



# State of the Tech

## The best rush-order hot runners in stock

Our quest for the best off-the-shelf injection molding technologies brings us this month to runnerless molding systems available from stock that ship, lickety-split, to your dock. —**Carl Kirkland**

**Ever had an emergency project, one involving an absolutely vital piece of equipment that had to arrive, like, yesterday? Our imaginary molder—John E. B. Goode, president of IMM—has such a project. He's got a hot medical packaging job in the works and he desperately needs a hot runner system right away. You can read his RFQ yourself.**

Fortunately for Mr. Goode, many runnerless systems suppliers offer drop-ins to meet his needs, plus the service capabilities to ensure his needs are met shot after shot. What follows are responses to his RFQ from eight top hot runner suppliers in their own words. You can read more details of their proposed solutions at [immnet.com](http://immnet.com).

*Editor's note: IMM wishes to thank John Blundy and his colleagues at Incoe Corp. for helping IMM prepare its RFQ. In 1962 Alex Scres, who later became chairman of Incoe Corp., developed and produced an electric hot-tip bushing that sparked the runnerless molding revolution.*

### Contact information

D-M-E Co. | [www.dme.net](http://www.dme.net)  
Husky IMS Ltd. | [www.husky.ca](http://www.husky.ca)  
Incoe Corp. | [www.incoe.com](http://www.incoe.com)  
Melt Design Inc. | [www.meltdesign.com](http://www.meltdesign.com)  
Mold-Masters Ltd. | [www.moldmasters.com](http://www.moldmasters.com)  
Polyshot Corp. | [www.polyshot.com](http://www.polyshot.com)  
Seiki Valve & Spear System | [www.seiki-hot.com](http://www.seiki-hot.com)  
V-Tek Molding Technologies Inc. | [www.v-tekmt.com](http://www.v-tekmt.com)

### IMM's RFQ

To whom this might concern:

I'm John E. B. Goode, the owner and president of Illinois Molds & Molding Co. (IMM) here in Addison. We're custom molders of consumer products and we also mold some electrical and industrial parts. We've got 12 molding machines now, ranging from 28-350 tons, and we're running two shifts, 24/5, although 24/7's more the norm these days.

Business is good. I've recently added a couple of new 300-ton horizontal presses, two new verticals, and a brand-new CNC knee mill for our toolroom. We mostly do tool maintenance and repairs, but we can build them, too, if need be. I've got a whopper of a problem right now, though. I need a hot runner system and I need it fast.

We won a job from a medical packaging company to run a small, round, snap-shut case with a living hinge that'll be used for holding pills. It's a hot runner job, all right. My toolroom guys gave me some particulars on what we'll need:

- Cavitation: Eight (four tops and four bottoms)
- Part weight: 5g (total-top and bottom)
- Wall thickness: 0.039 inch at gate, 0.004 inch at hinge
- Material: PP (translucent, three colors, no fillers)
- Flow-length-to-wall-thickness ratio: 40:1
- Gate vestige requirements: None—at least no vestige above the part
- Critical features: Flatness, roundness, and zero vestige for downstream automation, handling, and IML
- Press size: 100 tons
- Mold size: 12 by 14
- Gate pitch: Eight drop, one gate each on top and bottom, 1.250 inches apart; cavity spacing is 4 inches for the top, 5 inches for the bottom
- Shut height limitations: None—the parts are small
- Market: Medical/personal care
- Control: Something that's easy to use and available from stock
- Cost: Ballpark price—you tell me
- Delivery estimate: ASAP

If you've got any suggestions, I'd sure like to hear from you soon. Time is running out. We'll pay it off on standard terms. IMM doesn't owe the bank any money, but we're looking for something that's reasonably priced, even though we've got a short fuse when it comes to getting this job going.

Just one more thing: Do you supply parts, tech service, and training here in the United States? U.S. parts and service are very important to IMM. Very important. We got burned once on parts and service, and we don't want something like that happening again.

Anyway, what's the best standard-model, off-the-shelf, drop-in system from your latest lineup that you could recommend, and why? Are there any options available for it that you think would make this job run any smoother? If so, how much more, percentage-wise, could I expect to spend for one with the "works"?

I look forward to hearing from you soon.

Best regards,  
John E. B. Goode, president  
IMM, Addison, IL

P.S. If you can guess from this RFQ that IMM doesn't have much experience with runnerless systems, give yourself a gold star.

## State of the Tech: Hot runners

### D-M-E Co. Stellar QDS



**Specs:** Eight drops; 30-by-30-mm nozzle drop pitch; 10-by-12 standard mold base

**Control:** 12-zone Smart Series

**Warranty:** Three years leakproof

**Delivery:** Five business days for standard Z-dimension length; 10 business days for custom Z-dimension length

**Hot runner price:** \$10,800

**Control price:** \$3200

Based on the specs provided by the guys in your toolroom, D-M-E recommends our Stellar QDS (Quick Delivery System) hot-half package system. This self-contained "bolt-on" system not only is ideal for medical molding, but also addresses your need for quick turnaround on the order. All the components are premachined and are standard off-the-shelf items.

The Stellar QDS consists of a fully balanced eight-drop MNA (multiple nozzle assembly) with the choice of seven nozzle drop lengths. If you can work with one of our seven standard Z-dimension lengths—which refers to the amount that the nozzle drop protrudes from the hot half into a mold's cavity, insert, or A-plate—delivery will be five business days. If the Z-dimension needs to be customized, delivery will be 10 business days. All nozzles are threaded construction into the manifold.

The Stellar MNA we recommend incorporates a double-X flow-channel layout with a 30-by-30-mm nozzle drop pitch. It is proven to perform well with challenging medical resins and is optimized for small part molding as well.

Front-loaded nozzle tips, mini-tubular heaters, and thermocouples make the Stellar an easy-to-service hot runner system for maximum uptime.

D-M-E's pre-engineered, premachined components allow the Stellar QDS to be sized for a 10-by-12 standard mold base, which gives you additional savings. The highly conductive tip design and precise heat profiling in all nozzles ensure consistent processing temperatures.

Your Stellar QDS package system includes design, manufacture, assembly, wiring, and testing of all hot runner components and system mold plates. Delivery time starts with the verification of the application with Illinois Molds & Molding.

We also recommend a 12-zone-configuration Smart Series temperature control system with interchangeable and replaceable microprocessor-based temperature control modules. This system maintains simplicity of operation with simultaneous display of setpoint and temperature. Standard and off-the-shelf, it can be shipped complete (including the main frame, modules, cables, and floor stand), same day, at an approximate cost of \$3200.

D-M-E supplies standard parts from locations around the United States and our experienced tech service team spans the United States as well. Startup assistance and training are available (at no charge) to customers on a one-on-one basis and can include everything from how to design with hot runners to orchestrating applications or troubleshooting.

