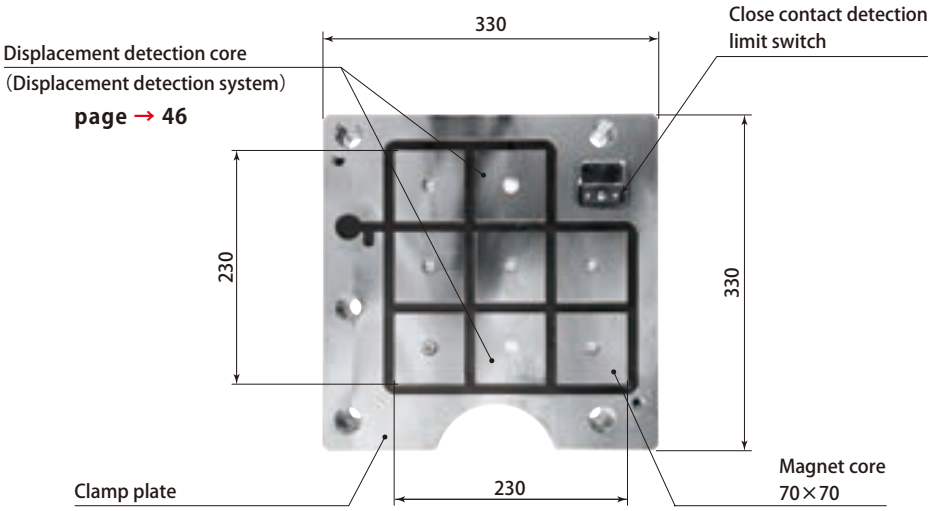
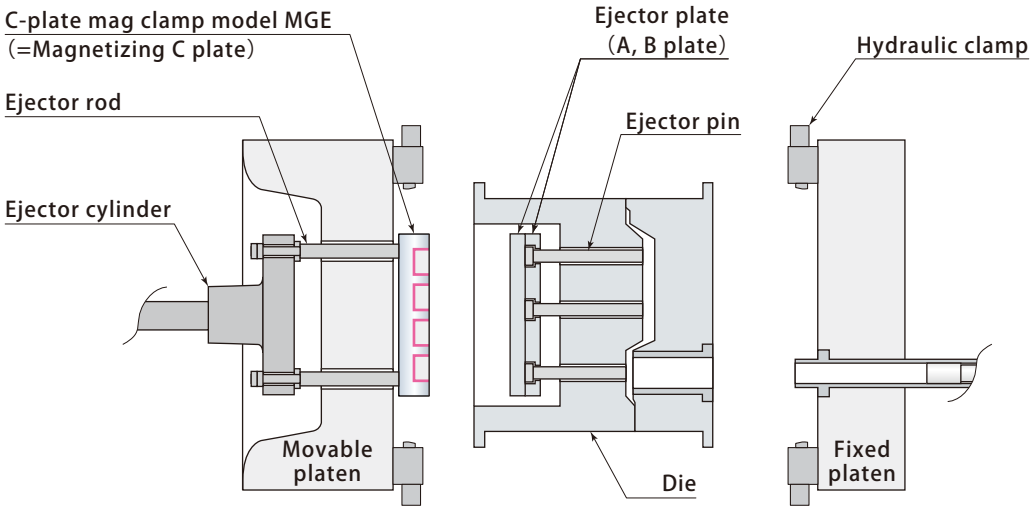
Dramatic shortening of set up time for ejector plate !!

It can instantly detach or attach the die ejector plate by magnetizing the machine ejector plate. Mounting and dismounting a ejector cylinder, rod and plate is not required and it shortens the set up time considerably.

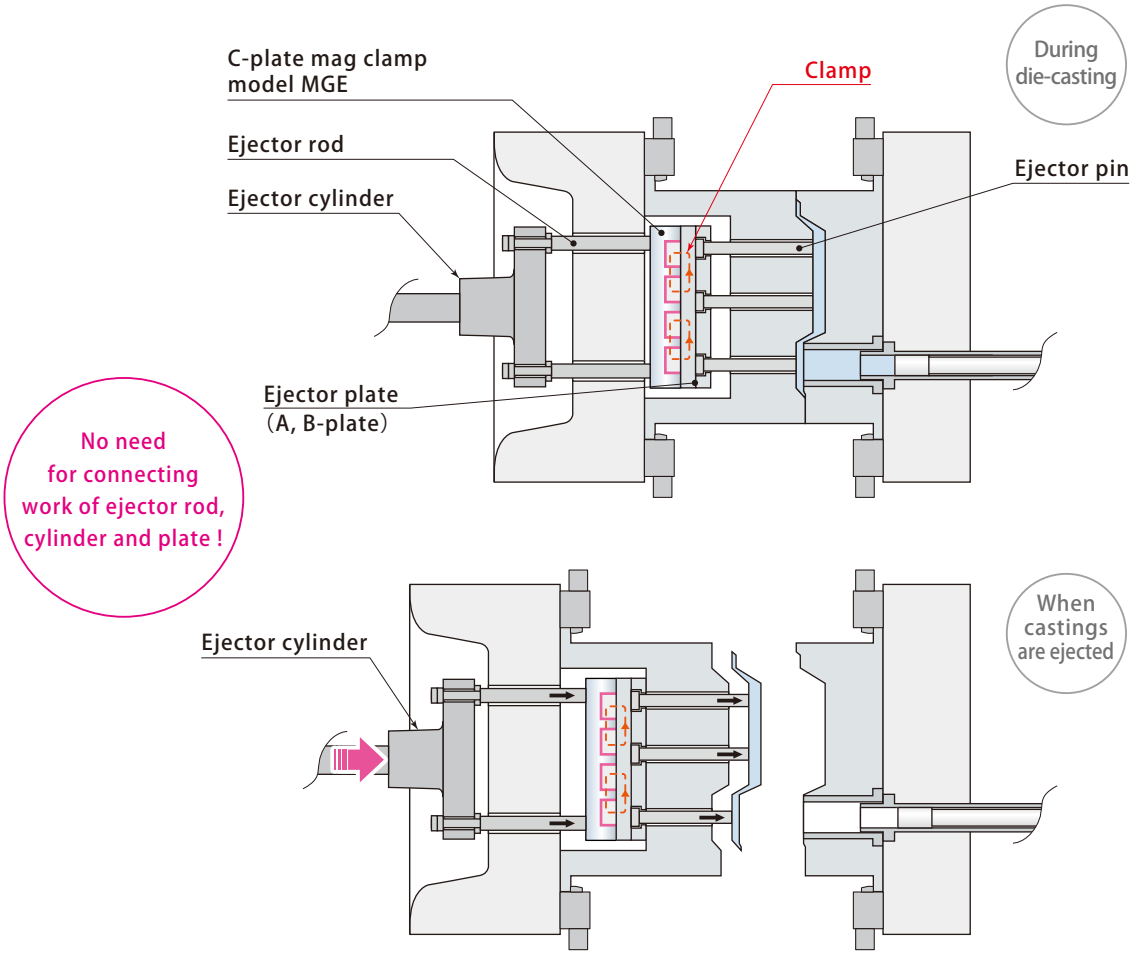
3,500kN (350ton) Die-casting machine C-plate mag clamp & Hydraulic clamp TYB



Max. clamping force：59kN

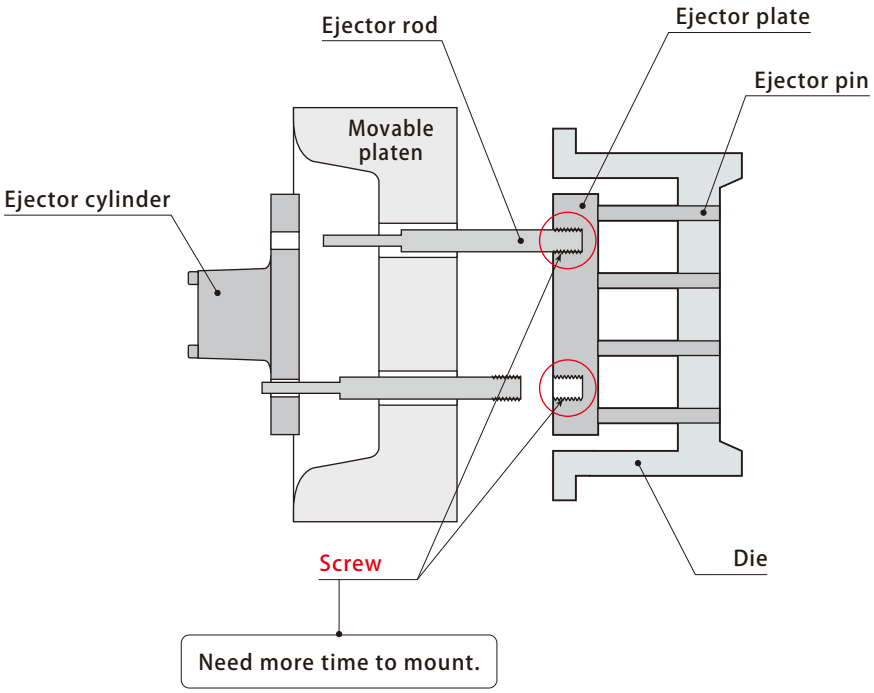


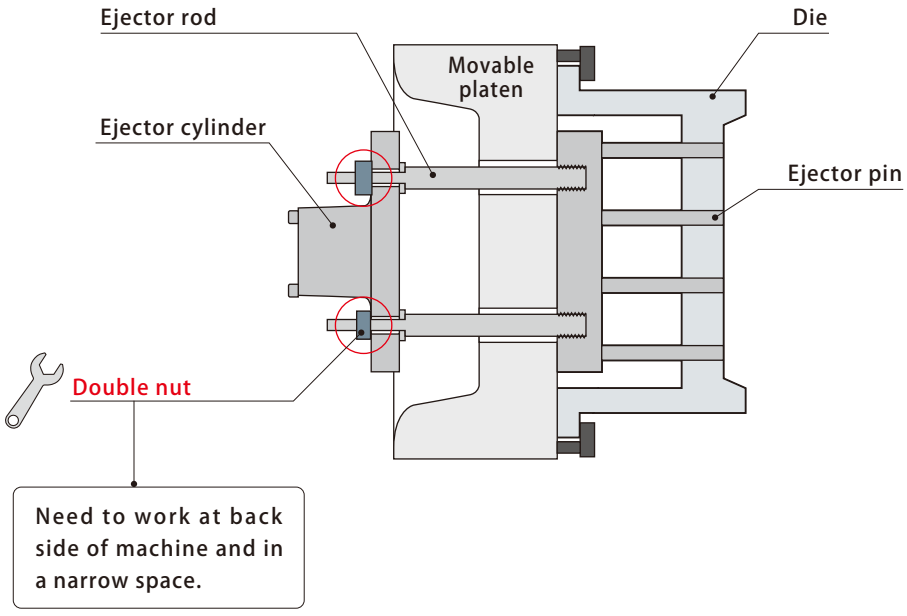
C plate (Magnet plate) and A/B plate connect at once by everlasting magnet and die connection is done.



In case of manual tightening connection rod …

①Ejector rod is screwed on plate, ②Die is fixed on platen and ③Ejector rod is mounted on cylinder from the back side in a conventional method. It wastes time to change a die.

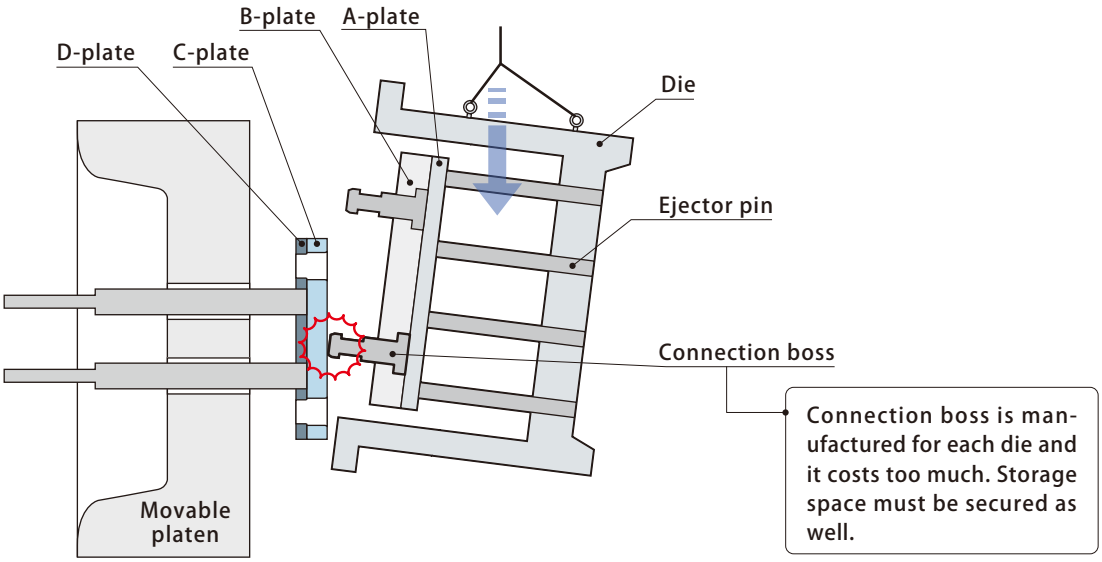




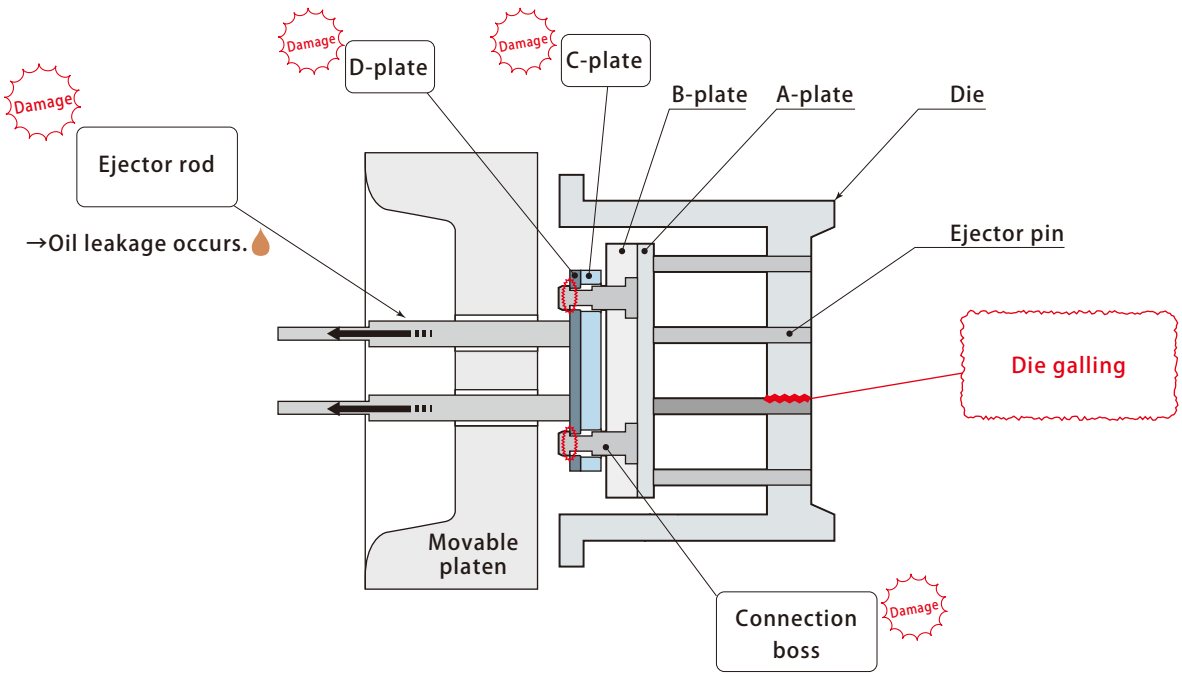
⇨ The maintenance cost (repair, purchase for replacement and die repair) is high and there is a risk of production stop.

In case of hydraulic type automatic C plate of clamp …

Hard to insert a connection boss when loading a die.
(C plate and connection boss interfere with each other.)

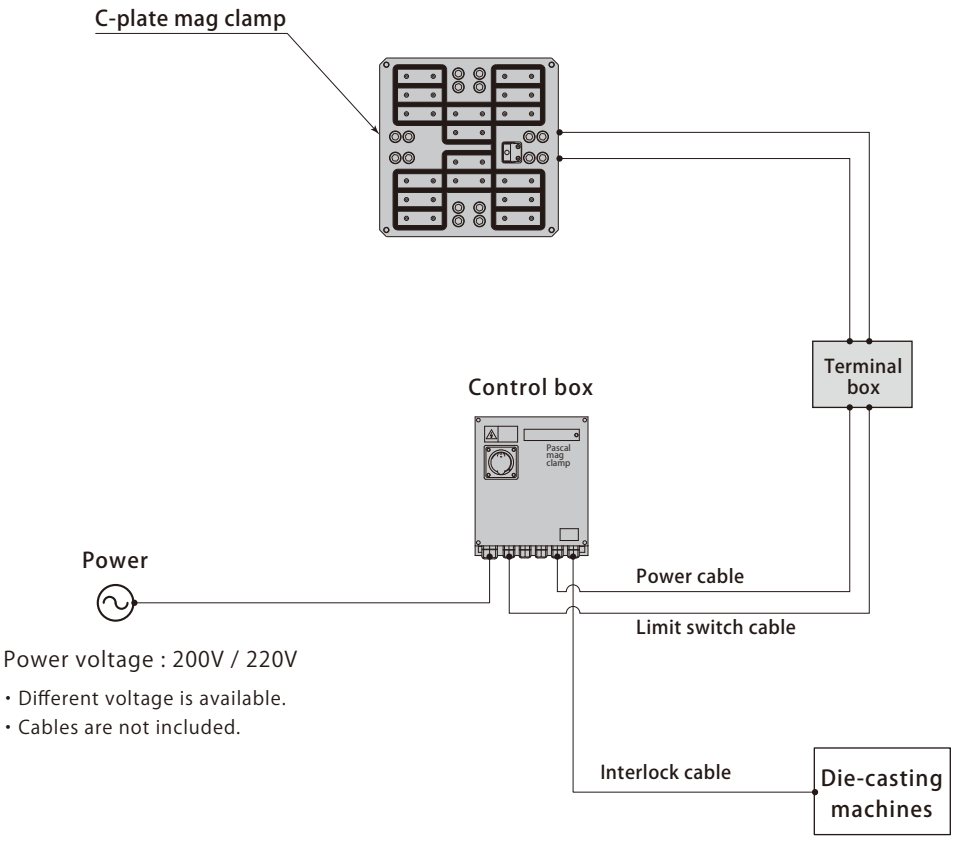


When die galling occurs, pull back force causes a damage.



⇨ The maintenance cost (repair, purchase for replacement and die repair) is high and there is a risk of production stop.

System configuration



● The operation for clamp（connection）and unclamp（disconnection）are performed on operation panel of die-casting machine. Contact Pascal for the details.

Magnet plate

model **MGE**

Magnet core
Size：32×100mm
Quantity：16
Total clamping force：59kN

Displacement detection core
(Displacement detection system)
page → 46

Close contact detection proximity switch
- It detects that the ejector plate (A and B) is in close contact with magnet clamp when clamping.
- It detects a displacement of ejector plate.

● Specifications of magnet plate differ depending on dies. Contact Pascal for the details.

Control box

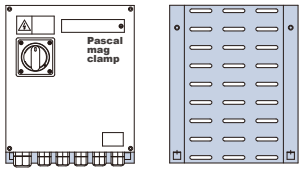
model **EMGD-G**

Height400 × Width350 × Depth200 (mm)

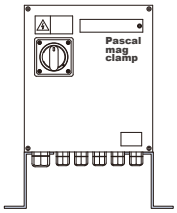
Model		EMGD-G
Weight	kg	25

Mounting bracket

Wall mount type

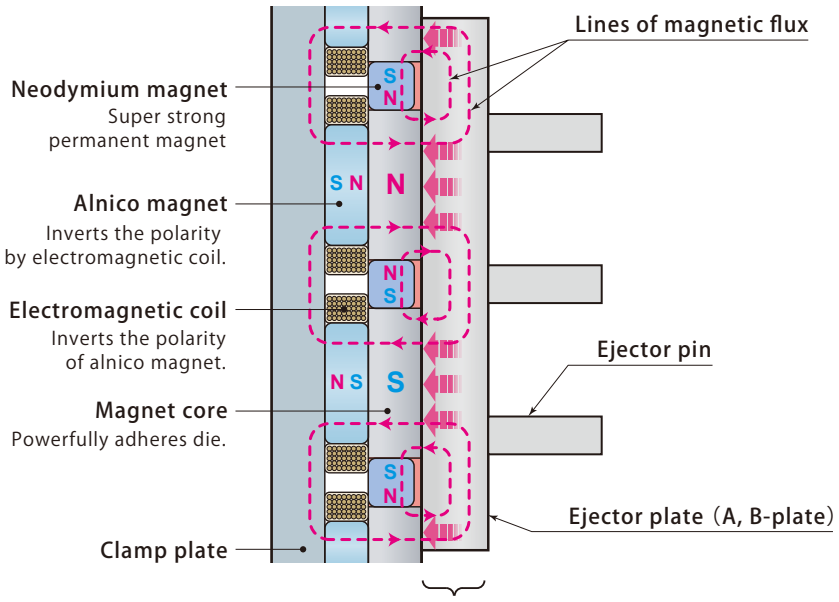


Self-standing type



Structure and function

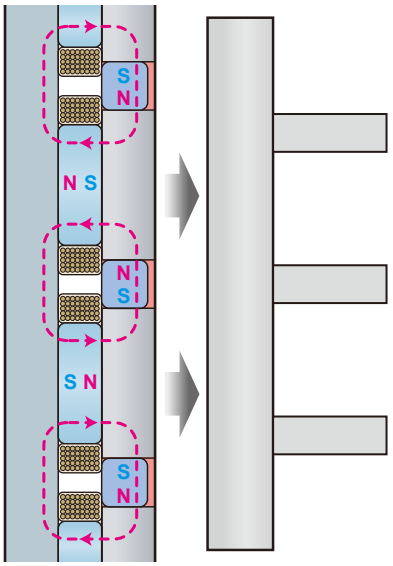
Clamp (Magnetized)



Effective height of magnetic flux : approx 20mm

1. Electromagnetic coil is energized for **0.5** sec.
2. Polarity of alnico magnet is inverted.
3. Neodymium magnet and alnico magnet become homopolar.
4. Magnet core becomes a strong magnet to clamp the ejector plate.

Unclamp (Demagnetized)

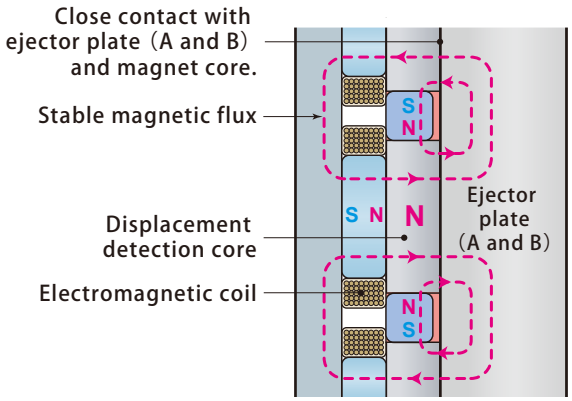


1. Electromagnetic coil is energized for **0.5** sec.
2. Polarity of alnico magnet is inverted.
3. Magnetic flux of neodymium magnet and Alnico magnet is not emitted from the surface of the magnet core.
   Thus, it unclamps the ejector plate.

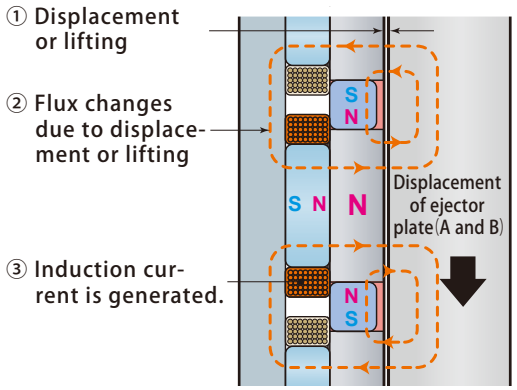
Displacement detection system (standard) PAT.

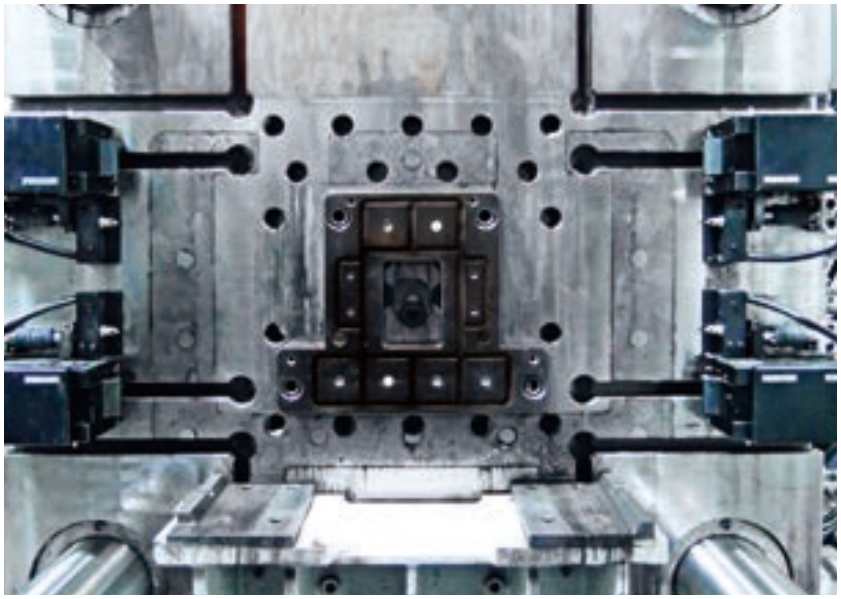
Displacement or lifting of die can be detected by the electromagnetic coils built into the magnet core near the center of clamp plates. (When the ejector plate moves, these electromagnetic coils detect an induction current signal.)

Normal clamping status

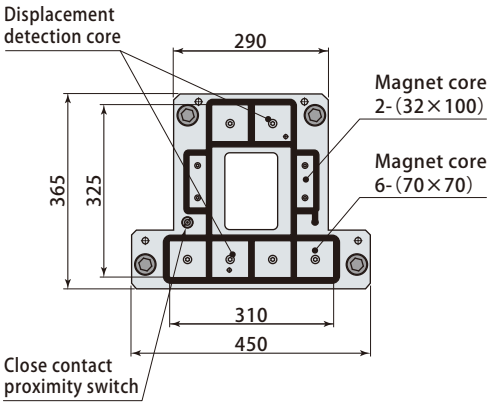


When the die moves



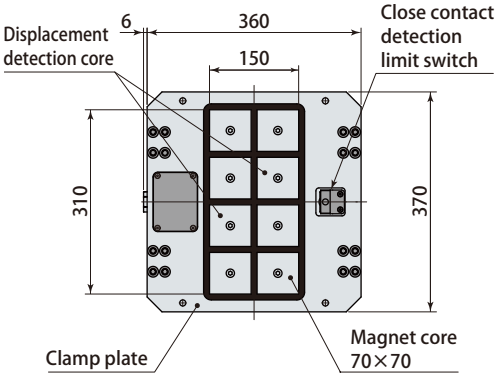


8,500kN (850ton) Die-casting machine C-plate mag clamp & Hydraulic clamp TYB-Z

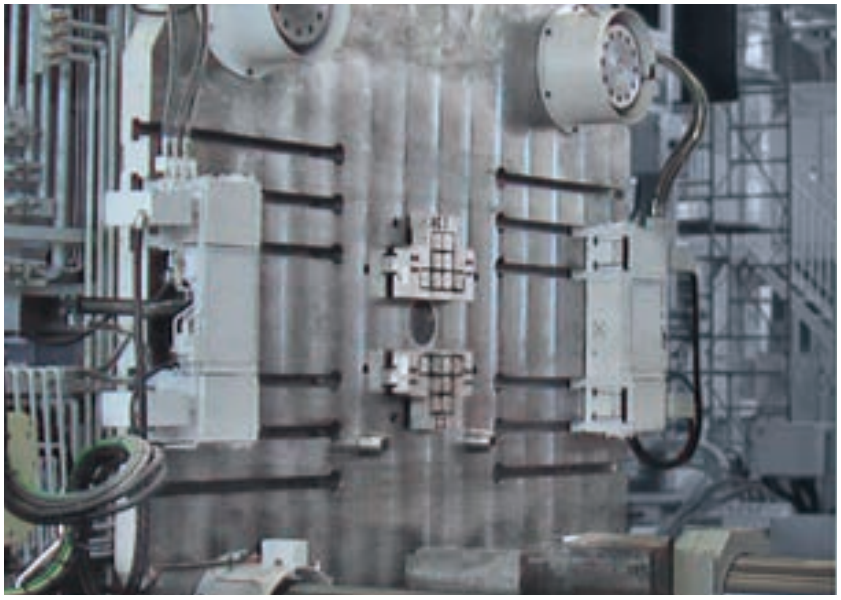


Max. clamping force：50.9kN

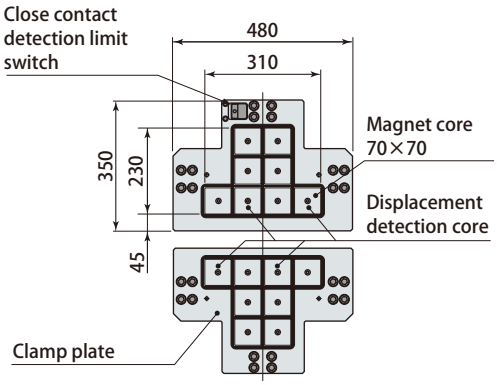
8,500kN (850ton) Die-casting machine C-plate mag clamp & Hydraulic clamp TYB



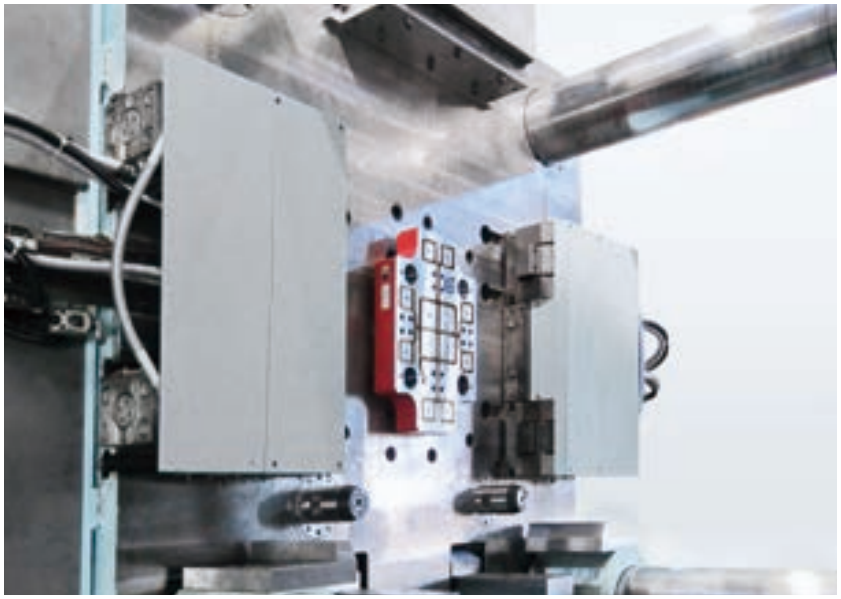
Max. clamping force：59kN



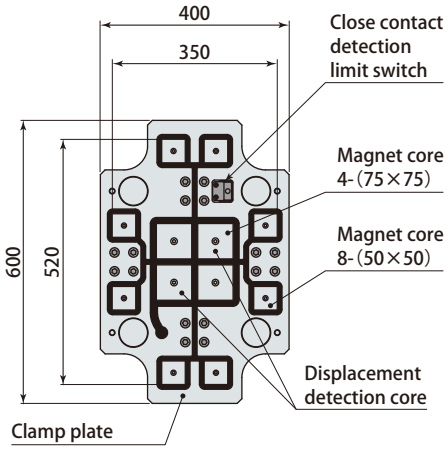
40,000kN（4,000ton）Die-casting machine　C-plate mag clamp



Max. clamping force：118kN（59kN×2）



16,500kN（1,650ton）Die-casting machine　C-plate mag clamp



Max. clamping force：61kN