



MINIJECTOR

BY ELECTRO-MATIC MINIATURE PLASTIC MOLDING



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Over 40 years of experience in each machine

MINIJECTOR Injection Molding Machines represent more than 40 years of experience in designing and building quality, plastic injection molding machinery.

The low price of the MINIJECTOR combined with its low tooling costs, make small production runs of 100 pieces as economically efficient and practical as runs of thousands. Typical applications would be: prototypes of new or experimental parts, color mix testing, insert molding, plus traditional ATSM tensile specimens, and educational programs.

MINIJECTORs are available in pneumatic, electric servo, and hydraulically operated versions, as well as plunger or reciprocating screw type plasticizing systems. All MINIJECTORs may be used with all thermoplastics.

CONTROL PANEL

Control systems used in the MINIJECTOR series feature the finest components available. Heaters and thermocouples are plug-in for ease of maintenance. The controls are housed in a compact enclosure that can be fully serviced by removing panel screws.

The machines can be operated on a semiautomatic or manual control sequence.

Hydraulic and pneumatic components are supplied by the best-known quality manufacturers of fluid power systems, and operate with a minimum of maintenance. Pneumatic devices are self-lubricating, requiring non messy oil mist in the air supply. Hydraulics are extra heavy-duty versions designed to operate at pressure twice those used on the machines. Hydraulic fittings are of the face seal "O" ring type for leakproof operation.

SELF CLAMPING "V" MOLD

MINIJECTOR's "Wasp" series of machines use self-clamping "V" molds. The V-mold is forced by nozzle pressure into a slot between two clamping shoes and are removed from the machine after each cycle. V-molds are ideal for proto-typing, short run production, R&D, and insert molding. Precision ground "V" mold bases in various sizes, types and materials are available to fit both our new model machines or older ones in the field.



INSERT AND LOOSECORE MOLDING

Insert and loose core molding can be performed economically on the MINIJECTOR. Insert molding involves molding plastic around a metal insert or a previously molded plastic article to form a finished assembly. Loose cores are metal forms inserted into the mold prior to molding which produce hollow portions in the finished part. The beauty of insert molding using the "V" molds is that the insert or loose core can be placed in the mold; the two mold halves assembled and the entire assembly held in one's hand prior to placing in the machine. This permits molding around very fragile inserts that could not be safely molded using machines with high clamping pressure.

Electro-Matic carries a full line of spare parts, technical manuals and engineering support for these and the thousands of older MINIJECTOR machines still in use after many years of satisfactory service.



MODEL 45



The **Model45 Minijector** is a benchtop injection molding machine that requires only an air supply and a 115V current for operation. The Model45 is the smallest machine in our lineup and requires just 55 square feet of space. The Model45 can be purchased with a variety of heating cylinder sizes and various shot capacities and pressured. Heating cylinders can be interchanged in minutes to offer you the maximum flexibility. An air compressor of at least 2HP with a minimum of 80 PSI output is recommended for this machine. Electric power requirements is only 115 volts to 15 amps. An aluminum 12lb. capacity material hopper with a shut off and dump tube automatically meters material during the machine cycle, which is controlled by a timer.

TYPE	Pneumatic	
VERTICAL ORIENTATION	Clamp, Inject	
CLAMPING PRESSURE (TONS)	11.75	
MAX HEAT (°F)	600	
MAX MOLD SIZE (W x L x H)	7.0" x 3.0" x 2.125" *	
POWER REQUIREMENT	115 V	
OVERALL DIMENSIONS (W x L x H)	22.4" x 29.8" x 43.375"	
PLUNGER DIAMETER	MAX INJECTION PRESSURE (PSI)	MAX SHOT SIZE (OZ) †
1/2"	32,000	0.33
5/8"	20,480	0.50
3/4"	14,223	0.75
7/8"	10,449	1.00
1-1/16"	7,068	1.50

AVAILABLE OPTIONS > C-FRAME MOLD HEAT PART EJECTION

MODEL 50



The **Model50 Minijector** injection molding machine has a self-contained hydraulic system that does away with the need for an outside air source. The Model50 is a benchtop unit that requires only a 230-volt single phase current supply of at least 25 amps. The 2000 PSI system delivers 2 gallons of oil per minute to the 2" bore hydraulic injection cylinder through a solenoid operated directional valve. The 1725 RPM 2 HP electric motor is controlled by a motor starter that has overload protection coils. An independent relief valve and oil filled pressure gauge allow for precise injection pressure setting. The Model50 features manual or semi-automatic operational capabilities.

TYPE	Hydraulic	
VERTICAL ORIENTATION	Clamp, Inject	
CLAMPING PRESSURE (TONS)	11.75	
MAX HEAT (°F)	600	
MAX MOLD SIZE (W x L x H)	7.0" x 3.0" x 2.125" *	
POWER REQUIREMENT	220 V	
OVERALL DIMENSIONS (W x L x H)	33.25" x 25.63" x 43"	
PLUNGER DIAMETER	MAX INJECTION PRESSURE (PSI)	MAX SHOT SIZE (OZ) †
1/2"	32,000	0.33
5/8"	20,480	0.50
3/4"	14,223	0.75
7/8"	10,449	1.00
1-1/16"	7,068	1.50

AVAILABLE OPTIONS > C-FRAME MOLD HEAT PART EJECTION

* 10.00" x 3.00" x 4.00" with **Wide Mold** option † Polystyrene

MODEL55

The **Model55 MiniJector** injection molding uses a reciprocating screw plasticizing injection unit. The machine utilizes the same self-clamping “V” mold system used on plunger type MiniJectors but rather than depending on injection ram force the Model55 uses an independent short stroke hydraulic cylinder to generate that force. This permits full clamp force independent of injection pressure.

The Model55 requires only 230-volt single phase power and requires no more 3.5 sq. ft. of bench space. It has a self-contained hydraulic power unit with a 5.4-gallon reservoir with 2 HP 1725 RPM motor driving a 2.3 GPM gear pump. Manual adjustments are provided for screw speed, back pressure, and injection pressure, and injection speed. Timers and temperatures are all controlled by the Siemens PLC and HMI.

MODEL55 STANDARD SPECIFICATIONS

VERTICAL ORIENTATION	Clamp, Inject
MAX HEAT (°F)	700 °F
MAX MOLD SIZE (W x L x H)	7.00” x 3.00” x 2.125” *
AVAILABLE BARREL SIZES (OZ)	1, 2, or 4 ounces
POWER REQUIREMENT	220 V
OVERALL DIMENSIONS (W x L x H)	20.5” x 27.0” x 45.0” †

AVAILABLE OPTIONS > C-FRAME MOLD HEAT PART EJECTION

MODEL55



Reciprocating screw

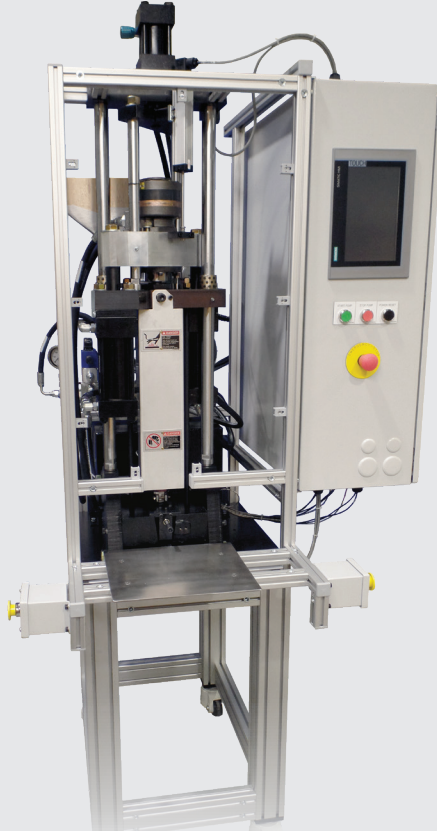


Three heating zones



Manual setpoint adjustment

MODEL55P



Potentiometer added to track screw position for improved accuracy



Upgrades to PLC and HMI



More control given to PLC



Ability to save Recipes

MODEL55E



All-electric servo driven for best accuracy and precision



Low Noise



Self-contained cooling system



Ability to save Recipes

TYPE	Hydraulic
CLAMPING PRESSURE (TONS)	11.75
MAX INJECTION PRESSURE (PSI)	16,065 - 16,593

TYPE	Hydraulic
CLAMPING PRESSURE (TONS)	11.75
MAX INJECTION PRESSURE (PSI)	17,000

TYPE	Electric
CLAMPING PRESSURE (TONS)	25.00
MAX INJECTION PRESSURE (PSI)	17,000

* 10.00” x 3.00” x 4.00” with **Wide Mold** option † Polystyrene

MODEL 70

The **Model70 Minijector** answers a long-standing need for a precision semi-automatic molding machine that is both compact and user friendly. A vertical twin cylinder hydraulic 10 ton clamp with a vertical injection unit permits the use of molds with center sprue injection such as 8" x 8" DME plus 5" x 6"U and #5 x 8"U universal bases plus Master Unit Dies. The compact design (11 square feet of floor space required) allows the placement of the machine near assembly areas to avoid having to "batch mold" the parts. The machine can be integrated into a product assembly line. The machine is offered in an injection capacity of 1 or 2 ounces (1.850 or 3.97 cubic inches). The large capacity of the injection units permits molding either small delicate or fairly large parts

CLAMPING UNIT

The Minijector has a direct hydraulic clamp that is locked when closed through a system of check valves. The machine has a clamp axis potentiometer and a settable mold protect pressure to insure that the machine will not cycle with any obstruction in the mold. The final clamping pressure is adjustable to permit the use of small delicate molds at lower tonnages. A 2.00" stroke hydraulic knockout is supplied. An optional in-out shuttle table brings the mold to the operator for rapid insert loading and part unloading. The machine has a sit-down type stand with an aluminum tabletop.

INJECTION UNIT

The compact screw injection unit feature an efficient direct hydraulic screw drive, a front loading hopper with a swivel permitting dumping material through a dump tube when changing resins. The radiused nozzle can be supplied either with a straight orifice or a shut-off non-drool design. Selectable sprue break, special early sprue break, screw decompression, adjustable injection and screw speeds plus adjustable back pressure offer maximum versatility. The high torque screw drive permits molding any type of filled or un-filled thermoplastic resin.

HYDRAULIC UNIT

The 5 HP motor drives an immersed 6 GPM vane pump for reliable quiet operation. A heat exchanger is provided in the 12 gallon reservoir that includes a return line filter. All components are accessible for ease of maintenance. All pressures are controlled with an electronic proportional pressure valve.

CONTROL UNIT

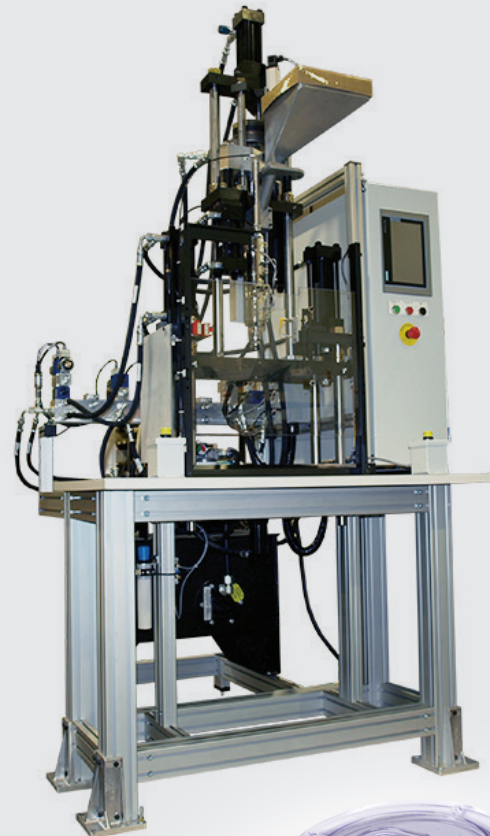
The machine's sequences and parameters are controlled by an extremely quick SIEMENS PLC and LCD "touch screen" operator interface. All positions, temperatures, hydraulic pressures, and times are set in the screen. The control's settings can be stored in the machine's memory for future selection. Up to 36 eight alpha numeric set up "recipes" can be stored. A variety of alarms and safety interlocks are part of the machine software package, and were designed with input from customers. The safety gate has a positive monitored mechanical safety, a monitored hydraulic safety plus dual electrical interlocks. A selectable automatic temperature cut-back will reduce heats if the machine is idle.

TYPE	Hydraulic	
VERTICAL ORIENTATION	Clamp, Inject	
CLAMPING PRESSURE (TONS)	10.00	
MAX HEAT (°F)	700 °F	
STANDARD MOLD SIZE (W x L x H)	8.0" x 8.0" x 6.5"	
POWER REQUIREMENT	220 V	
OPEN DAYLIGHT MAX	10.75"	
PLATEN SIZE (D x W)	8.5" x 24.0"	
MAX CLAMPING PRESSURE	10 tons	
MAX SHOT SIZE (OZ) †	MAX INJECTION PRESSURE (PSI)	OVERALL DIMENSIONS
1	16,000	48.0" x 36.0" x 85.5"
2	16,593	48.0" x 36.0" x 91.3"

AVAILABLE OPTIONS >

C-FRAME

PART EJECTION



REQUEST A MATERIAL SAMPLE

We'll send you an production sample from one of our Minijector machines in the material of your choice! Choose between **polypropylene**, **polycarbonate**, **nylon**, **polystyrene**, or **ABS** and we'll ship the sample to you!

REQUEST A POKER CHIP SAMPLE AT
ELECTRO-MATIC.COM/MINIJECTOR



MINIJECTOR

BY **ELECTRO-MATIC**

MINIATURE PLASTIC MOLDING

DETROIT
MICHIGAN
248-478-1182

GRAND RAPIDS
MICHIGAN
248-478-1182

CLEVELAND
OHIO
248-478-1182

MEMPHIS
TENNESSEE
901-545-3780

JACKSONVILLE
FLORIDA
813-774-5935

MIAMI
FLORIDA
813-774-5935

ORLANDO
FLORIDA
813-774-5935

TAMPA
FLORIDA
813-774-5935



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