



Manual Desktop Injection Molding Machine-ECO

Description

AHP PLASTIK MAKINA

AHP PLASTIK MAKINA



From Ideas
to Real Parts

Compact. Simple.
Reliable.

MANUAL DESKTOP INJECTION MOLDING MACHINE ECO

A compact and cost-effective solution
for prototyping, education and
small-scale production.



15 cm³
Injection Volume
Ideal for small
and precise parts



350°C
Maximum Temperature
Wide range
of thermoplastics



500 W
Power
Energy-efficient
operation



20 mm
Piston Diameter
Stable and
consistent injection



Precision Nozzle
Clean and reliable injection



Material Hopper
Easy feeding of granules



Ergonomic Lever
Smooth and powerful operation



Digital Temperature Controller
Accurate and easy to use



Prototyping
Turn your ideas
into real parts



Education
Perfect for schools
and training



**Small-Scale
Production**
Reliable results
whenever you need



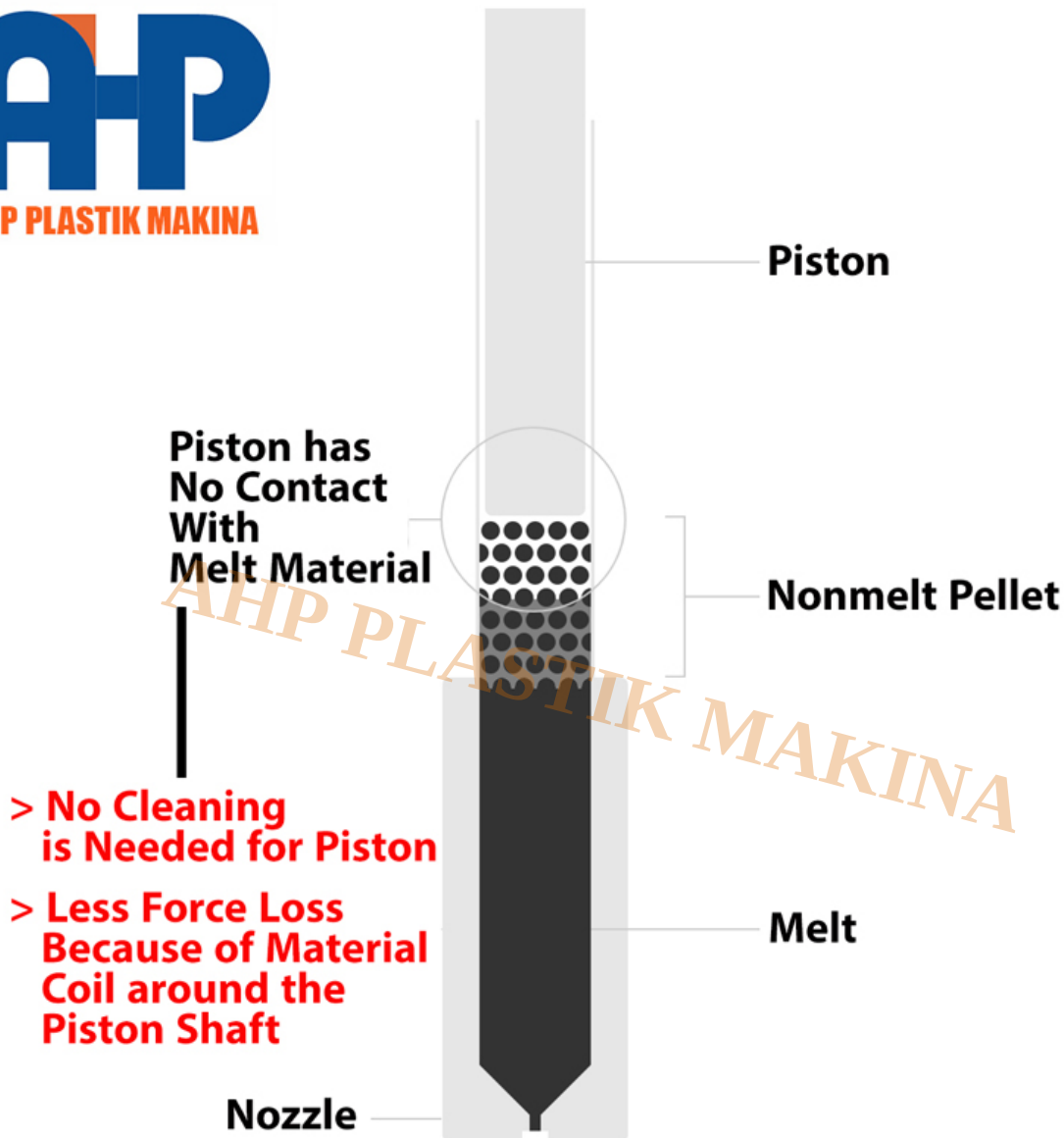
R&D Applications
Test materials
and develop new products

- Nominal injection volume: 15 cm³
- Operating temperature: up to 350 °C
- Power: 500W- 220V
- Easy mold change
- No need of any moving parts for charging the cylinder (compare to other brands)
- Filling the reservoir of material rapidly and easily
- Material reservoir with cooling action on the cylinder
- Robust structure guarantees no movement of parts during injection
- No need to clean the piston every time because it has no touch of molten material
- Pressure application of molten material with no touch of piston head with molten material
- Doubled the force compare to the present models in the market
- Half price compare to the other brands in the market
- Piston diameter: 20mm (Thanks to special design for lever make it possible of doubling the force compare to other brands in the market and make it possible for higher volume of material to be injected)
- PID temperature controller
- Controller box separate from the body to be away from heat and molten material
- No grip is needed for placement of mold under injection
- Can be supplied with aluminum molds as per customer request
- Proper choice even for low flow-high MFI value materials for industrial purposes
- Easy clean of cylinder because it is easy to detach from the machine body
- Highly polished cylinder
- Double act lever mechanism increase the molding force two times compare other brands while keeping the lever length shorter
- You can even injection mold with materials like HDPE with low MFI of about 0.2 g/10 min for laboratory samples
- Safety gloves included
- Molds can be supplied with materials of customer request such as Steel, aluminum, copper etc.
- Compatible with different polymer materials like PEDH, LDPE, PP, PLA, PS, PA, TPU, POM, ABS, PMMA

Parameter	New Version of AHP	Others
Injection volume	We used a 15mm Cylinder and a bigger shot size, even with reduced travel	Using a cylinder of 16mm because it is not possible to inject material in a cylinder with 16mm diameter, due to limitations on force application, and a weak body (Most of them are less than 12 cc)
Force Value (Kg)	670 KG	Most of them are less than 500 Kg. This machine is applicable with hanging a mold with the lever of the machine (Ratio is 5/1). In most of the machines, the force ratio is even around 4. Meaning the force is up to 400 Kg.

Reservoir	It has a reservoir with cooling, no moving parts, no melting of material inside the reservoir, and no moving parts of the head to fill the cylinder	Most of them have no reservoir, in contact with the hot section of some of the material inside the cylinder with no cooling, or a reservoir with moving parts of the head (transfer of the head) to be able to fill the cylinder
Force application	Double-act lever, doubled the force value	Standard lever
Mold grip	No mold grip, thanks to the wedge application	Manual mold grip, opens on injection of MFI materials or higher force application
Injection speed	Lower travel of the piston, bigger diameter guarantees a higher injection speed and complete filling of the mold, even with low-MFI materials	Lower diameter, higher travel of the piston, different models of lever and wedge mechanisms, causes lower injection speed. Lower speed causes solidification of material, especially on low-flow materials, before complete filling of the mold.
Shot size	15 cc	Mostly 10-12 cc
Charging the cylinder	Thanks to the cooled hopper	Moving parts of the head are avoided, saving time, and charging is needed only once of injection.
Lever mechanism	Double-act mechanism, higher force, lower travel, lower lever length	Standard lever, long lever requires more force for the operator
Structure	Robust structure	Aluminum table and body, iron shafts, working
Injection speed	Higher speed because of the bigger diameter, of less travel in the injection section	Less speed, because of higher travel of the piston, direct contact of the piston with the material. Material slipping around the head and shaft causes friction between the molten material and the piston shaft, being applied to the molten material. Prolonged lever length causes lower speed.
MFI range suitable for injection	All ranges of material MFI is possible specially for industrial purposes and industrial laboratory applications.	Absolutely impossible to inject very high MFI materials for industrial purposes. These machines are only suitable for general-purpose home applications.

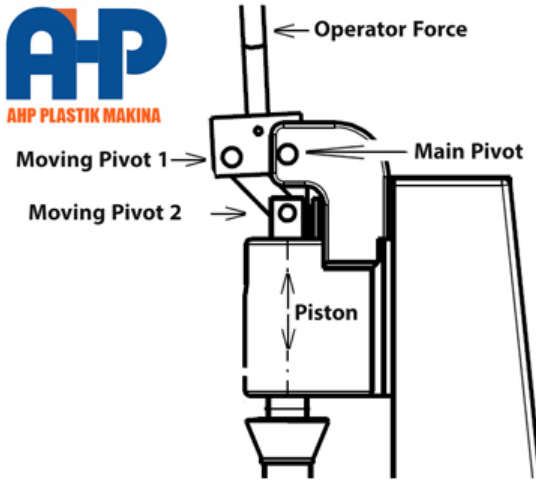
Melt Material Has No Contact With Piston and Rod



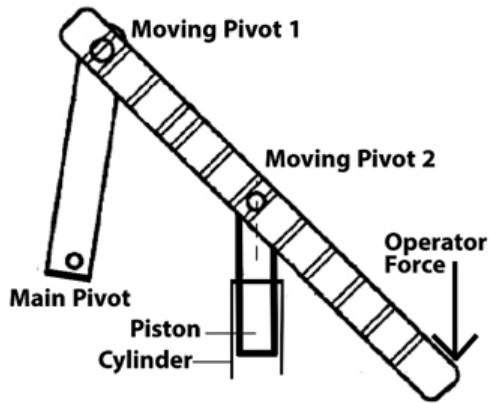
Double Act Lever Mechanism

Positioning of the pivots are in such a way that it increases force as it moves forward, compare to standard lever that you have reduction of force as operator hand moves forward. It guaranties the complete filling of the mold specially with low MFI materials for industrial laboratory purposes of tensile, Izod, Charpy, etc.

At the end of the injection cycles it makes it easy to keep the compaction force for cooling of sample with no formation of air bubbles on samples that is very critical specially for laboratory samples. This is because of special linkage design.



Double Act Lever Mechanism



Standard Lever Mechanism

Cooled Hopper and Material Reservoir

No need to any moving hopper like translation or rotation of head parts to be able to fill the cylinder. Thanks to fixed cooling hopper and reservoir. Having moving parts at the head while taking the piston out of the cylinder for charging it, brings melt material come into contact with the head parts and making them dirty and it is difficult to clean.

Electric Panel

Separate from main body to be away from molten material and heat

Nozzle Valve

Valve for nozzle makes it possible to compact material during melting. Compaction make the melt material free of air. This is crucial parameter specially for laboratory applications for making different test samples.

Price Comparison

Cast structure makes it possible to reduce the price of finished product compare to other brands. We reduced machined parts, time of machining and assembly time. That why you will pay less money for having manual injection molding machine.



AHP PLASTIK MAKINA