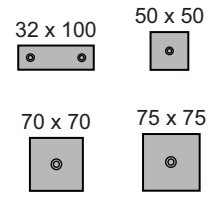


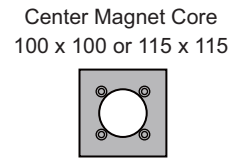
PASCAL MAG CLAMP is powerful permanent magnet which magnetizes with mold so that the mold does NOT fall during running production if no power or a disconnected cable.  
 Moreover, Pascal intensifies more safety issues in order to perform the below mold fall protection countermeasures.

### ● Powerful magnetized mold by optimized magnet core layout!

1 4 types of magnet cores with different sizes and form are used according to the platen size of injection molding machines ranged from 20 - 3000 tonf in order to have the optimized magnet core layout. The magnet cores concentrated in the center magnetize powerfully with the mold, and protect the mold fall by lack of clamping force.



2 Moreover, some models are added a big size of magnetic core in the center of the movable platen. So that the smaller sizes of mold are also magnetized reliably. (PATENT NO.4428692)



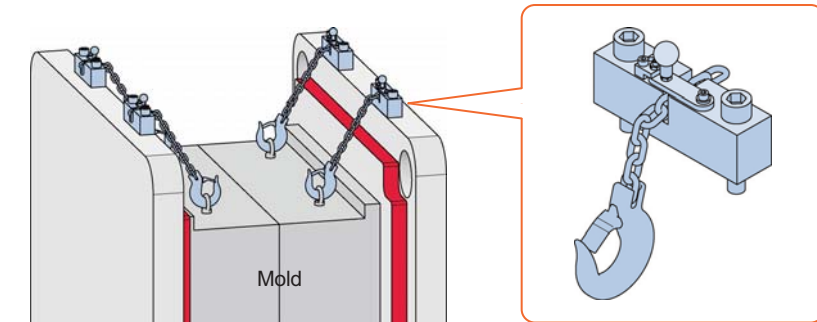
Magnet core layout is dependent on the platen size of injection molding machines. See "Data Sheet" in details.



Source NO. PA-110J

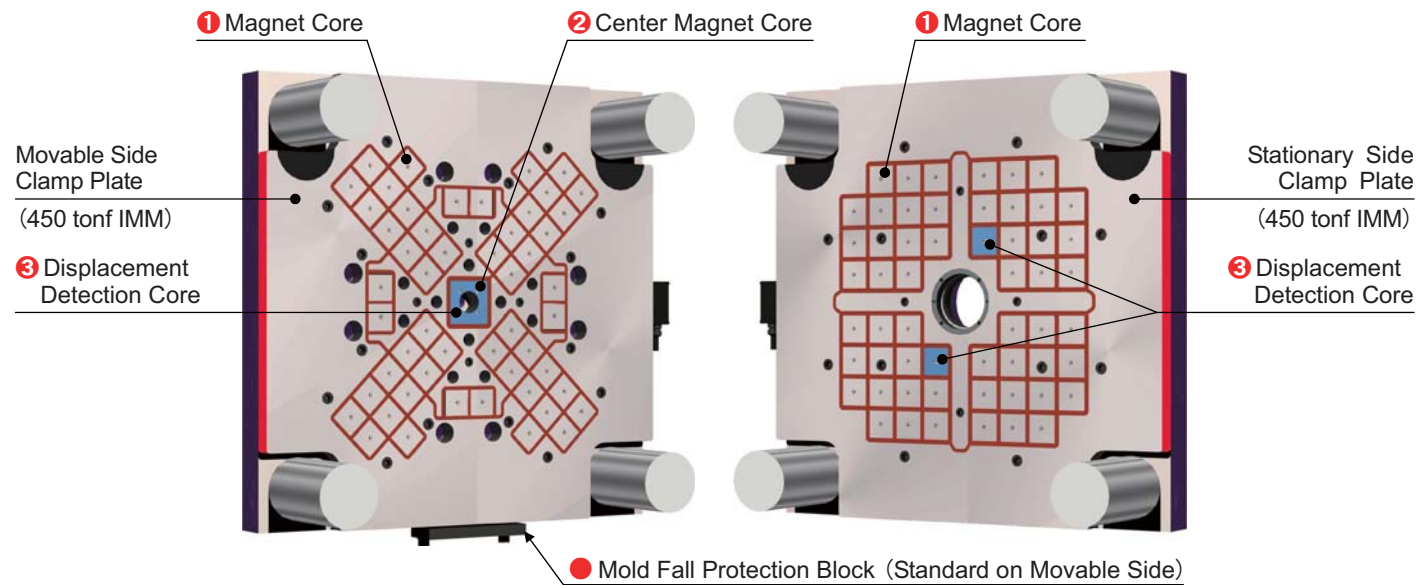
### ● Mold Fall Protection Hook

It is provided Mold Fall Protection Hook (Option) which is easily adjustable the chain length. (PATENT NO.3136001)  
 See Drawing No.MGAC0100 in details.



### ● Calculation for Magnetized Force with Mold

Magnetized force of PASCAL MAG CLAMP is calculated by touched surface (how many magnetic cores touched) between the clamp plate and adaptor plate. In case of bolt holes or scratches on the mold plate, the magnetic force is declined because of decreasing the touched surface in two plates. The mold condition like the material (other than SS400) and temperature (Over 80°C) of mold plates makes the magnetized force decline. See the Data Sheet (Source No. PA-110J) for the calculation of the actual clamping force.



### ● Check Points for Mold Fall Protection

Ejector miss-set-up makes a big cause to fall the mold. The caution plate on right is provided for IMM operator. The plate should be near the operator's panel, and check the position of the ejector pin, ejector stroke, and displacement of the pin hole.

**Pascal mag clamp**  
Check the following points to avoid the mold to fall.

- If ejector pin is incorrectly positioned, the mold may be pushed to fall.
- When confirming, lift the mold and move the ejector pin manually.

① Wrong Position

IS the position of ejector pin CORRECT?

Recommended Ejector Setting Value

② Over-stroke

ISNT the length of ejector pin TOO LONG?

Ejector force should be less than 1/3 against magnetic clamping force on movable platen side.

③ Displacement of Pin Hole

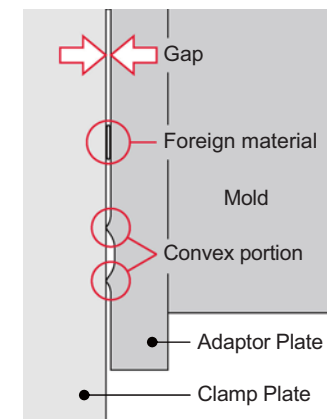
DOES the mold mount PROPERLY?

Ejector speed should be less than 50 mm/sec.

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Please also check the following points to improve the molding parts together with the mold fall protection :

- DO NOT use the mold with warpage or distortion, which causes the decline of magnetized force because of gap between the clamp plate and adaptor plate.
- USE the adaptor plate with over 25 mm thickness. The magnetized flux makes 20 mm into the adaptor plate. In case of less 25 mm thickness, the magnetized force is declined.
- DO keep cleaning up the both surfaces of clamp plate and adaptor plate. Water or oil on the both surfaces does not cause directly for decline of the clamping force, but easily attach dust or foreign materials, that make gap between the both surfaces.
- In case of convex portions on the both surfaces, DO remove them by grinding in order to make a flat surface.



### ● Mold displacement detection system

When the mold moves, it is detected by the signal from inductive current which is generated by the electromagnetic coil of the magnetic core. Then the machine will stop.

This system can detect the mold falling (displacing or lifting) without fault rather than the proximity switch.

