

Manual Desktop Injection Molding Machine (Sample Preparation Device for Laboratory Instruments)

AHP PLASTIK MAKINA

Description

- Injection volume: 15 cm3
- Operating temperature: up to 350 Â°C
- Power: 400W- 220V
- Easy mold change
- No need for turning head for charging material
- 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
- Robust cast iron structure guaranties 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
- Production rate: 1 to 2 min/parts depending on the volume to be injected and the type of thermoplastic and modules used
- No force application on the mold
- Doubled the force compare to the present models in the market
- No moving parts for charging the cylinder
- Half price compare to the other brands in the market
- Easy change of direction of handle for left hand people
- 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)
- Reservoir for granule material with cooling action
- PID temperature controller
- Special nozzle design with contact face instead of conical contact reducing stress and material release on contact face with the mold
- Valve on the nozzle make it possible to compress material before injection for air bubble release
- Controller box attached to the body for easy setting
- No movement of cylinder is needed during injection, compare to other brands

- 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
- Replaceable cylinder for different material
- Easy clean of cylinder because it is easy to detach from the machine body
- Cleaning brush coming with machine
- 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 0.18 g/10 min for laboratory samples
- Safety gloves included
- Molds can be supplied with materials of customer request such as Steel, aluminum, copper, dense wood
- Compatible with different polymer materials like PEDH, LDPE, PP, PLA, PS, PA, TPU, POM, ABS, PMMA

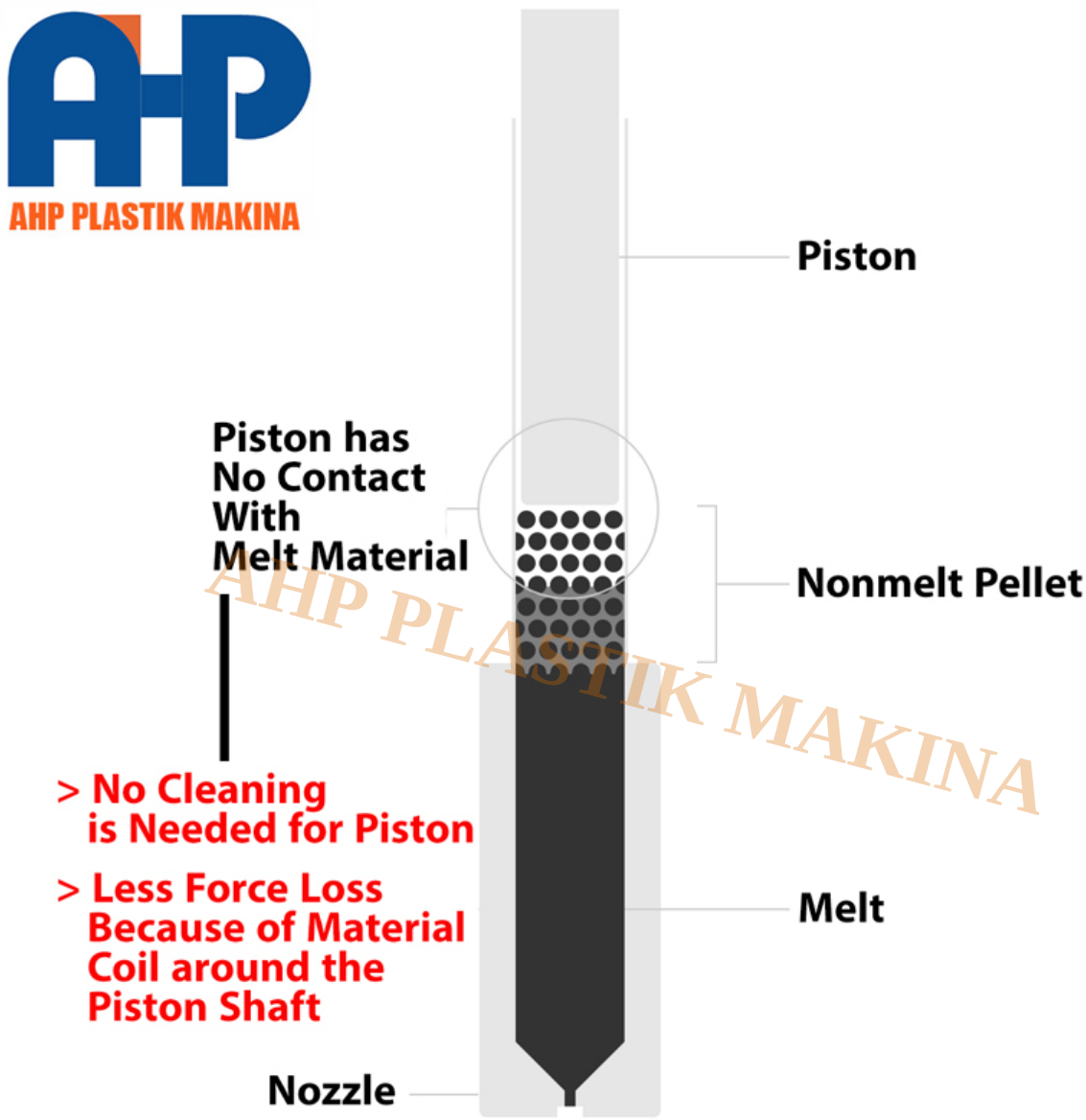
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Parameter	New Version of AHP	Others
Injection volume	We used a 20mm Cylinder and a bigger shot size, even with reduced travel (**It has 15cc of shot volume**)	Using a cylinder of 16mm becau able to inject material in a cylind diameter, due to limitations on f application, and a weak body (**M are less than 12 cc**)
Force Value (Kg)	**700 KG**	Most of them are less than **500 is applicable with hanging a r with the lever of the machine 5/1). In most of the machines, ratio is even around 4. Meanin 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 c of some of the material inside th with no cooling, or a reservoir th moving parts of the head (transl of the head) to be able to fill the
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 inje MFI materials or higher force ap
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 different models of lever and wh mechanisms, causes lower inje Lower speed causes solidificati material, especially on low-flow the mold, before complete filling
Shot size	20 cc	Mostly 10-16 cc

Charging the cylinder	Thanks to the cooled hopper, it makes it possible to multiple-shot with no charging needed in every shot	Moving parts of the head are av of time, and charging is needed of injection.
Compaction of material	It is available because of the nozzle with a valve	Not available and cause sample bubbles
Lever mechanism	Double-act mechanism, higher force, lower travel, lower lever length	Standard lever, long lever requi for the operator
Structure	Cast a robust structure	Aluminum table and body, iron s working
Injection speed	Higher speed because of the bigger diameter, of less travel in the injection section	Less speed, because of higher piston, direct contact of the pist material. Material slipping arour head and shaft causes friction b molten material and the piston s being applied to the molten mat Prolonged lever length causes
MFI range suitable for injection	All ranges of material MFI is possible specially for industrial purposes and industrial laboratory applications.	Absolutely impossible to inject v materials for industrial purposes are only suitable for general-pur home applications.

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Melt Material Has No Contact With Piston and Rod

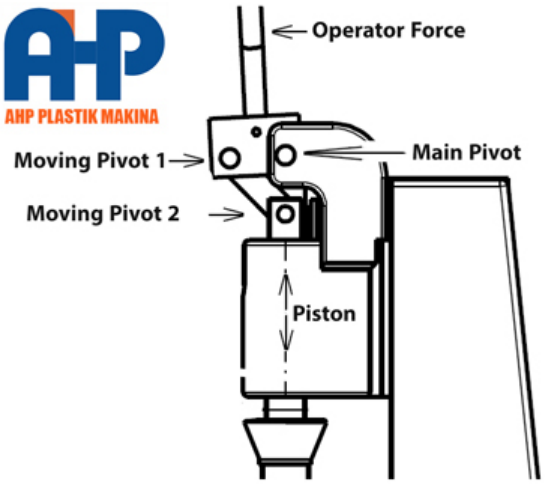


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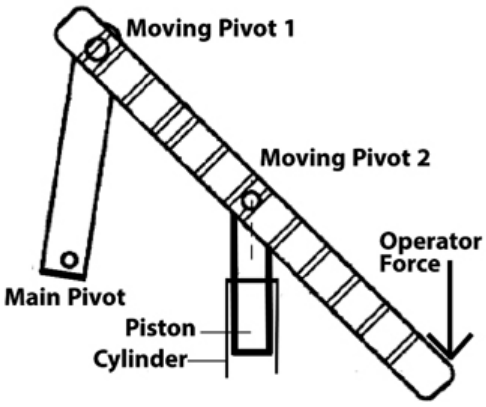
Double Act Lever Mechanism

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, â€¦

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



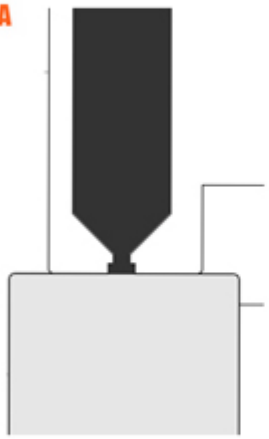
Standard Lever Mechanism

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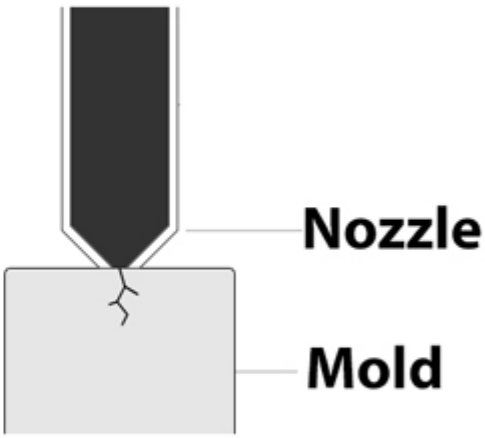
Contact of Nozzle to the Mold

Surface contact makes it possible to have fix cylinder with no need for movement during injection. Less damage to the mold and much more seal during injection. Sealing makes it possible to have less material mess on the mold.

It also makes it possible to have insertion of the mold from the side.



Surface Contact



Point Contact

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.

Bent Double Side Lever Handle

Bent lever makes it possible to have full view of the injection zone. Offset of force application compare to operator standing Infront of the machine make it easy to being the handle down for having maximum hand power during injection. Also it is proper for left hand operators to change the direction of the handle.

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Wedged Mold

Having instant mold makes it possible to have surface contact of nozzle to the mold. Also we have possibility of placement of the mold under the nozzle from the side. Thanks to wedge application with optimum angle of wedge to have maximum contact between mold surface and nozzle.

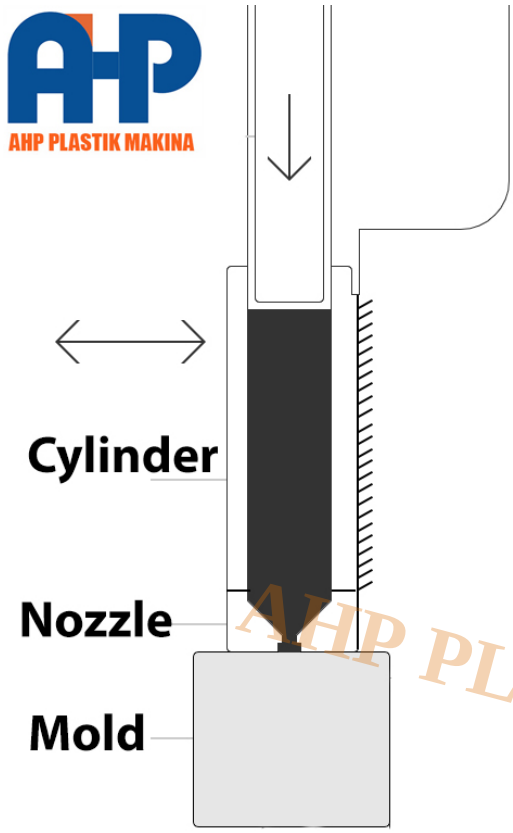
Electric Panel

Electric panel attached to the main structure, makes it more compact and easy for the operator to works with the panel.

Detachable Cylinder

Easy detachment of the cylinder from the front side (Compare to other brands that you donâ€™t have access to cylinder even for cleaning, you can not detach the cylinder unless you disassemble whole machine body).

New design at AHP, makes it possible to inject different materials with different colors and flow characteristics. Easy to clean the cylinder. Easy to have multiple cylinders with one machine for multiple materials.



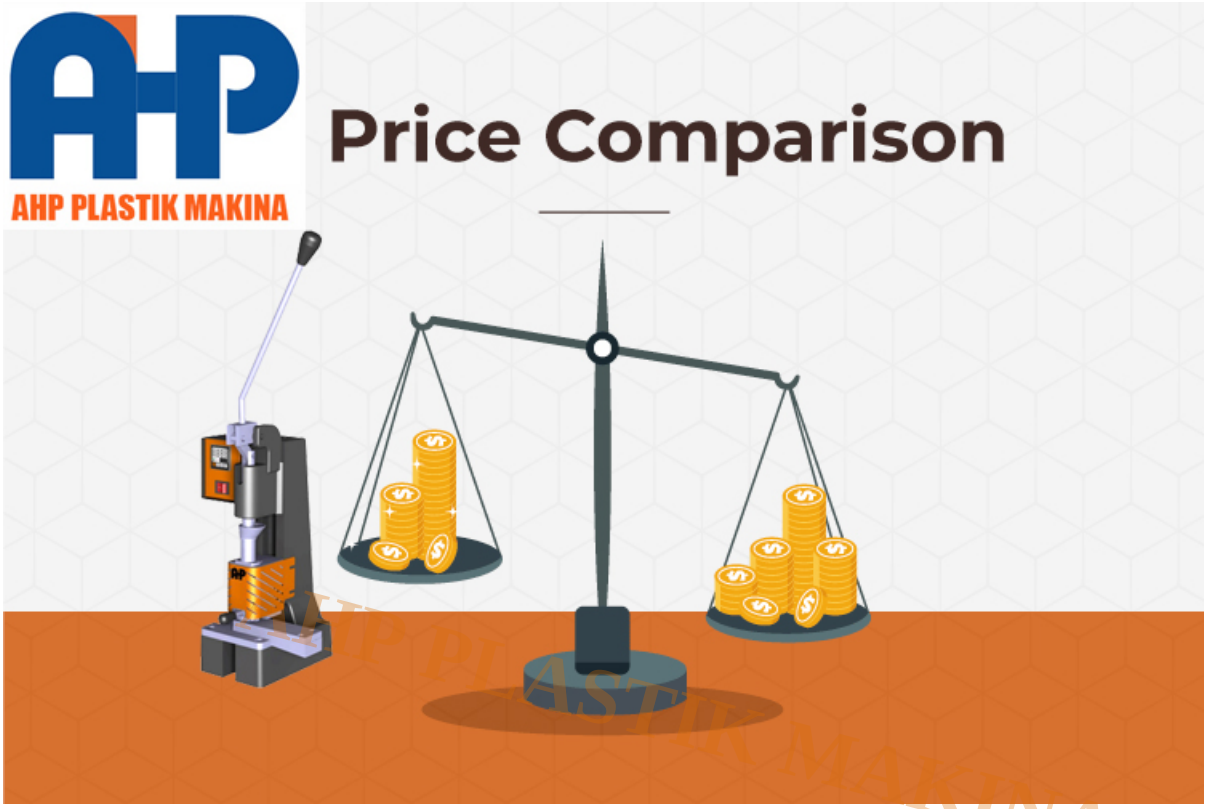
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Nozzle Valve

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.



Structure is Cast Iron

Check the dimensions of the cast iron structure to see the difference between our design and present models in the market. Beside robust structure, having no moving parts of the head during charging and injection makes it more easy, clean and comfortable for the operator. The stiffness of the cast structure is not comparable to the present models with the aluminum profiles, sheet metal works for the body and weak structures for the main column of the machine like using a metal pipes and rods.



New Economic Model Manual Injection Molding Machine-AHP PLASTIK MAKINA

Manual Desktop Injection Molding Machine-ECO

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