

PLAGATE NOZZLES

The superior runnerless molding system



FISA
CORPORATION

FISA Corporation

The American company, based in Shelbyville, Tennessee, is the marketing, distribution and service arm of a highly respected Japanese manufacturer of precision nozzles for the injection molding industry. Its PLAGATE System is recognized as superior to any competitive product currently on the market in the U.S., and has been popular in other parts of the world for many years.

The PLAGATE System is simple and compact in design, without pneumatic or hydraulic cylinders, requires no timing device for opening and closing the gate, has easy gate balance control and a perfect gate seal, which increases product quality and reduces waste. The nozzles are easy to install or remove, require minimum maintenance and are cost effective through reduction in wasted material, minimized cycle time and reduction of post-injection finishing processes.

The company was established in 1959, and during its early years developed and produced a high-temperature camera for X-ray analysis, a sphere-boring machine, and a series of electrostatic eliminators. It developed the PLAGATE System in 1974 and was subsequently awarded the Ichimura Prize for Originality in Engineering. In 1994, FISA won an award from the Tokyo Chamber of Commerce and Industry for environmental preservation.

The company now operates 6 manufacturing facilities and 7 sales and service offices throughout Japan, and markets its products in over 15 countries worldwide. Opening of the U.S. company in 1996 was its first venture in North America.



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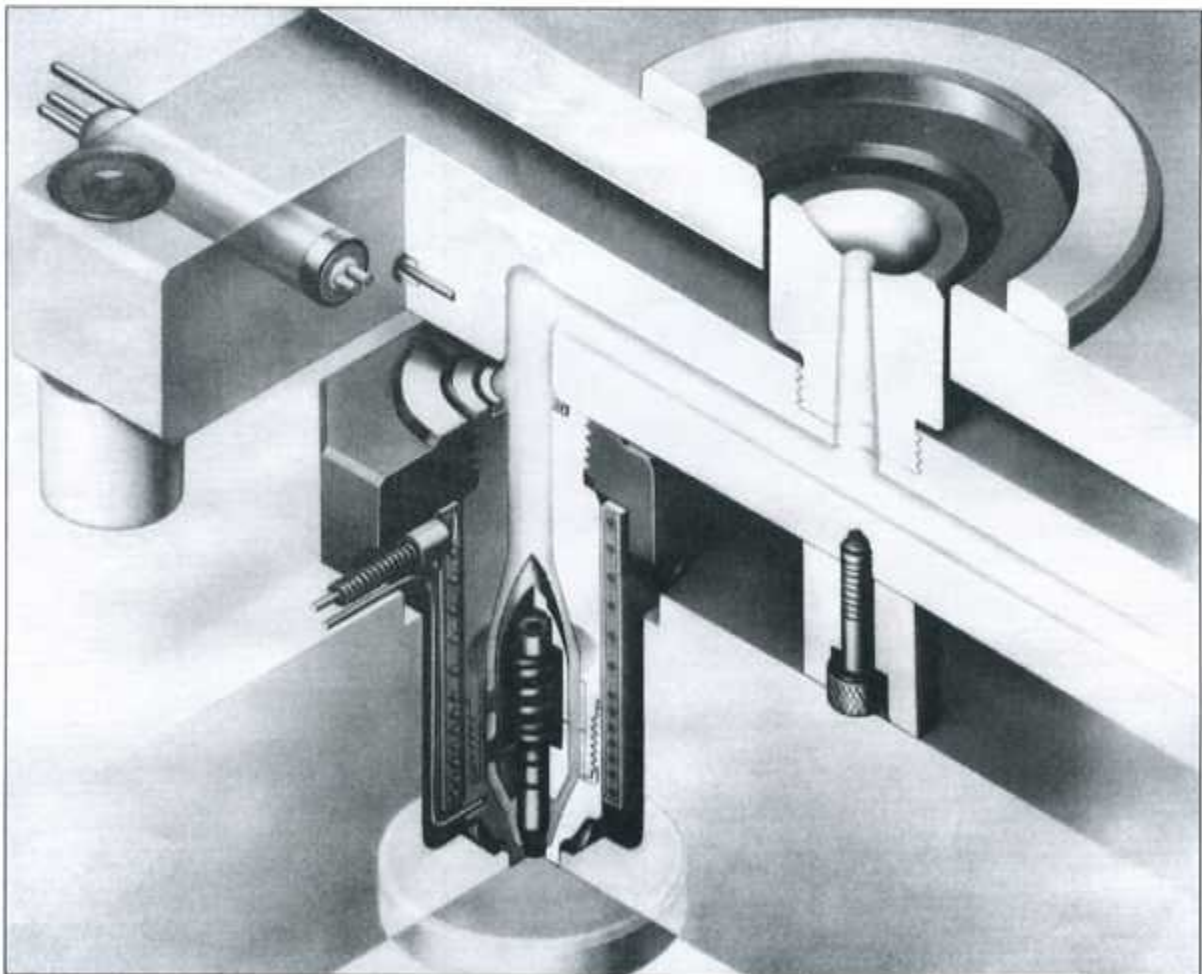
FISA's original valve-gate system, a practical design to meet the needs of the customer.

Plagate is FISA's original runnerless molding system, equipped with a special valve-mechanism.

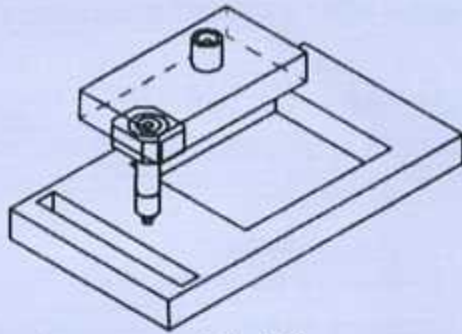
The NH type Plagate runnerless molding nozzle is mounted to the mold, and used in the automatic injection molding of thermoplastics. 100% of material is utilized, leaving no sprues or runners.

For the Plagate nozzle, no external driving force is needed to open or close the gate. The gate is opened and closed automatically by the injection-pressure operated valve.

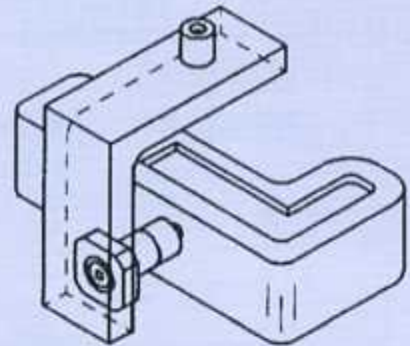
The NR type Plagate barrel nozzle is of the same patented design as the NH type.
(U.S. Patent #4,427,361)



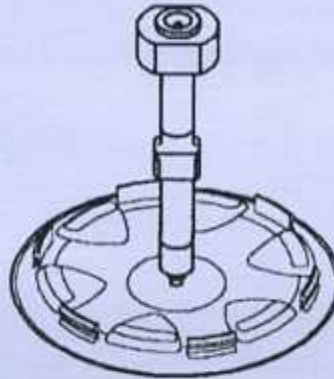
Examples of Plagate Molded Products



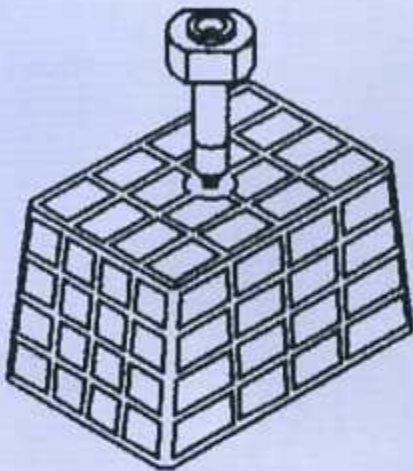
PA 170g



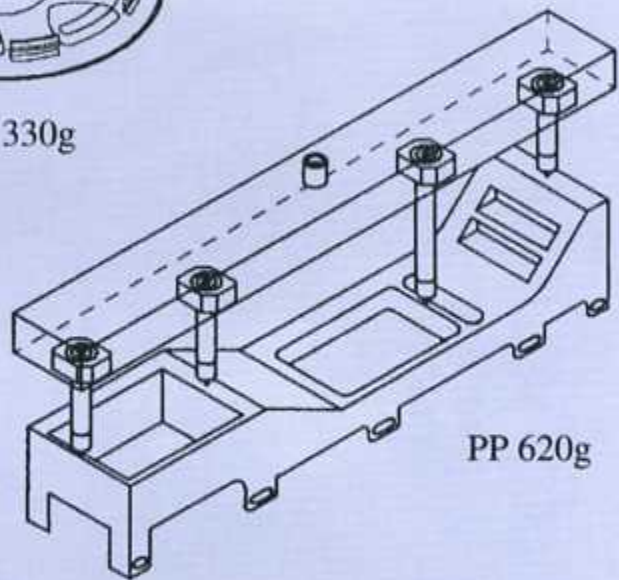
ABS 410g



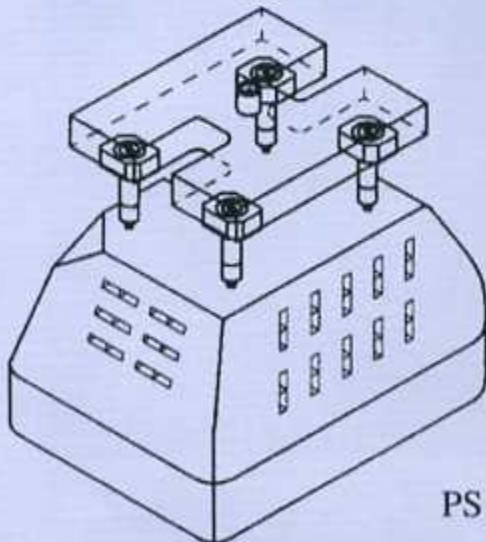
PPO 330g



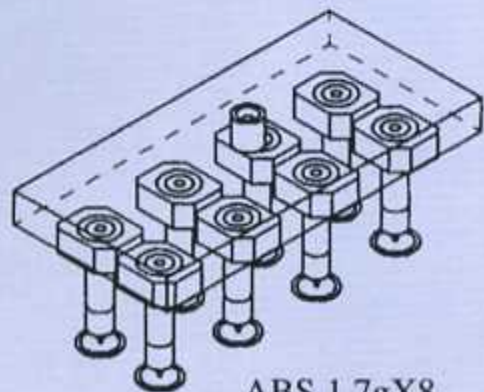
PP 670g



PP 620g

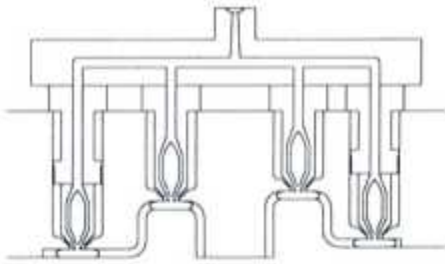


PS 3.7kg



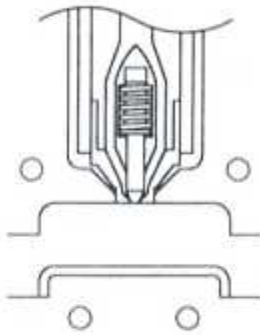
ABS 1.7gX8

Versatility and ease of use with the Plagate Nozzle



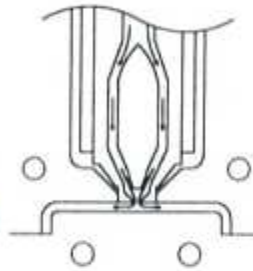
Well-balanced gate for multicavity production

Multicavity gates open only after the pressure in all nozzles is equal, thus all nozzles open and close simultaneously. This also prevents the nozzles from injecting uneven amounts of resin, insuring continuity in production.



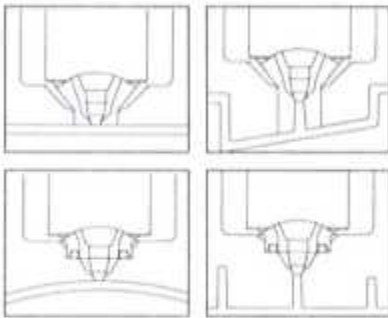
Perfect Gate-Seal

The perfect sealing of the gate, through the use of a powerful spring and piston, eliminates problems normally encountered with stringing or drooling of resin, as well as unwanted stubs or projections.



No Resin Build-up Points

All flow channels in the Plagate nozzle are streamlined in design, insuring complete melting and usage of resin without overheating, scorching, or burning. Color changes do not require disassembly.

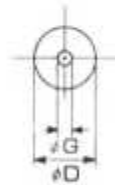


Quality, Accuracy, and Reliability

The Plagate nozzle is manufactured precisely and uniformly to the highest manufacturing standards, to withstand extremes of heat and high pressure.



If a non-catalog nozzle length is required, an adaptor or special body is required.



Top Type Gate Marks

With the top-type nozzle, the cap ØD , and ØG leave a mark on the product, seen as a double-circle.



Topless Type Gate Marks

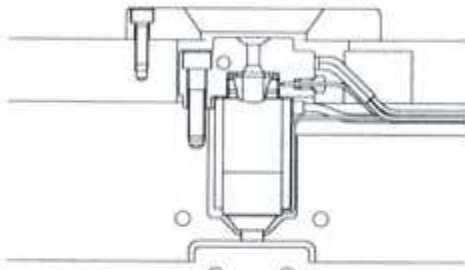
With the topless-type nozzle, the circle mark of the gate ØG is left on the product.

Maintenance and repairs, when needed, are quickly and easily made with common shop tools. All Plagate parts may be replaced with interchangeable components from parts stocks in Shelbyville, Tennessee.

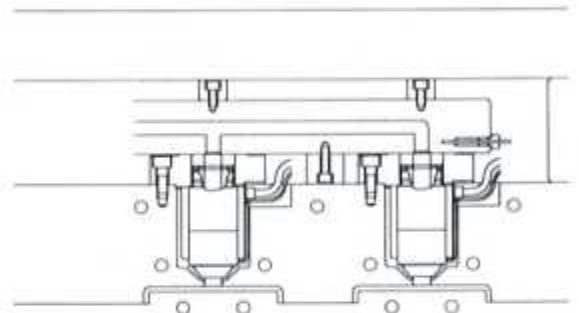
Plagate Molded Products



Through the use of the proper flange, the Plagate Nozzle can be easily mounted to the mold.



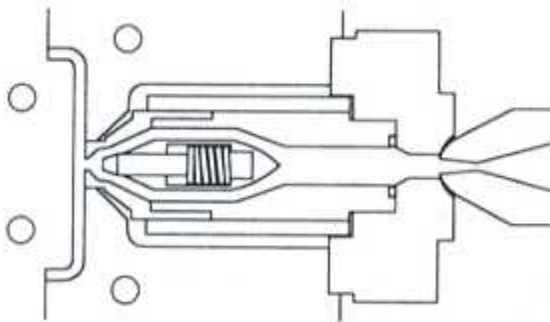
Single gate and mold



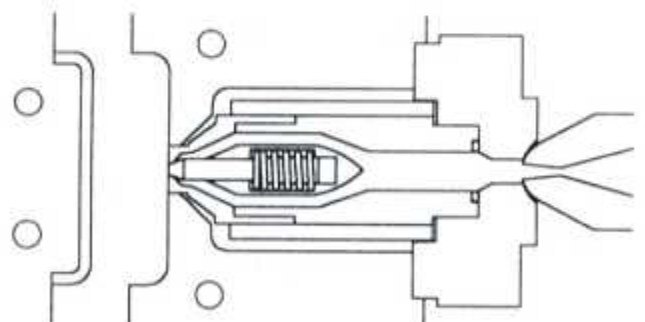
Multi-gate and mold

Manifolds are custom made

The gate is opened and closed by the pressure of the resin in the nozzle.



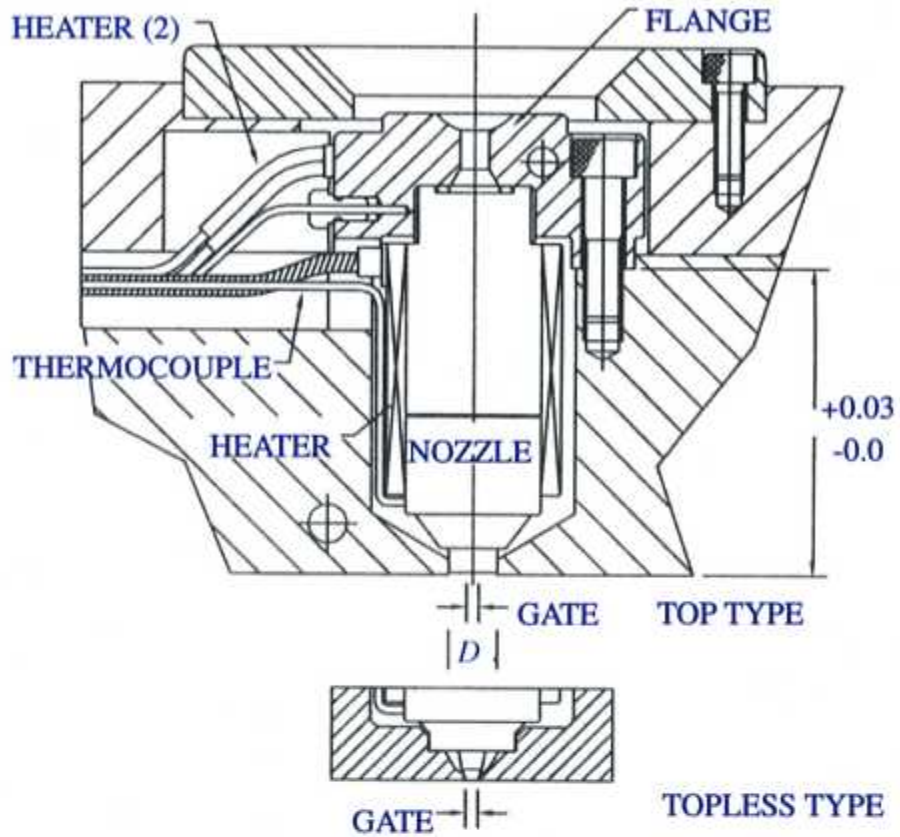
When high resin pressure is in the nozzle, the piston slides back, opening the gate.



When there is low resin pressure in the nozzle, the spring pressure on the piston closes the gate.

Typical Installations

NH & AH MONO FLANGE INSTALLATION



NH & AH MULTI FLANGE INSTALLATION

