



synflow[®]
Leading the drive for the maximum process control

synflow3 the latest process

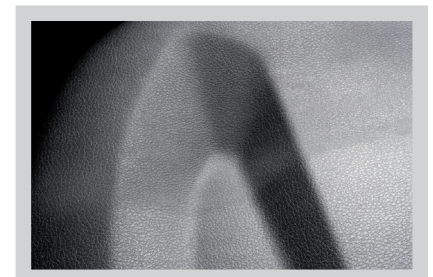
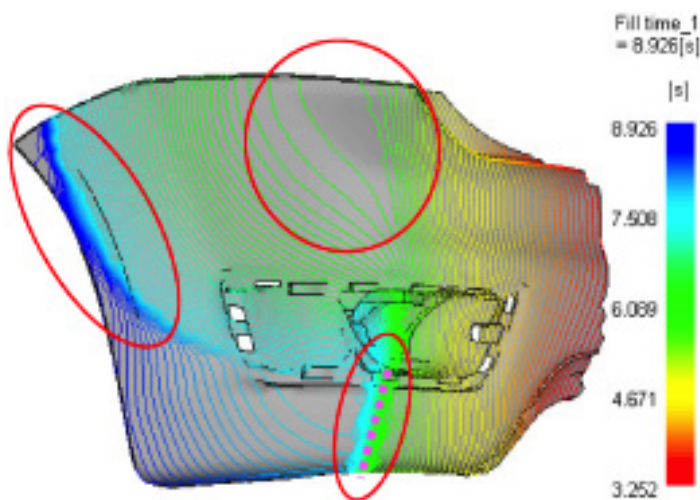
With traditional valve gate hot runner systems, the valve pins opened and closed at a maximum, uncontrolled speed. The inability to control the flow results in melt front stagnation and accelerations, which in turn may cause visible part surface defects.

To address these quality issues our original synflow offered two-speed pin control. Surface defects were eliminated by allowing the user to individually define the opening velocity of each valve pin, and the amount of opening stroke in which the velocity will be controlled.

The next generation synflow brings more advanced features which allow molders to quickly and easily define the complete molding parameters for a specific application.

Molders can now slow the opening of the pin for a set distance and hold at that position until closing or facilitate multiple moves within a cycle.

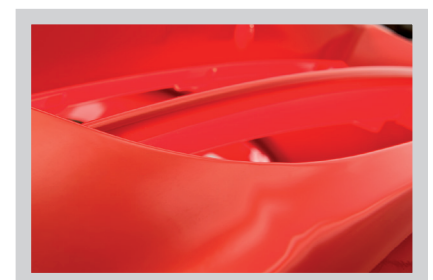
Any SVG+ systems, which are supplied with pin position sensors, can be easily upgraded to synflow. A mold that has separate open and close connections for each actuator can be tested without modifications to the tool. Simply connect the external equipment to validate the added control.



Melt Acceleration Line or Gloss Line



Gloss Marks



Reflection Marks

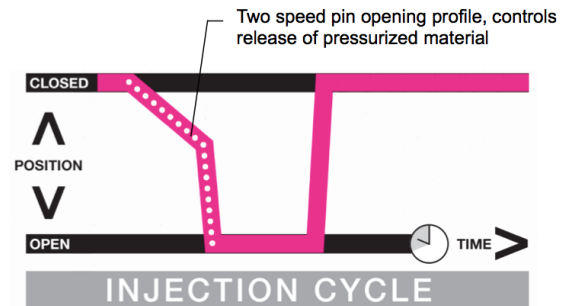
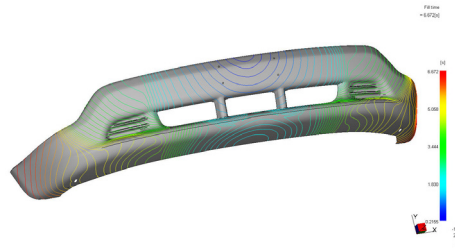
synflow Features:

- No connection to the injection molding machine necessary.
- Test on the actual tool without committing to additional equipment.
- Same controls equipment can be used on multiple systems.
- Pin sequencing is still done through current process simplifying use for machine operator.
- New software platform designed for ease of use.
- Ability to stop the pin mid-stroke to independently regulate filling or packing of each nozzle.
- Ability to program alternating moves allows for prefilling of cold runner or differential packing.

control advancement is here. NOW

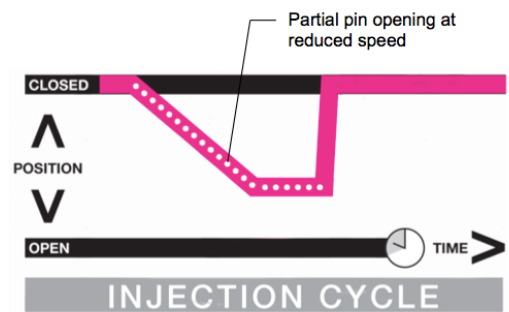
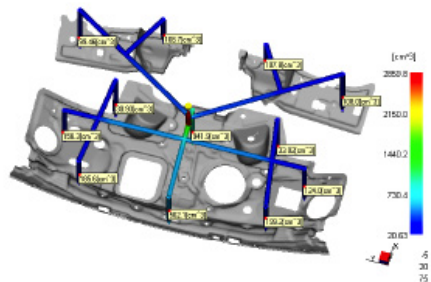
Pressure Line Reduction

Reduced initial pin opening velocity to eliminate sequencing defects. Pin returns to full speed once predefined stroke is reached.



Balance Control

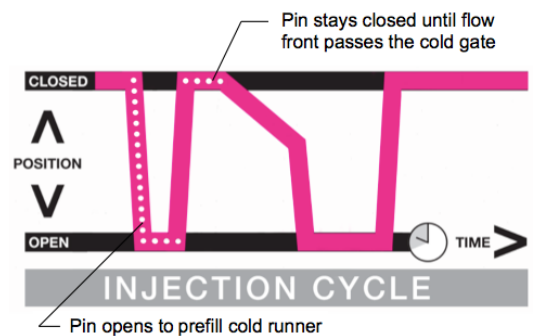
Pin is opened at a controlled speed to a set stroke and held at that position until it closes.



If the hydraulic sequencer is capable of multiple moves, synflow can be programmed to perform varying control on alternating moves

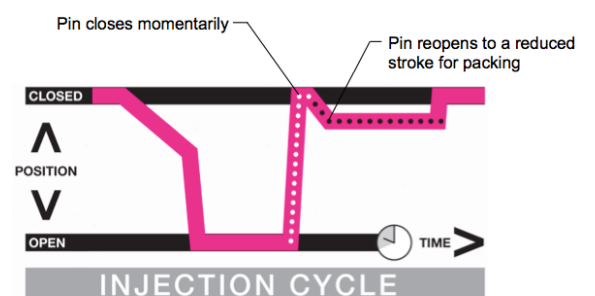
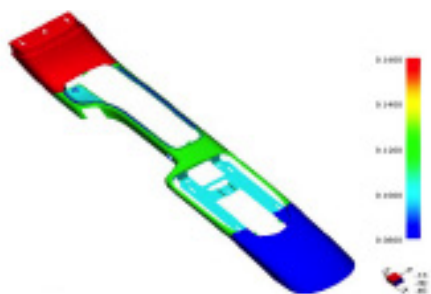
PreFill Runner Control

On initial opening, pin speed is not controlled enabling unrestricted pre-filling of cold runner.



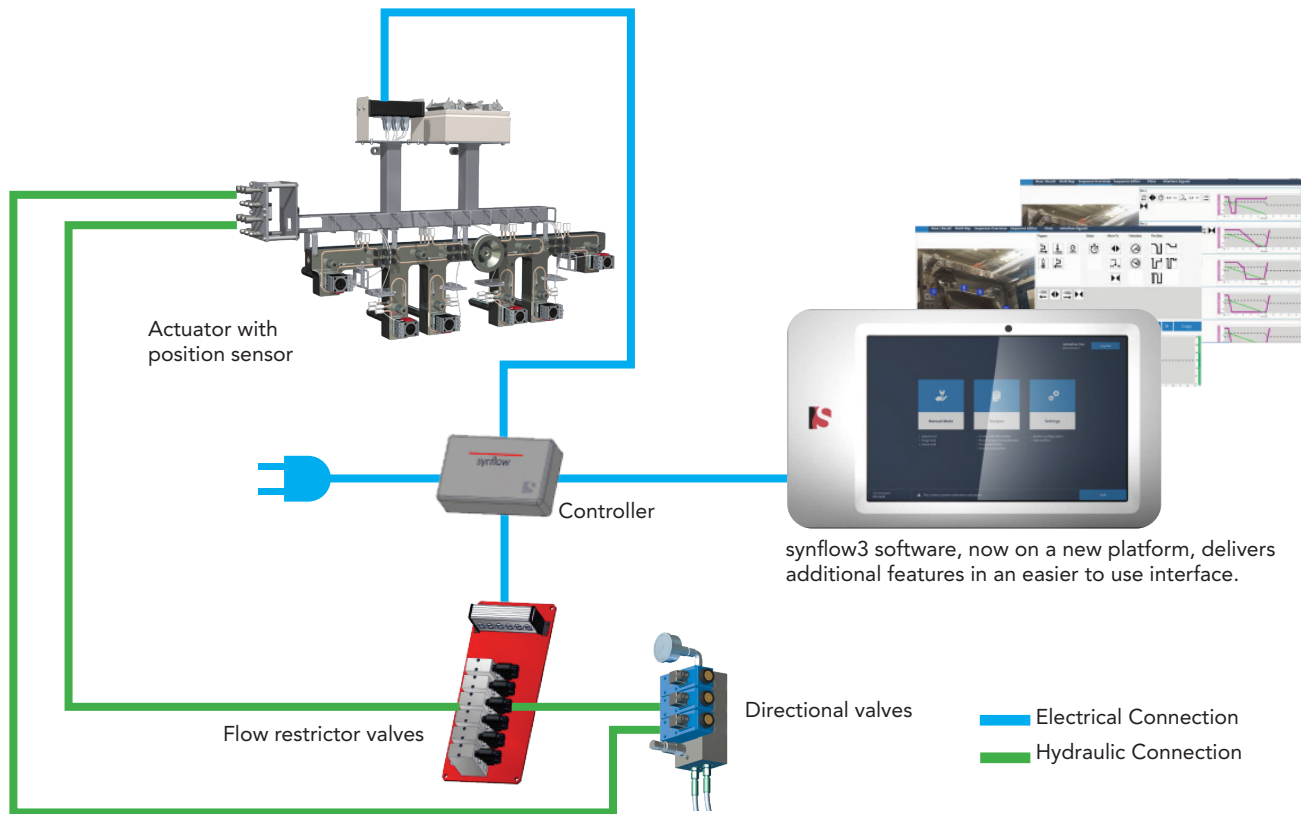
Differential Pack Control

Pin momentarily closes at transfer and then reopens to a reduced stroke to provide a lower pack pressure to individual nozzles.



synflow Components

synflow technology can be added to any activeGate® enabled system through simple external hookups.



Frequently Asked Questions

Can I use synflow without installing an interface on my injection molding machine?

Yes, the synflow controller does not need to communicate with the molding machine or seqUencer in order to perform its functions.

Does my current sequencer need the ability to open and close the pins multiple times in a single cycle in order to program multiple moves?

Yes, the synflow controller does not move the pin, it controls the speed of a movement or can hold the pin in place.

If I plumb the synflow valves between the directional stack and the tool can I leave them there when I run other tools?

Yes, when the synflow controller is turned off or not connected, the valves are in a pass-though state and will have no impact on the process.

Will my application benefit from synflow?

Every application is unique, please consult Synventive for a thorough review to ensure synflow suitability.

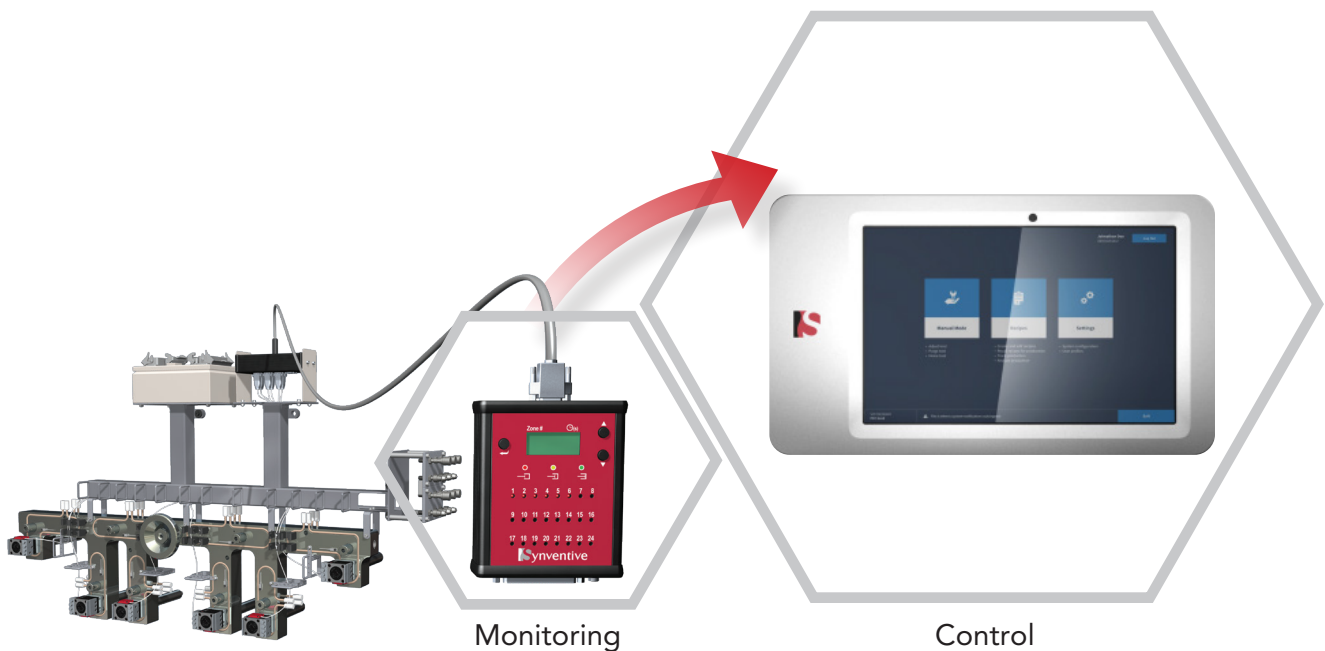
Simple upgrade path from SVG+

Synventive has a rich history in developing industry-leading hot runner control advancements. From our very first Dynamic Feed offering 20 years ago to our current selection of activeGate® tool-based molding technologies, we provide unrivaled control over the molding process. This enables consistent production of higher quality parts, previously unattainable with traditional hot runner systems.

Within the activeGate® family of products are multiple levels of technologies, each with varying degree of control. These technologies can be supplied with the hot runner system or as the need arises, they can be added in later with a simple upgrade.

activeGate® allows for a low initial cost investment. Should additional control be needed, synflow can be easily added after initial mold sampling.

Upgrade to improve part quality



activeGate® technologies are designed to facilitate perfect surface quality, dimensional stability and reproducibility of injected molded parts allowing for:

- Higher quality part surface finishes
- Balance control
- Decreased scrap
- Faster mold start-ups



Synventive knows that our people are at the center of every product we sell. Contact us today for the service and support that has kept our customers coming back to Synventive for more than 50 years.

Sales & Service

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MOLDING SOLUTIONS

