

Oleodynamic Injection Molding

As a natural evolution of the **Pneumatic Injection Molding** technology and in response to the growing demand to inject materials in larger quantities and sizes, we have developed the new **Oleodynamic Injection Molding** system. This solution allows you to print objects with a volume of up to 100 cm³. The new plastic material molding system uses an **oleodynamic pump** to generate the necessary injection pressure, ensuring greater precision and process control.

The new project by **Robot Factory Srl** adopts a portal structure to ensure greater robustness, thus responding to new technical needs. This system is able to reach an extrusion force of up to approximately 2 t (**1.900 kg**) and is supplied with a vice that reaches approximately 4 t (**4.300 kg**) in closing.

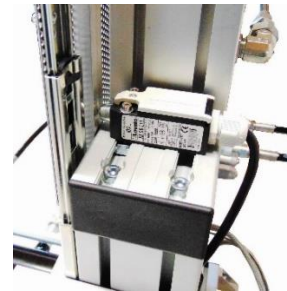
This system works by heating the plastic material in a specially designed chamber. Once the plastic material has reached its melting point, it is injected into a mold, taking the shape of the mold itself. When the plastic material cools, it solidifies and maintains its predefined shape.

Usually the mold is made of **two aluminum half shells** (obviously the molds can also be made of steel, resin, epoxy resin, etc.). As an alternative to metal molds, **molds obtained with 3D printers** can be used with excellent results. In this case it will be necessary to use resins suitable for high temperatures. A lot of documentation on this topic with various examples is available on the web with an easy search.

In addition to offering **lower system costs** than other manufacturing processes, this system offers **ease of use**, wide availability of raw materials **easily available on the market** and the possibility of producing parts with **recycled material**, for an even more productive, economical and more **ecological solution!**

The system is the ideal tool for prototyping, research and development, and production runs.

Much care has been taken to ensure operator safety by ensuring that the system will not start unless the safety grille is lowered, while also ensuring versatile and easy operation. Injection molding is perfect for a variety of uses within industries such as electronics, jewelry, model making, and medical device manufacturing, and other specialized applications that require many small plastic parts.



What's in the scope of delivery

Hydraulic injection molding complete with automatic injection system (time management) and material feeding. This system is capable of reaching an extrusion force of up to approximately **1.900 kg** and is equipped with a vice that reaches approximately **4.300 kg** in closing. The system also comes with detailed documentation and some explanatory videos.

TECHNICAL SPECIFICATIONS

Model	Oleodynamic automatic (<i>time management</i>)
Maximum Temperature	About 350 °C
Processing Temperature	Digital (4-digit) with double display (reached, set)
Injection Chamber Capacity	100 Cm ³ (about 100 g in weight at density 1.0)
Injection Nozzle	Bore 4.0 mm
Injection Force	Of up to 1.900 Kg
Vise force	4.300 Kg
Working Pressure	150 bar
Pump Flow Rate	2.3 lit/min
Tank Capacity	2 liters
Oil Type	H-LP46
Mold Size (without vise)	Length = 200mm, Width = 200 mm, Height = 120
Volts	230 V - 50 Hz – 2.3 A (fuse 3.15 A – 5x20T)
Watts	1,250 W (550 W resistors +700 W pump motor) 5.5 A total
System Weight (without vise)	64,00 Kg approx (all inclusive).
System Dimensions	640mm W x 740mm L (with vise) x 900mm H

A project developed and produced by:

 **Robotfactory**

All Robot Factory production is **MADE IN ITALY**

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