Pascal mold machine system

mag clamp
multi mag system
CC mag system
octagonal locate-ring
mag ejector rod
mold clamping system
Pascal pump
Pascal hydraulic control unit
auto coupling system
C&C system
multi coupler
die setting system
mold change system
mold handling system
mold rotator
robot tool changer
N2 gas spring

www.pascaleng.co.jp
units in operation providing performance and reliability
multi mag system
multi magnetic clamp

The economical Mag Clamp System
With only one control unit, multiple mag clamps can be operated.
80～220tf Molding Machine Total of 15 machines operated by 2 controllers (auto parts)

For ex.

Multi controller
Operation panel
Quick connector
Control box

Interlock box

MGA0020SM
15tf

MGA0100M
100tf

MGA0150M
150tf

MGA0280M
280tf
Simultaneous clamping and coupling

Effective for vertical and two color molding machine.

80tf IMM

At Clamp (Magnetized)
Coupler at Connection

At Unclamp (Demagnetized)
Coupler at Disconnection

Mold set ► Clamp ON ► Pilot pressure ON (Flow path open) ► Fluid circulation

Fluid stop ► Pilot pressure OFF ► Clamp OFF ► Remove mold
High accuracy mold positioning for insert / hoop molding

For improvement mold set-up time. The use of octagonal locate-ring (octagonal taper cone) provides accurate insertion point, eliminating need for retraining of robot.

High rigidity can be obtained by receiving Mold weight with 3-faces. Restrained 8-faces can provide highly accurate centering.
**mag ejector rod**
magnetic ejector rod

**For quick and easy changing**
It is a newly designed ejector rod with strong magnet on the joint surface of the fixed/removable rods, which plugs in/out by one-touch operation.
If using ordinary ejector rod,

- Heavy ejector rod. ex. 350t-class: approx. 3kg
  1000t-class: approx. 12kg.
- Poor workability and tool dropped easily in machine.
- Long threaded portion takes more time to loosen/screw up.
- Dangerous work is performed even with bad footing.
- Threads / tapped holes damaged easily without confirmation by eyes.

If using the mag ejector rod,

- ONLY300-gram & 1/10-lightweight!!!
  ※ 350t-class
  - No tools required
  - Avoid dangerous work
  - Simply detach removable rods
20,000 units in operation and proven

With Pascal mold clamping system, operators can finish the mold change operation easily and quickly, Eventu

mold clamping system
hydraulic / air clamp

Pascal pump
air-driven hydraulic pump
Air-driven, compact, high performance hydraulic pump.
ion – reliability
dding performance
ally the productivity shall be dramatically increased.

Pascal hydraulic control unit
control system
High performance hydraulic control unit with digital pressure gauge.
auto coupling system

hydraulic / water / air / electric connector

450tf IMM
Pascal C&C system
Clamping & coupling system

No driving or locking mechanism like conventional couplers
Simply structured coupling system
Ideal for 100-200 ton molding machines!

Conventional air cylinder type coupler

C&C system
Pascal multi coupler
Pilot air type multi coupler

Easy coupling
No sweat coupler connect/disconnect with the breakthrough multi coupler system

Coupler Module (Plug)  Lock Guide Pin  Coupler Module (Socket)

Grip (manual locking device)

Coupler size: 3/8, 1/2, 3/4
Water/Air  Manually detachable type  4-12 coupler units

W100mm x D65mm x H180mm
※excluding grip width

During coupler separation (Pilot air: OFF)

Mold side

During coupler connection (Pilot air: ON)

Temperature controlled water

Pilot air
Pascal die setting system

Locatering free die setting system
Secure and rapid die change
Die setting with locate ring

① Center (X, Y) is not stable.
② Difficult to load mold.
  Damage to platen and mold from locate ring.
  Visual check from injection unit side

Die setting with die setter

① Mold center (X, Y) is quickly secured.
② By placing the mold on the die setter, die setting is easy.

650t Molding Machine  Hydraulic clamp & Die Setting System
mold change system

mold changer

The key to the just-in-time production

Pascal mold change system allows complete automation for mold change operation including mold transportation to the machines. Now it is the key of success of stockless production.

electric cart (rail type)  autoloading  superimposed load:max. 15tf×2
mold handling system
mold separator

Down-time improvement for mold maintenance

Pascal mold separator can surely open/close the mold outside of the injection molding machine. It makes a reduction of machine down-time.
mold rotator
mold handling device

For turning dies
Quickly and safely rotation of molds, coils, casting parts and other heavy loads.

N2 gas spring
high durability gas spring

Ejector plate for quick reaction
High durability gas spring replaced from coil spring.
robot tool changer
automatic chuck changer

It enhances the multi-functions of robot, shortens the set-up time and supports the high-mix low-volume production.
Pascal all products

Pascal products supports automotive production lines globally.

For press workings
- Traveling clamp
- Die clamp
- Press die change cart
- Mold clamping system
- Magnetic mold clamp
- Auto coupling system

For plastic molding
- Mold clamping system
- Magnetic mold clamp
- Auto coupling system

For automotive parts die & mold
- N2 gas springs

Press machine
- Body
- Roof
- Door etc...

Molding machine
- Bumper
- Instrument panel etc...
For die cast machine

- C-plate mag clamp
- Mold clamp

For metal cutting work

- Work clamp
- Pallet clamp
- Index table
- Rotary joint
- Coupler
Pascal

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Specifications are subject to change without prior notice.