

PRECISION AUTOMATION FOR RUBBER MOLD VACUUM WAX INJECTION FROM THE



Introducing the Intellijector, the first **true** vacuum wax injector in 20 years. MEMCO now changes the art of injection into an exact science.

The alternate use of two mold clamps eliminates operator waiting while wax cools. Automatic mold filling speeds production, reduces rejects and saves wax.

Better nozzle sealing and overflow sensor means fewer clean-ups. Programmed tank heaters prolong wax life and save energy by heating only when actually needed.

Safety interlocks protect operator and equipment. Everything to produce perfect waxes is in one box; no accessories needed!

There is no elaborate assembly required and no maze of plumbing or wiring to obstruct your workspace. Simply plug in your clamps and your done.

Any other injector available today does not give repeatable results because of inaccurate gage measurements and imprecise mechanical air pressure regulators. Now, precision electronic measurement and digital design using computer control ensures accuracy and repeatability. Each mold is identified and optimum settings are computed and stored. Now, even a beginner can produce expert results on any injectable mold!

The INTELLIJECTOR automatically

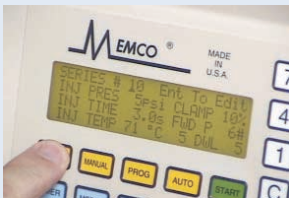
compensates for ambient temperature and pressure. Existing vacuum/wax valves produce bubbles in the wax pattern due to air entry. By enclosing the entire mold in a vacuum chamber, the INTELLIJECTOR provides the only practical means to ensure total air removal. Existing molds in good condition do not require modification for vacuum.

The optional wireless identification module or "WID" provides a fast, convenient method to identify your molds' parameters. By using this system, one person can program the molds' specifications on a "tag" that is inserted into the mold itself. When the tag is passed by the the "WID," the injection parameters are automatically adjusted and the mold is ready for injection. This enables anyone to operate the Intellijector with just basic instructions.

The Intellijector computes, stores, and sets the following parameters for each mold, yet provides for full operator control:

- Mold Clamp - sets proper force based on rubber mold
- Nozzle Force - stores & precisely regulates the mold-to-nozzle force for improved sealing
- Wax Temperature - furnishes accurate temperature regardless of flow, cycling or ambient temperature, separate controls for pot & nozzle plus nozzle has a rapid cool for faster changing
- Vacuum - measures actual vacuum, not time
- Wax Pressure - furnishes accurate pressure with ambient compensation
- Cooling - stores cooling time and opens the clamp when done

Features



User friendly command prompts and control buttons



Easy to use clamps

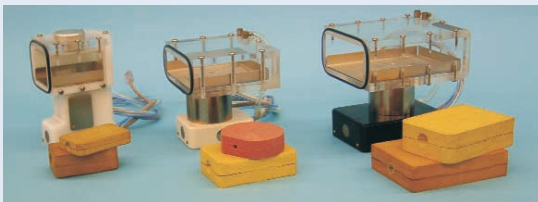


One handed operation



Automatic injection

Options



3 Clamp Sizes



3 Nozzle Types



Wireless Identification Module



Wireless Identification Tags

This unique combination of features work together to enhance, but simplify the wax injection process. Stones in wax production is much easier with precision waxes. Precision waxes also provide exact weights for mass produced pieces. Consistent quality is the key to profit in any production shop.

VACUUM WAX INJECTOR COMPARISON

To assist our customers in determining the best wax injector to fit their needs, we offer this comparison of the Intellijector® with our most popular competitor, Yasui®. We feel that the more you know about both machines, the more attractive ours becomes.

Feature & Notes on Standard Unit		Intellijector®	Yasui®
Stores Expert Parameters	1	6 per Mold & 3 in Unit	None
Clamp Pressure	2	Digital Closed Loop Positioning	Mechanical Pressure Regulator
Nozzle Pressure	3	Digital Pressure Control	Mechanical Pressure Regulator
High Speed Nozzle Temperature	4	Fast Nozzle Heating & Cooling	Heat Only
Wax Temperature	5	Digital, +/- 0.5 °C Accuracy	Digital
Vacuum Control	6	Electronic Sensor	Blind Timer
Vacuum Source	7	Internal or External	External Only
Injection Time	8	Digital, 0.1 sec. Increments	Analog Dial
Wax Pressure Settings	9	3,100 Mold Specific Database	8
Cooling Time	10	Digital, 1 sec. Increments	No
Supply of Injection Wax/Vacuum	11	Separate Paths	Combined
Cycle Progress Display	12	Yes	No
Diagnostic Displays	13	Yes	No
Mold Overflow Detector	14	Yes	No
Programmed Pot Heating	15	Yes	No
Removes Air From Wax	16	Yes	No
Insulated Pot	17	Yes	No
Display Programs	18	Yes	No
Spanish Version	19	Yes	No
Central Control Panel	20	Yes	No
Operator Prompts	21	Yes	No
Trash Pot	22	No	Yes
Components		1 (+2 Clamps)	5 (+1 Clamp)
Waxes / Minute		4	2

Feature # Advantages & Benefits — Intellijector® vs. Yasui®

1. The Intellijector® stores six critical parameters of each mold in its memory including injection temperature, injection pressure, injection time, clamp pressure, forward pressure, and dwell time. Keying in the mold number recalls these parameters and sets the machine for injection. The Intellijector® can store the parameters for over 3100 individual molds and up to 99 groups of molds.
2. The mold clamps use a positioning sensor to insure repeatable results to within .001-inch (.025mm). This means change in air pressure or wear in the clamp piston will not affect the finished wax. Mechanical regulators vary up to 15% and do not insure repeatability even at the same setting.
3. Forward pressure is controlled using a special piston and digitally controlled air pressure accurate to within 0.1-psi (.689 Pa) of the setting. Mechanical regulators can't even come close to this accuracy.
4. The nozzle is part of a high-speed heat exchanger that can rapidly heat or cool the next shot of wax to match the molds' requirements. No time is lost waiting for it to cool down on its' own.
5. Direct digital temperature input means accurate settings for repeatable results. Analog dial settings are only approximate.
6. The on board computer monitors vacuum levels to make sure the next step proceeds only if vacuum levels are correct. A simple timer is no measure of vacuum.
7. In shops with no vacuum available, the Intellijector® will produce its own vacuum from shop air. An external vacuum pump is an option.
8. Injection time is set by the mold database in 0.1-sec. increments and is accurate to 20-ms. Again, an analog dial setting is only approximate.
9. Wax pressure is set by the mold database in 1-psi increments and is accurate to 0.1-psi (689 Pa). One number calls up and sets all injection parameters, not just the pot pressure setting.
10. Cooling time is entered in the mold database in 1-sec. increments.
11. The Intellijector® provides separate plumbing for mold vacuum and wax injection. Since the entire mold is put under vacuum, there is no need to use the same path as the wax. This eliminates the need of a "trash pot" and keeps air from being drawn into the injection nozzle and producing bubbles. The patented Wilcox Clamp insures vacuum inside and outside the mold, through the entire injection cycle, not just before.
12. On the front of the Intellijector® are two vertical progress displays that show the status of each clamp. Each segment is labeled and lights with the current step of the cycle. Combined with the countdown display on the main screen, there is never any doubt as to what the machine is doing.
13. Also located on the front are the diagnostic LED's which, when compared to the status bars, will allow most any problem to be resolved. No need to have a technician opening the case in order to troubleshoot.
14. In the event of a mold misalignment or sprue hole leak, the Intellijector® will detect it, shut off the wax flow, and alert the operator.
15. A built-in 7-day heat timer allows for different shift times. This means the wax is melted and the machine is ready for your operator. This also means longer wax life, reduced power usage, and less cleaning because the heaters are off when not in use.
16. The automated shift start pre-vacuums the wax pot to remove air and moisture before injection.
17. A well insulated wax pot reduces power usage, helps stabilize wax temperatures, and keeps the heat away from the operator.
18. Programs are clearly displayed on the large, illuminated, high contrast LCD display for review and making changes.
19. The Intellijector® is available in English and Spanish versions.
20. The central control panel allows all adjustments to be made in one location. There are no obscure control knobs, dials, or switches spread around the machine.
21. The operator receives plain language instructions from the display when needed.
22. The trash pot must be cleaned daily.

INTELLIJECTOR SPECIFICATIONS

DOMESTIC

Small Clamp Capacity	3.00L x 2.05W x 1.40H, in.
Medium Clamp Capacity	3.79L x 3.56W x 1.25H, in.
Large Clamp Capacity	5.05L x 3.55W x 1.52H, in.
Wax Capacity	1 gallon
Nozzle Temperature	130 - 195°F
Ambient Temperature	40 - 110°F
Electrical	115V, 5.0A, 580W, 50/60Hz.
Air Supply	2 cfm min @ 75 psi, 100 psi max.
Dimensions	17.5H x 19W x 13D, in.
Net Weight	71 lbs.
Crated Dimensions	23H x 26W x 20D, in.
Ship Weight	125 lbs.

INTERNATIONAL

Small Clamp Capacity	7.62L x 5.20W x 3.56H, cm.
Medium Clamp Capacity	9.63L x 9.04W x 3.17H, cm.
Large Clamp Capacity	12.87L x 9.02W x 3.86H, cm.
Wax Capacity	3.8 liters
Nozzle Temperature	55 - 90°C
Ambient Temperature	4-43°C
Electrical	230V, 2.5A, 580W, 50/60Hz.
Air Supply	1 lps min @ 517 kPa, 690 kPa max.
Dimensions	44.5H x 48.2W x 33.0D, cm.
Net Weight	32 kg.
Crated Dimensions	58.4H x 66.0W x 50.8D, cm.
Ship Weight	56.7 kg.



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