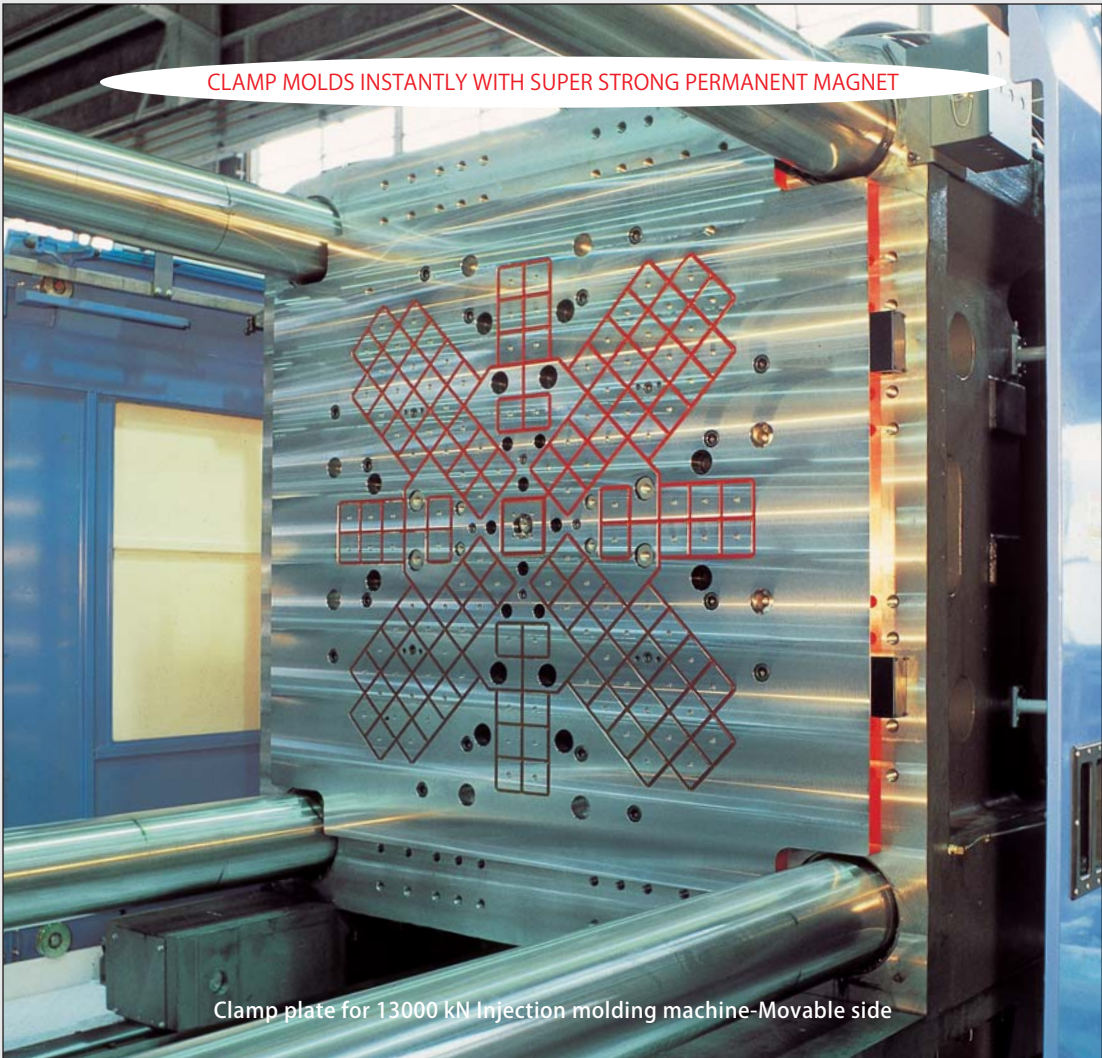


Pascal mag clamp

Magnetic mold clamp model MGA



No energization required during clamped condition.



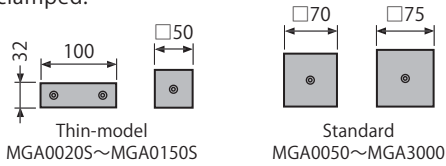
Pascal mag clamp

CLAMP MOLDS INSTANTLY WITH SUPER STRONG PERMANENT MAGNET

PASCAL MAG Clamp is a mold clamp system for injection molding machines that clamps the mold with powerful magnet force.

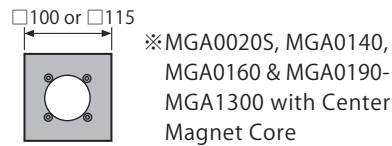
Optimized Magnet Core Layout

The following magnet cores (four different sizes) are utilized up to the platen size in order to have the optimized magnet core layout. Any size of mold can be powerfully clamped.



Center Magnet Core Patented

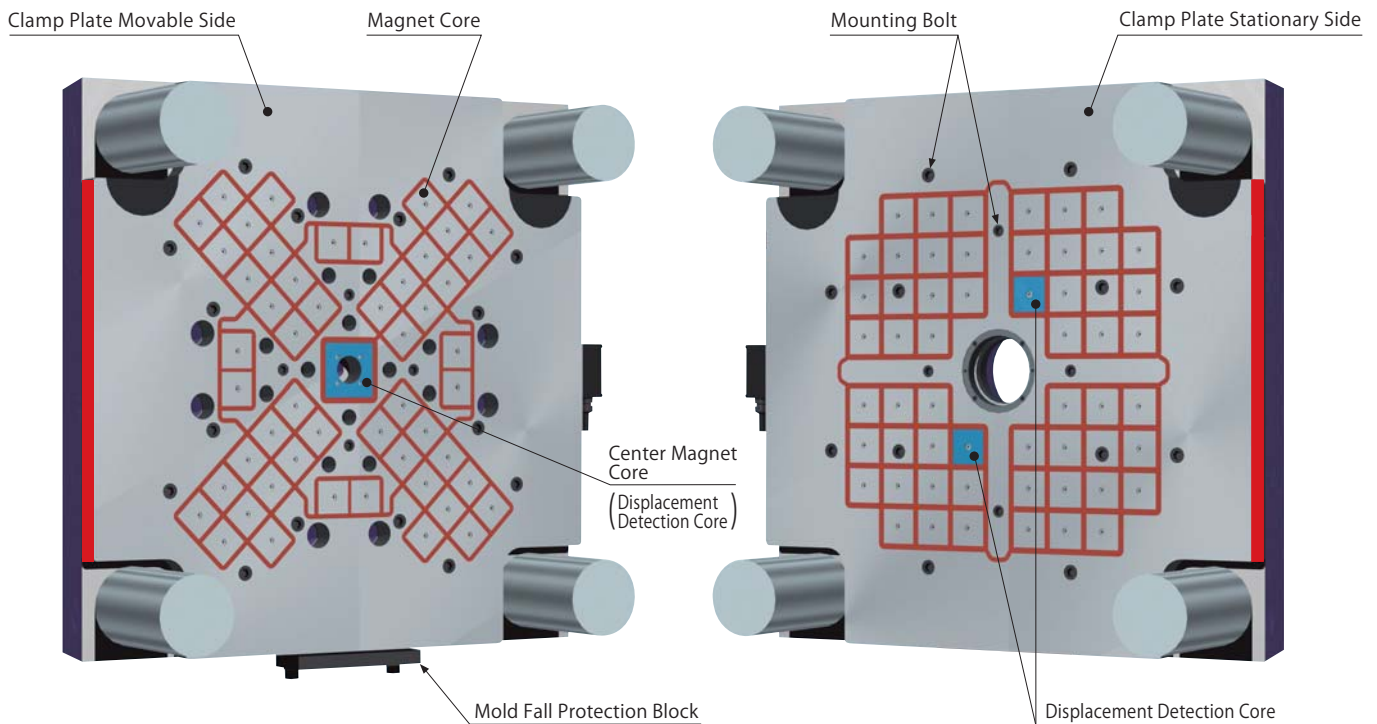
Large magnet core is adopted at the ejector pin hole at the center of movable platen so that the small mold can be securely clamped.



Against Deflection

Mounting bolts are positioned in good balance on the entire surface of machine platens, to prevent distortion and help stabilize clamping capability.

※Additional tap holes need to be machined near the center of platens.

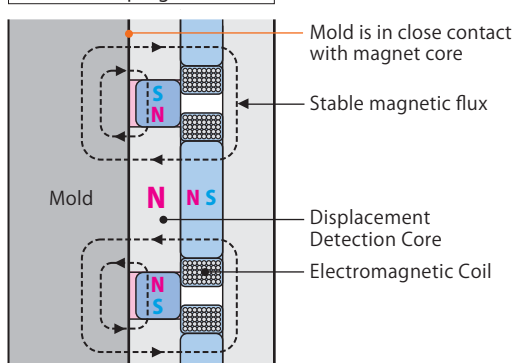


Displacement Detection System (Standard)

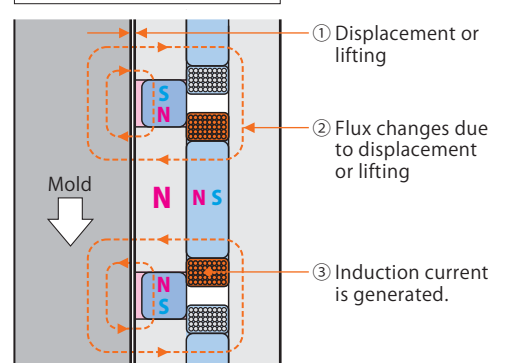
Patent P.

Displacement or lifting of the mold can be detected by the electromagnetic coils built into the magnet core near the center of the clamp plates. When the mold moves, these electromagnetic coils detect an induction current signal.

GOOD clamping condition



When the mold moves



Specifications

For dimension, specifications, etc. of clamp plate, refer to Data Sheet (NO. PA-110E).

Clamp Plate Model	Mold Clamp Force of Injection Molding Machine kN	Magnetic Clamping Force ※1		Clamp Plate Thickness mm	Clamp Plate Model	Mold Clamp Force of Injection Molding Machine kN	Magnetic Clamping Force ※1		Clamp Plate Thickness mm
		Movable Side kN	Stationary Side kN				Movable Side kN	Stationary Side kN	
MGA0020S	200	22	22	34 (Thin-model) ※2	MGA0180	1700 ~ 1800	176	176	50 (Standard)
MGA0030S	300 ~ 350	34	29		MGA0190	1700 ~ 1800	192	176	
MGA0050S	400 ~ 550	41	39		MGA0230	2200 ~ 2300	221	206	
MGA0055S	400 ~ 550	41	39		MGA0250	2500 ~ 2600	251	235	
MGA0060S	600	41	39		MGA0280	2800 ~ 3000	251	265	
MGA0080S	750 ~ 800	55	69		MGA0350	3500 ~ 3600	310	314	
MGA0100S	1000 ~ 1100	78	78		MGA0450	4500	398	408	
MGA0130S	1200 ~ 1300	110	103		MGA0550	5500	427	439	
MGA0150S	1400 ~ 1500	123	118		MGA0650	6500	545	533	
MGA0050	500 ~ 600	59	59		MGA0850	8500	633	690	
MGA0080	750 ~ 850	88	88	MGA1050	10000 ~ 10500	809	815		
MGA0100	1000 ~ 1200	118	88	MGA1300	13000	927	1004		
MGA0130	1300	118	118	MGA1600	14000 ~ 16000	1176	1160		
MGA0140	1300	133	118	MGA2000	18000 ~ 20000	1264	1317		
MGA0150	1400 ~ 1600	147	147	MGA2500	22000 ~ 25000	1558	1505		
MGA0160	1400 ~ 1600	192	147	MGA3000	28000 ~ 30000	1793	1788		

※1: It is total magnetic clamping force per plate which all magnet cores are contacted to the adaptor plate.

※2: Due to the plate, this type is suitable for the small class injection molding machines (200~1500 kN mold clamp force) with small daylight.

Specifications - Standard		Standard Accessories	Options	Symbol
Magnetic Clamping Force per Magnet Core	Thin-model 32 x 100 mm : 3.43 kN □ 50 mm : 2.45 kN □ 100 mm : 7.84 kN Standard □ 70 mm : 7.35 kN □ 75 mm : 7.84 kN □ 115 mm : 15.68 kN	Locate Ring (stationary side only)	Voltage Change (50/60 Hz) AC380 V ±5% AC440 V ±5% AC480 V ±5%	3 4 5
Working Temperature Range	0 ~ 80°C (on clamp plate surface)	Mold Fall Protection Block (movable side only)	Heat Proof Type 0 ~ 150°C 0 ~ 180°C	H U
Magnetic Flux Height	20 mm (when adapter plate's material is SS400)	Operation Panel model ESM ※2	Rust Proof Arrangement	N
Primary Power Source	AC200 V / AC220 V ±5% (50 / 60 Hz)	Control Box model ESM ※2	Mold Size Detection System	※3
Applicable Machine	Horizontal type of injection molding machine	Displacement Detection System (movable & stationary side)	Proximity Switch For Mold Detection (distance 0.2 mm)	※3
Plate Mounting	Fixed with bolts at the tap holes of machine platens ※1	Control Cables	Additional Magnet Core	※3
		Interlock ※2	Specific Layout	※3
			Mold Fall Protection Hook (movable & stationary side)	※3
			Mold Horizontal Loading	※3

※1 : Additional tap holes need to be machined near the center of platens.

※2 : Refer to next page.

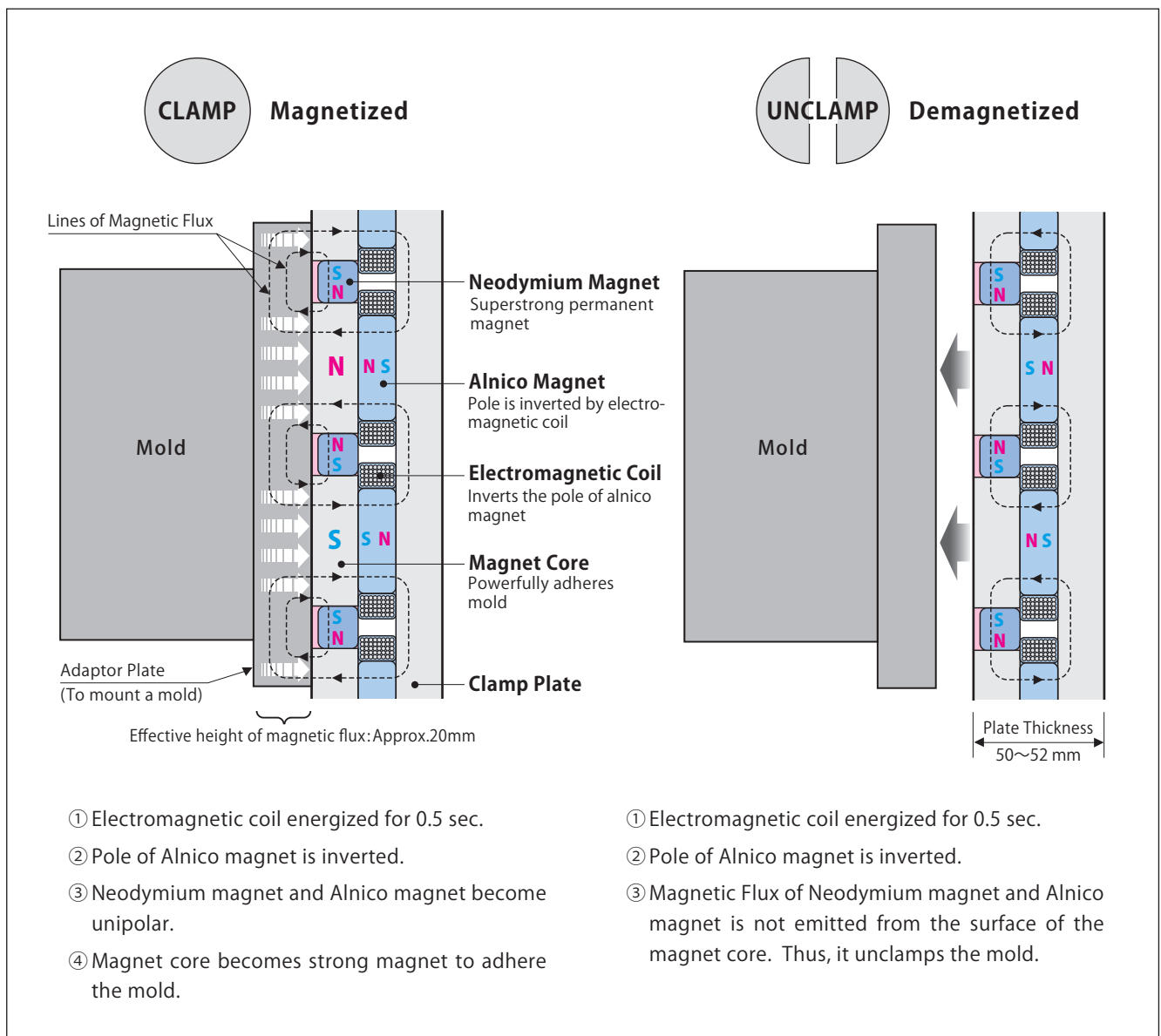
※3 : Ask us for details.

Model Designation		MGA	Size ※1	①	②	③	④	⑤	⑥	⑦	※1 : Refer to specification table	
Size	① Plate Thickness	② Diameter of Locate Ring	③ Primary Power Source	④ Language on Operation Panel	⑤ Working Temperature Range	⑥ Rust Proof Arrangement	⑦ Special Specification					
MGA	0020 } 3000	Nil : Standard (50 / 52 mm) S : Thin-model (34 mm)	1 : 40 mm 2 : 60 mm 3 : 100 mm 4 : 120 mm 5 : 150 mm 6 : 180 mm 7 : 250 mm 9 : Special	2 : 200 V / 220 V 3 : 380 V 4 : 440 V 5 : 480 V	J : Japanese E : English	Nil : 0 ~ 80°C H : 0 ~ 150°C U : 0 ~ 180°C	Nil : Not included N : included	Nil : Not included Drawing No. : included				

Features

- Mold can be adhered and detached instantly (0.5~4.5 seconds).
- Energization required only during CLAMP ON and OFF. No energization required during clamped condition. No electricity consumed, thus no heat generation.
- Once the mold is clamped, demagnetization (unclamping) will not occur even in the event of a power failure or cable breakage.
- Attraction force of permanent magnet will not decrease through aging. Fixing force is maintained for long-term use.
- Fixing force is evenly applied on all faces of the magnet core. No gaps are created between the machine's platen surface and center part of the mold. So precision molding is assured.
- No need to unify the mold sizes. (Note that fixing force is dependent on the size of adaptor plate.)
- The effective height of magnetic flux is about 20 mm above clamp plate surface. Magnetic field does not cause significant effect inside the mold.
- No magnetic field is generated from the sides or back of the clamp plate. So the injection nozzle and controller are not affected.
- Clamp plate has no moving parts, thus assuring high durability. Plate interior is maintenance-free.

Structure and functions



Pascal

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CERTIFICATE OF APPROVAL ISO9001