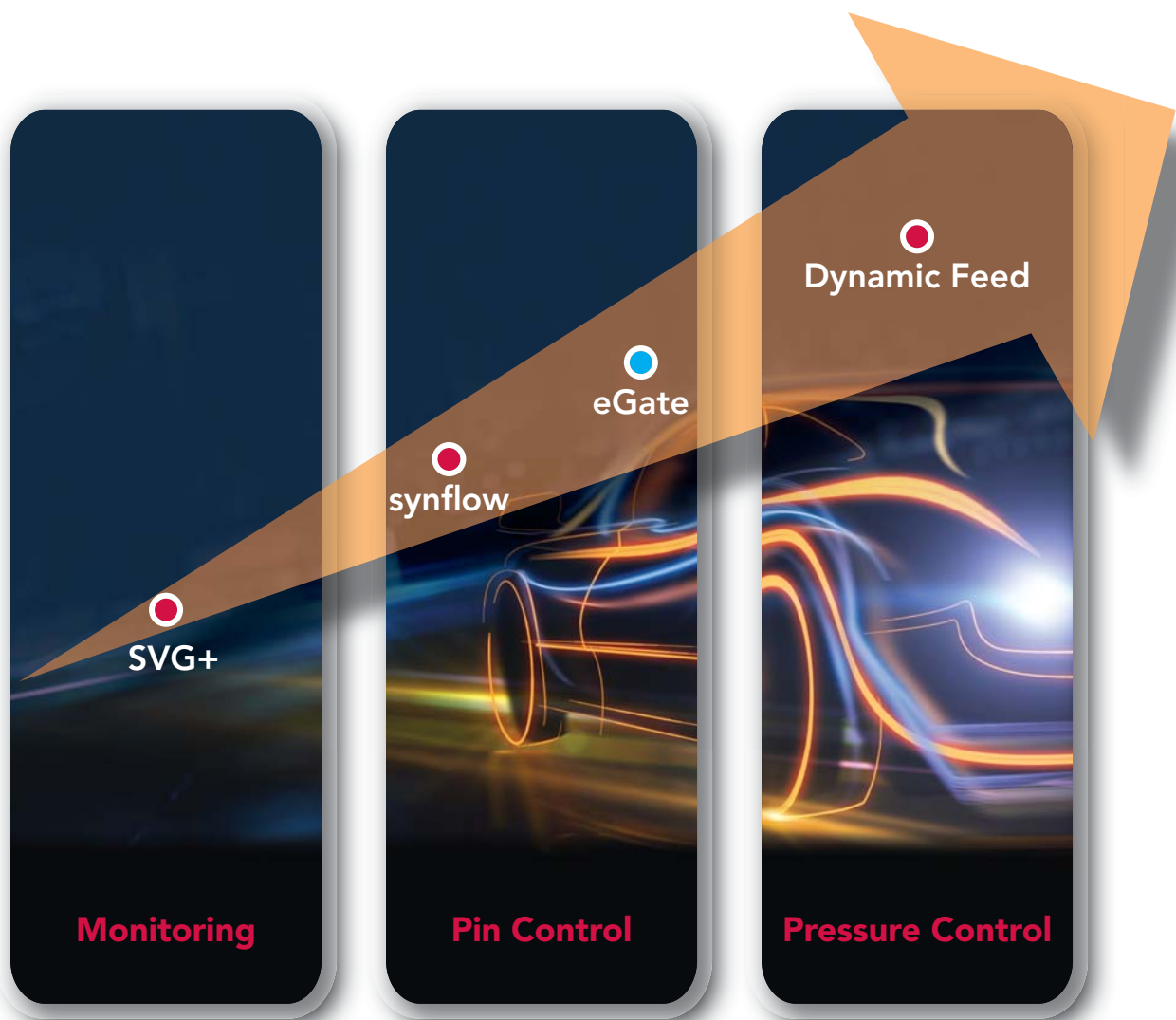# eGate®

For Large Part Applications

**Electric Actuation
for Superior Part Quality**

**Synventive
molding solutions**

A business of BARNES GROUP INC

Synventive is the world's leading manufacturer of hot runner systems and patented activeGate® control technologies. Our latest electric actuated system, eGate 2.0 is now available for large part applications. Synventive's expanding portfolio ranges from simple monitoring systems, to fully closed loop pressure control and comes with over 20 years of experience, ensuring the optimal technology for your application.

Dynamic Feed

eGate

synflow

SVG+

Monitoring

Pin Control

Pressure Control

Synventive
molding solutions
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THE LATEST PROCESS CONTROL ADVANCEMENT
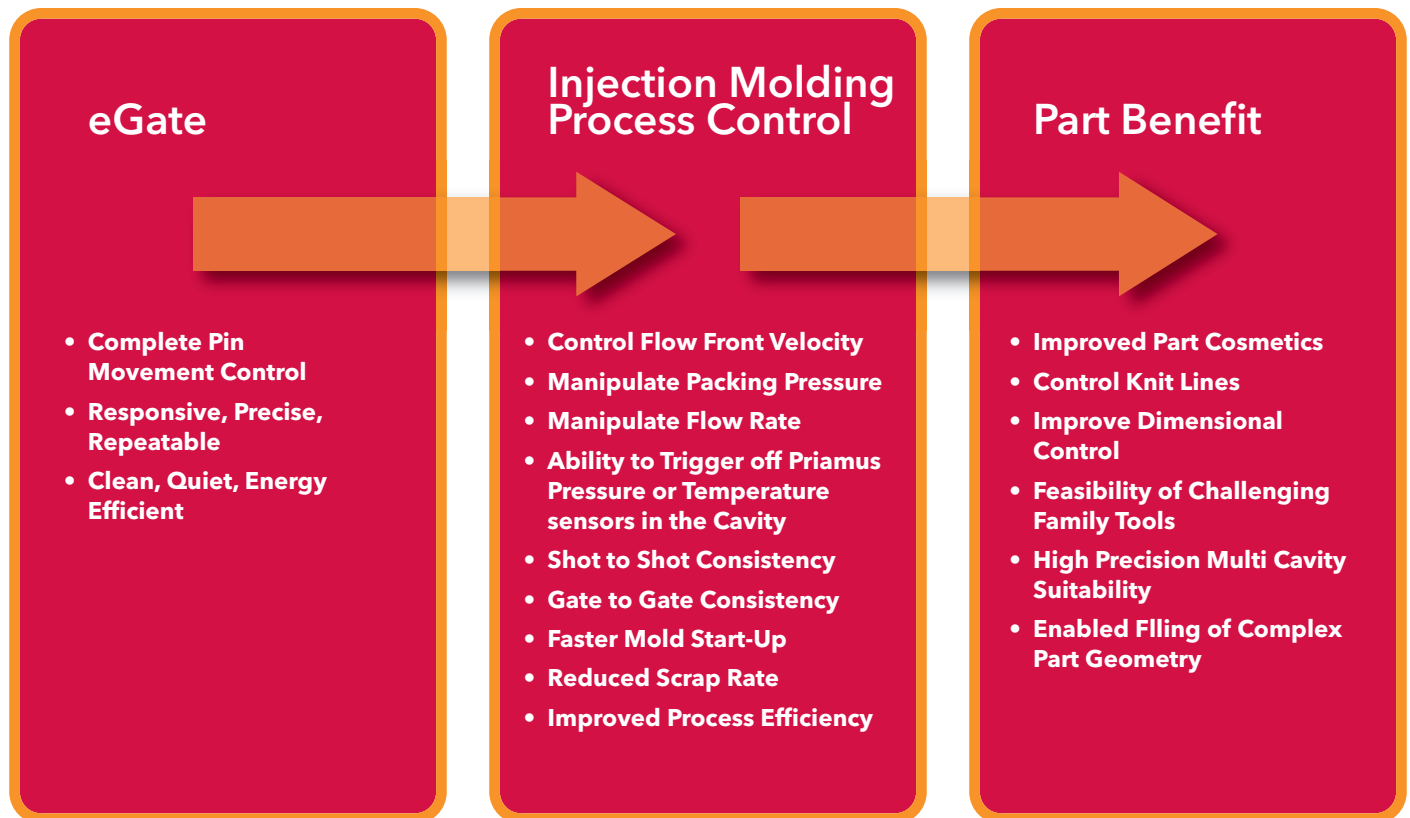
eGate® benefits

Now available for Large Part Applications

- Complete pin position control
- Responsive, precise, repeatable
- Clean, quiet, energy efficient

Synventive first introduced eGate for smaller part molding in 2010. Synventive is now introducing the next generation eGate 2.0, for large part applications.

Precise all electric control of each valve pins position, speed, velocity and stroke, capable of delivering:

- Optimal cosmetics for class A surfaces
- Superior molding flexibility
- Warpage reduction
- Clamp force reduction
- Part weight reduction
- Greater application flexibility

eGate

- **Complete Pin Movement Control**
- **Responsive, Precise, Repeatable**
- **Clean, Quiet, Energy Efficient**

Injection Molding Process Control

- **Control Flow Front Velocity**
- **Manipulate Packing Pressure**
- **Manipulate Flow Rate**
- **Ability to Trigger off Priamus Pressure or Temperature sensors in the Cavity**
- **Shot to Shot Consistency**
- **Gate to Gate Consistency**
- **Faster Mold Start-Up**
- **Reduced Scrap Rate**
- **Improved Process Efficiency**

Part Benefit

- **Improved Part Cosmetics**
- **Control Knit Lines**
- **Improve Dimensional Control**
- **Feasibility of Challenging Family Tools**
- **High Precision Multi Cavity Suitability**
- **Enabled FIling of Complex Part Geometry**

eGate® applications

Independent pin movements control allows user to easily define individual valve pins:
Position - Speed - Acceleration - Stroke

INJECTION CYCLE

Conventional Open | Close
Pins open at full speed for the entire stroke
and close at full speed.

Flow Front Speed Stabilization
Pin initially opens at reduced speed for a set distance
after which it returns to full speed for the remainder of
the opening stroke in order to control initial release
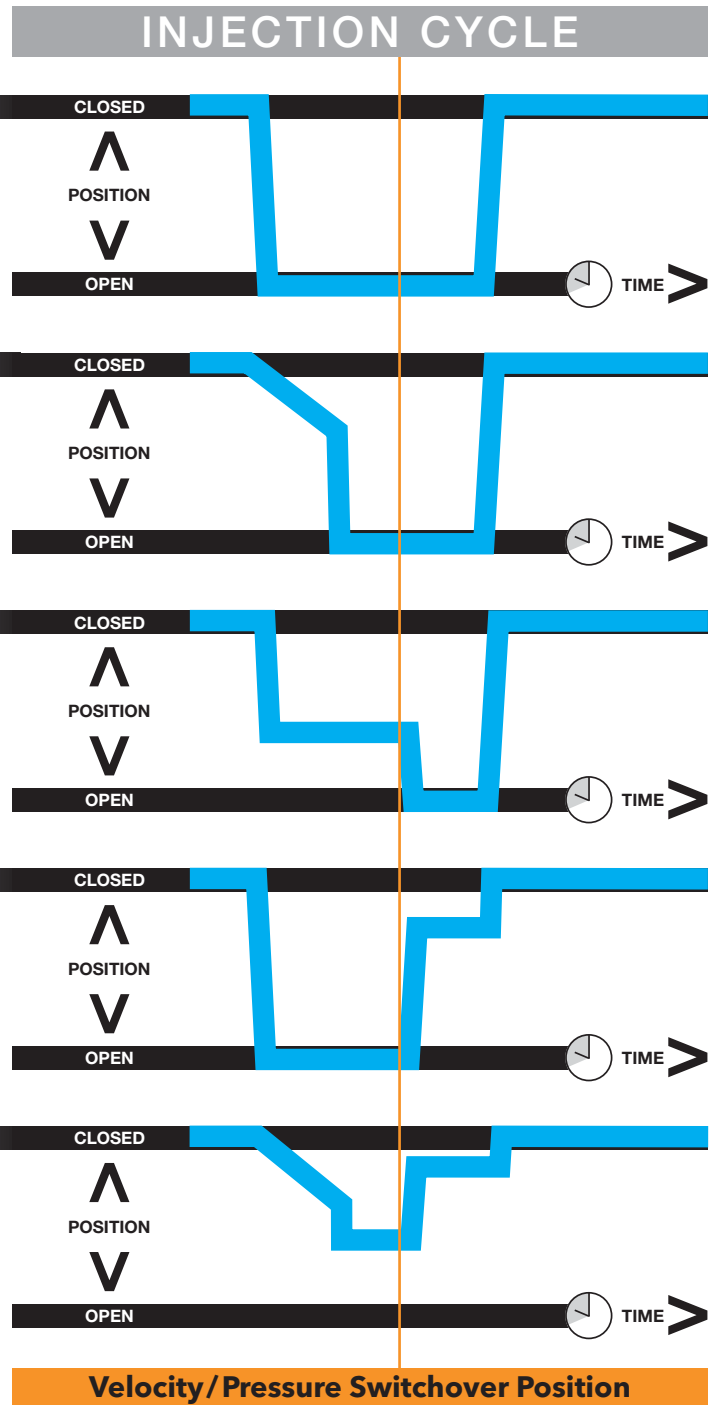of pressurized material behind delayed pin.

Balance Control
Pin opens at full speed to an intermediate position
and stays in that position until transfer to restrict
filling out of that nozzle. Pin then opens to full stroke
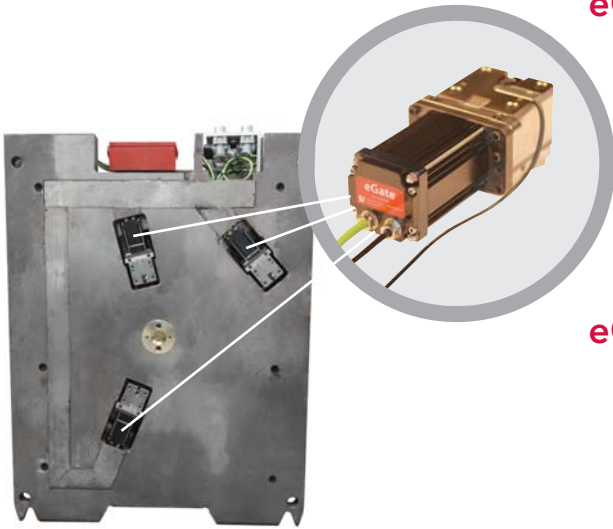for unrestricted packing.

Pack Control
At transfer pin moves to an intermediate
position for differential packing.

Complex Movements
A combination of multiple types of
moves can be made in a single cycle.

Velocity / Pressure Switchover Position

eGate® components

eGate Hot Runner System
- Bolt onto the manifold for easy install
- Compact footprint maximizes tool integrity
- Small stack height
- Individual cooling
- Individually cooled motors with thermal switch
- Compatible with magnetic clamping
- Maintenance free motor

eGate User Interface
- New easy to use intuitive interface
- Simple recipe recall and run
- Sequence Plot overview
- Mold Map feature
- Simple Drag and Drop editor
- Multiple varying levels of control permissions

eGate Controller
- 220V Single Phase eGate controller available in 8 or 16 zone configurations
- Accepts digital input signals via the Ether CAT communication protocol
- Cavity sensor triggering compatibility

Synventive
molding solutions
A business of BARNES GROUP INC

Determined… driven… totally focused on our customers.

Through ongoing collaboration with customers, we're focused on one objective: to develop the most effective hot runner solution for the specific application, giving customers precision-control over injection molding and ensuring reliable, trouble-free operation. Partner with us and your business can rely on 45+ years of experience, industry-leading technology, backed by unprecedented support for your projects.

Synventive has manufacturing operations in North America, Europe and Asia, each with its own manufacturing, design, and research and development departments.

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BARNES MOLDING SOLUTIONS

Molding Solutions, a strategic business unit within Barnes Group, includes highly respected brands in plastic injection molding tooling, hot runners and controls. Molding Solutions offers a comprehensive portfolio of advanced technologies and value-added services, delivering premium tool-based solutions across a broad spectrum of applications.