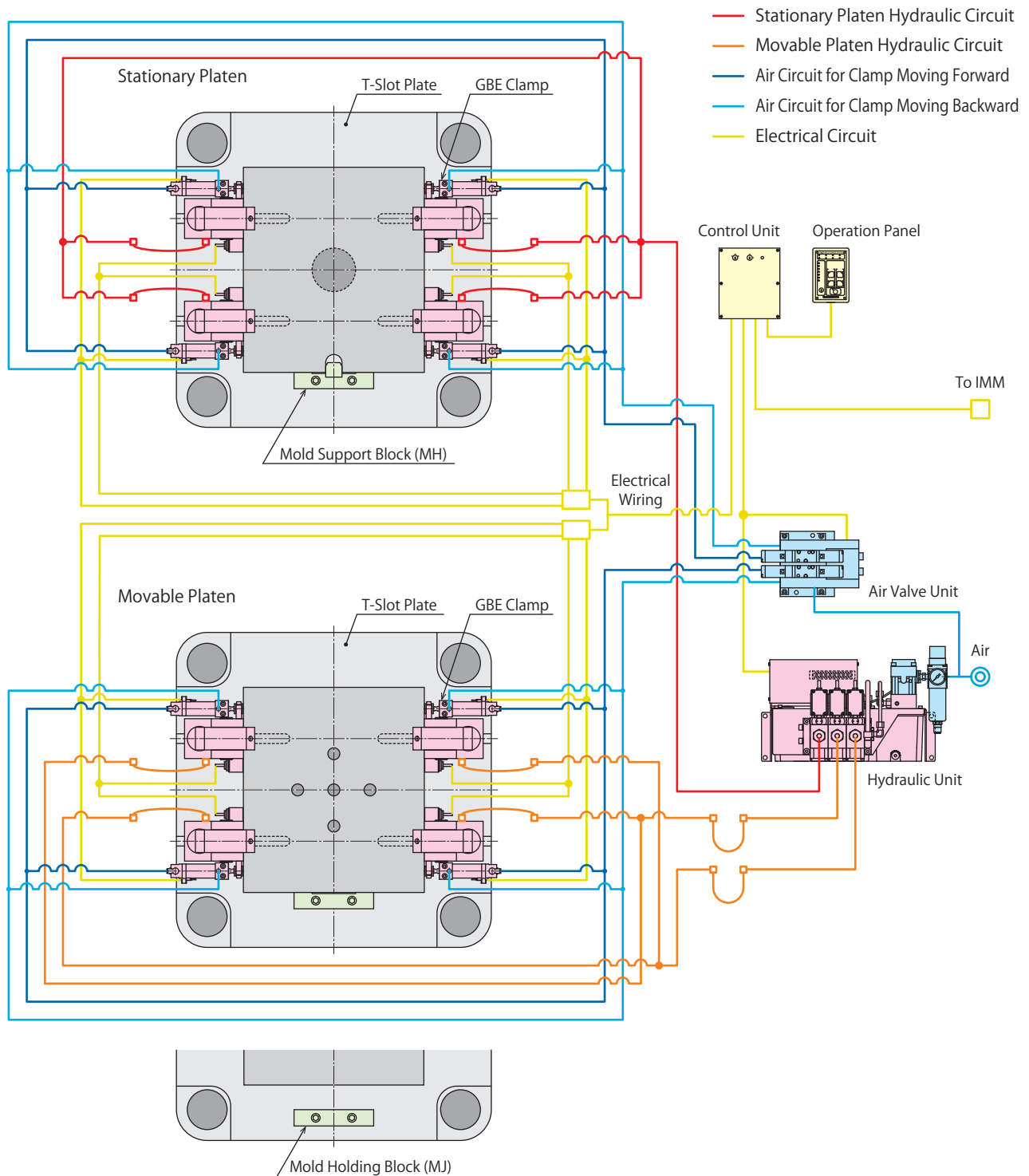


## Vertical Loading Mold Change System

For Molds with Different Width

※ This drawing shows the system circuit reference for GBE clamp.



## Standard System

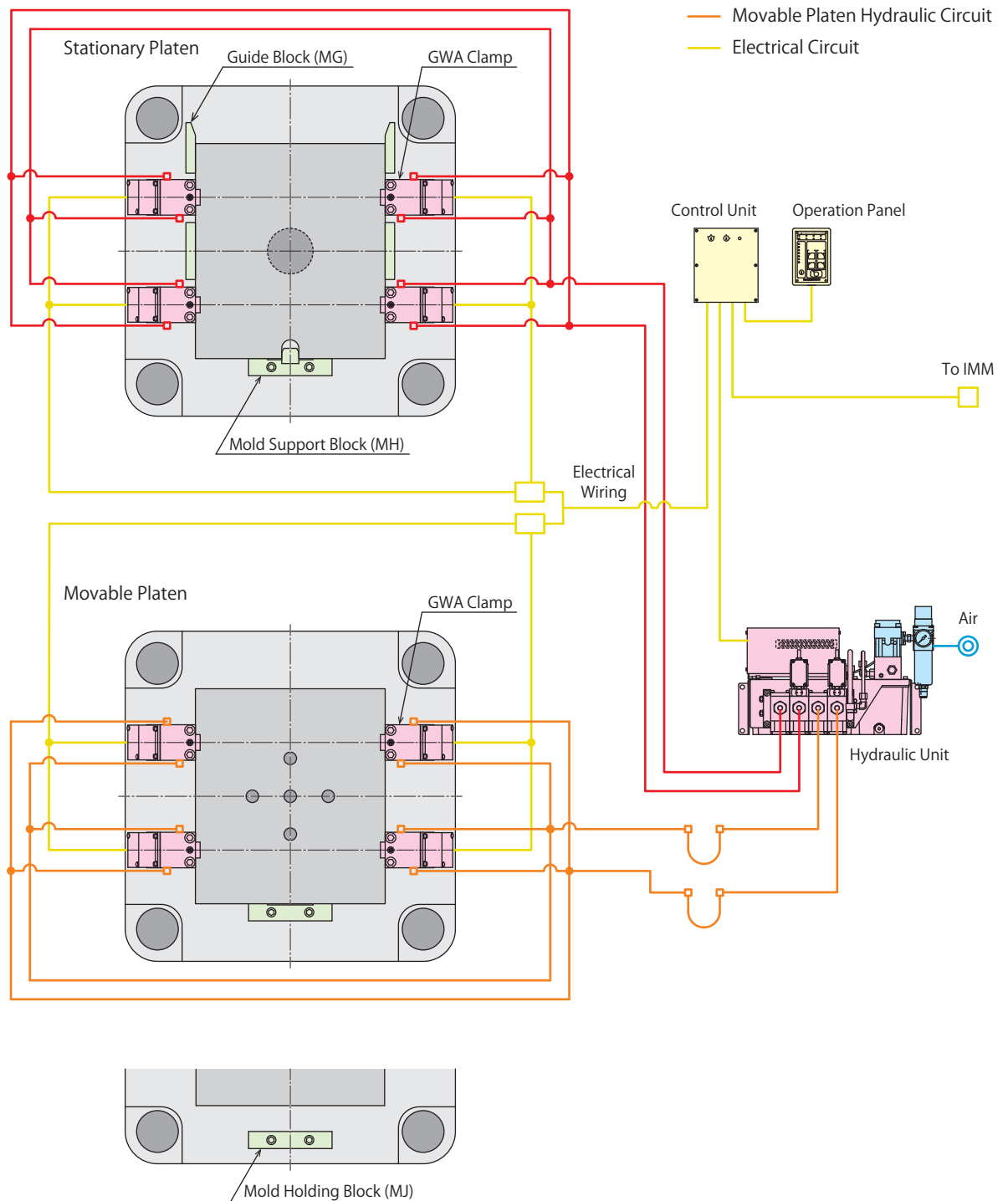
| IMM Capacity<br>(kN) | Clamp     |           |           |           |           |           |      |  | Hydraulic Unit |                | Mold Support<br>Block | Mold Holding<br>Block | Air Valve Unit<br>(GBE/GBF/GBR) |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|--|----------------|----------------|-----------------------|-----------------------|---------------------------------|
|                      | GBB Clamp | GBE Clamp | GBC Clamp | GBF Clamp | GBM Clamp | GBR Clamp | Qty. | Stationary / Movable<br>Clamping Capacity (kN) | Standard       | High Speed     |                       |                       |                                 |
| ~ 500                | GBB0100   | -         | GBC0100   | -         | -         | -         | 8    | 40   | CPBN000-3UR-□0 | CPDN000-3UR-□0 | MH03                  | MJ0010                | MV3013                          |
| ~ 750                | GBB0160   | -         | GBC0160   | -         | -         | -         | 8    | 64   |                |                | MH03                  | MJ0010                | MV3013                          |
| ~ 1500               | GBB0250   | GBE0250   | GBC0250   | GBF0250   | GBM0250   | GBR0250   | 8    | 100  |                |                | MH04                  | MJ0020                | MV3013                          |
| ~ 2500               | GBB0400   | GBE0400   | GBC0400   | GBF0400   | GBM0400   | GBR0400   | 8    | 160  |                |                | MH04                  | MJ0020                | MV3013                          |
| ~ 3500               | GBB0630   | GBE0630   | GBC0630   | GBF0630   | GBM0630   | GBR0630   | 8    | 252  |                |                | MH04                  | MJ0020                | MV3013                          |
| ~ 5500               | GBB1000   | GBE1000   | GBC1000   | GBF1000   | GBM1000   | GBR1000   | 8    | 400  | CPDN000-3UR-□0 | CPCN000-3UR-□0 | MH06                  | MJ0030                | MV3023                          |
| ~ 8500               | GBB1600   | GBE1600   | GBC1600   | GBF1600   | GBM1600   | GBR1600   | 8    | 640  |                |                | MH06                  | MJ0040                | MV3023                          |
| ~ 13000              | GBB2500   | GBE2500   | GBC2500   | GBF2500   | -         | -         | 8    | 1000   |                |                | MH08                  | MJ0050                | MV3023                          |
| ~ 20000              | GBB4000   | GBE4000   | GBC4000   | GBF4000   | -         | -         | 8    | 1600   | CPEN000-3UR-□0 | CPEN000-3UR-□0 | MH08                  | MJ0050                | MV3033                          |
| ~ 30000              | GBB5000   | GBE5000   | GBC5000   | GBF5000   | -         | -         | 8    | 2000   | CQEN000-3UR-□0 |                | MH10                  | MJ0050                | MV3033                          |

Note: 1. The list shows standard system references. Please contact us for unlisted systems.

## Vertical Loading Mold Change System

For Molds with Standardized Width

※ This drawing shows the system circuit reference for GWA clamp.



## Standard System

| IMM Capacity<br>(kN) | Clamp     |      |  | Hydraulic Unit  |                 | Valve Unit<br>IMM Hydraulic Source               | Mold Support<br>Block | Guide<br>Block |
|----------------------|-----------|------|--|-----------------|-----------------|--|-----------------------|----------------|
|                      | GWA Clamp | Qty. | Stationary / Movable<br>Clamping Capacity (kN) | Standard        | High Speed      |  |                       |                |
| ~ 500                | GWA0100   | 8    | 40   | CPBL000-2PPR-□0 | CPDL000-2PPR-□0 | MV0011-5<br>(IMM Hydraulic Pressure<br>14MPa)    | MH03                  | MG             |
| ~ 750                | GWA0160   | 8    | 64   |                 |                 |  | MH03                  | MG             |
| ~ 1500               | GWA0250   | 8    | 100  |                 |                 |  | MH04                  | MG             |
| ~ 2500               | GWA0400   | 8    | 160  |                 |                 |  | MH04                  | MG             |
| ~ 3500               | GWA0630   | 8    | 252  | CPDL000-2PPR-□0 | CPCL000-2PPR-□0 | MV0021-5<br>(IMM Hydraulic Pressure<br>14~21MPa) | MH04                  | MG             |
| ~ 5500               | GWA1000   | 8    | 400  | CPCL000-2PPR-□0 |                 |  | MH06                  | MG             |
| ~ 8500               | GWA1600   | 8    | 640  | CPEL000-2PPR-□0 | CPEL000-2PPR-□0 | MV0061-5<br>(IMM Hydraulic Pressure<br>14~21MPa) | MH06                  | MG             |
| ~ 13000              | GWA2500   | 8    | 1000   | CQEL000-2PPR-□0 |                 |  | MH08                  | MG             |
| ~ 20000              | GWA4000   | 8    | 1600   |                 |                 |  | MH08                  | MG             |
| ~ 30000              | GWA5000   | 8    | 2000   |                 |                 |  | MH10                  | MG             |

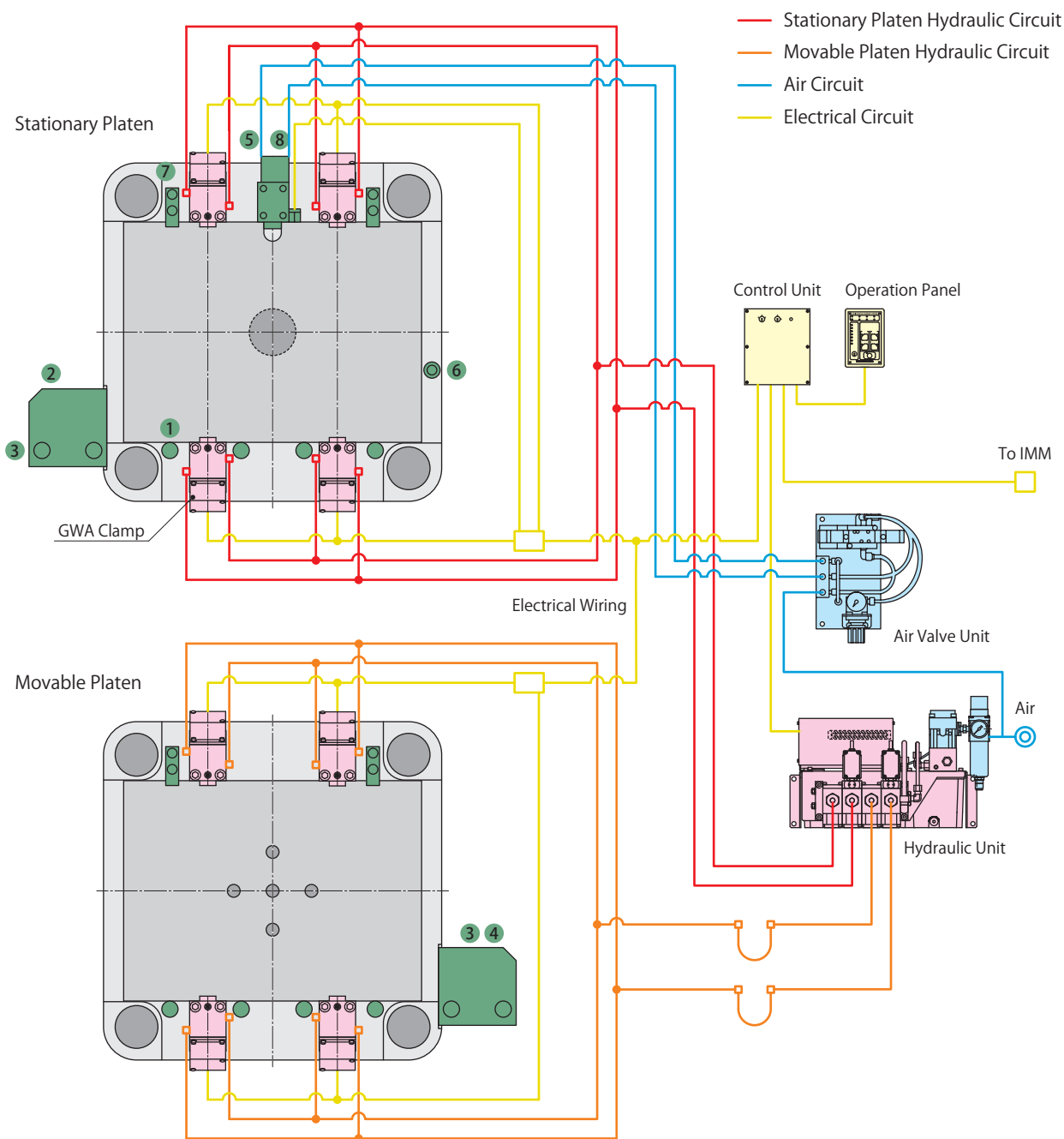
Note : 1. The list shows standard system references. Please contact us for unlisted systems.

|                                   |
|-----------------------------------|
| Hydraulic Clamping System         |
| Hydraulic Clamp                   |
| Hydraulic Unit                    |
| Valve Unit                        |
| Air Valve Unit                    |
| Operational Panel<br>Control Unit |
| Auto Coupler                      |
| Cautions<br>Others                |

## Horizontal Loading Mold Change System

Needs to Standardize Mold Dimension

※ This drawing shows the system circuit reference for GWA clamp.



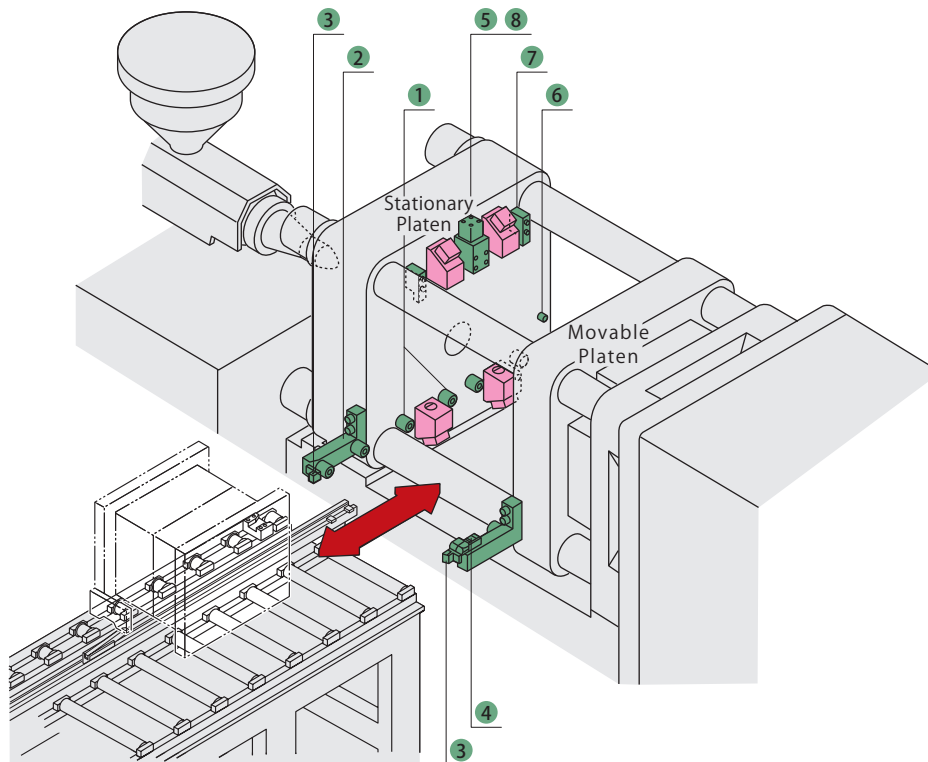
## Standard System

| IMM Capacity<br>(kN) | Clamp     |      |  | Hydraulic Unit   |                 | Valve Unit                                       | Platen Components ※1 ※2 |              |  |
|----------------------|-----------|------|--|------------------|-----------------|--|-------------------------|--------------|--|
|                      | GWA Clamp | Qty. | Stationary / Movable<br>Clamping Capacity (kN) | Standard         | High Speed      | IMM Hydraulic Source                             | ① Platen Roller         | ② Pre-Roller | ③ Movable Platen Opening<br>Upper Limit Detector |
| ~ 500                | GWA0100   | 8    | 40   | CPBL000-2PPR-□0  | CPDL000-2PPR-□0 | MV0011-5<br>(IMM Hydraulic Pressure<br>14MPa)    | MR0270                  | ML02         | MS4011-5   |
| ~ 750                | GWA0160   | 8    | 64   |                  |                 |  | MR0270                  | ML02         | MS4011-5   |
| ~ 1500               | GWA0250   | 8    | 100  |                  |                 |  | MR0400                  | ML04         | MS4011-5   |
| ~ 2500               | GWA0400   | 8    | 160  |                  |                 |  | MR0400                  | ML04         | MS4011-5   |
| ~ 3500               | GWA0630   | 8    | 252  | CPDL000-2PPR-□0  | CPCL000-2PPR-□0 | MV0021-5<br>(IMM Hydraulic Pressure<br>14~21MPa) | MR0400                  | ML04         | MS4011-5   |
| ~ 5500               | GWA1000   | 8    | 400  | CPC L000-2PPR-□0 |                 |  | MR0600                  | ML06         | MS4021-5   |
| ~ 8500               | GWA1600   | 8    | 640  | CPEL000-2PPR-□0  | CPEL000-2PPR-□0 | MV0061-5<br>(IMM Hydraulic Pressure<br>14~21MPa) | MR0800                  | ML08         | MS4021-5   |
| ~ 13000              | GWA2500   | 8    | 1000   | CQEL000-2PPR-□0  | CQEL000-2PPR-□0 |  | MR1000                  | ML10         | MS4031-5   |
| ~ 20000              | GWA4000   | 8    | 1600   |                  |                 |  | MR1600                  | ML16         | MS4041-5   |
| ~ 30000              | GWA5000   | 8    | 2000   |                  |                 |  | MR1600                  | ML16         | MS4041-5   |

Notes : ※1. Please refer to the circuit drawing and image drawing for details of platen components.

※2. Application of platen components may differ depending on IMM or mold conditions.

## Horizontal Loading Mold Change System



### Hydraulic Clamping System

Hydraulic Clamp

Hydraulic Unit

Valve Unit

Air Valve Unit

Operational Panel  
Control Unit

Auto Coupler

Cautions  
Others

## Platen Components

### 1 Platen Roller

Transfers molds and positions in vertical direction toward the center of IMM nozzle.

### 2 Pre-Roller

Bridge from Platen Rollers to Safety Gate.

### 3 Movable Platen Opening Upper Limit Detector

In case the movable platen of IMM opens wider than the mold thickness (dimension D), it detects during mold loading and prevents the mold from falling from the platen roller or pre-roller.

### 4 Movable Platen Opening Lower Limit Detector

In case the movable platen of IMM opens narrower than mold thickness (dimension D), it detects during mold loading and stops the mold.

### 5 Mold Positioning Equipment

Positions mold in horizontal direction during mold loading.

### 6 Mold Stopper

Prevents mold from overrunning due to the error of mold positioning equipment.

### 7 Mold Safety Retainer

When the movable platen opens too wide after releasing clamps, it will prevent the mold from falling.

### 8 Mold Detection

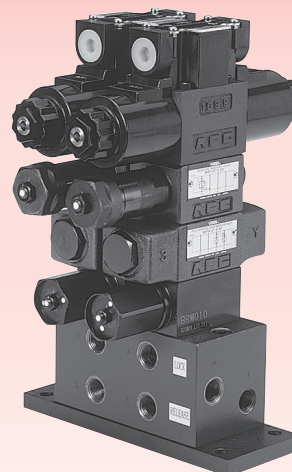
Confirms the presence of mold in IMM.

| Platen Components ※1 ※2                          |                                |                |                   | Standard<br>Mold Weight (t) |
|--|--------------------------------|----------------|-------------------|-----------------------------|
| 4 Movable Platen Opening<br>Lower Limit Detector | 5 8 Mold Positioning<br>Device | 6 Mold Stopper | 7 Safety Retainer |                             |
| MS2030-5<br>(Limit Switch)                       | MP03                           | MM             | MF0010            | 0.6                         |
|  | MP03                           |                | MF0010            | 0.6                         |
|  | MP04                           |                | MF0010            | 1.0                         |
|  | MP04                           |                | MF0010            | 1.5                         |
| MS2041-5<br>(Proximity Switch)                   | MP06                           |                | MF0010            | 2.5                         |
|  | MP06                           |                | MF0020            | 4.5                         |
|  | MP08                           |                | MF0020            | 8.0                         |
|  | MP08                           |                | MF0030            | 15                          |
|  | MP08                           |                | MF0030            | 20                          |
|  | MP10                           |                | MF0040            | 30                          |

# Valve Unit

For IMM Hydraulic Pressure

Model **MV0**



## Controls the Clamps with Hydraulic Pressure from IMM.

Only for GWA/GLA Clamp

Valve Unit with Pressure Relief Valve in Lock Circuit

### ● Model No. Indication

**MV** **002** **1** - **5** - **W** - **N**

1 2 3 4 5

#### 1 Size Code

- 001** : For Small/Medium Clamp (For IMM Pressure 14MPa)
- 002** : For Small/Medium Clamp (For IMM Pressure 14-21MPa)
- 006** : For Large Clamp (For IMM Pressure 14-21MPa)

#### 2 Design No.

- 1** : Revision Number

#### 3 Valve Control Voltage

- 1** : AC100V
- 2** : AC200V
- 3** : AC110V
- 4** : AC220V
- 5** : DC24V (5 ~ 40mA)

#### 4 Option ①

- Blank** : Standard (With Pressure Relief Valve at Lock Circuit)
- W** : With Pressure Relief Valve on Both Lock and Release Circuit

#### 5 Option ②

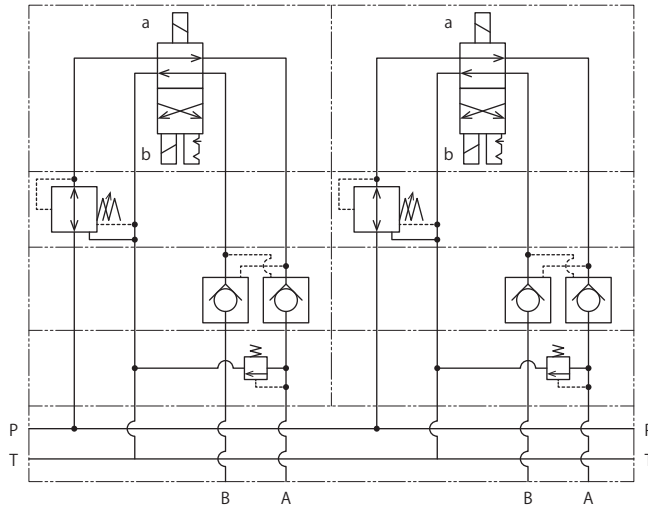
- Blank** : Standard
- N** : NPT Port ※1

Note :

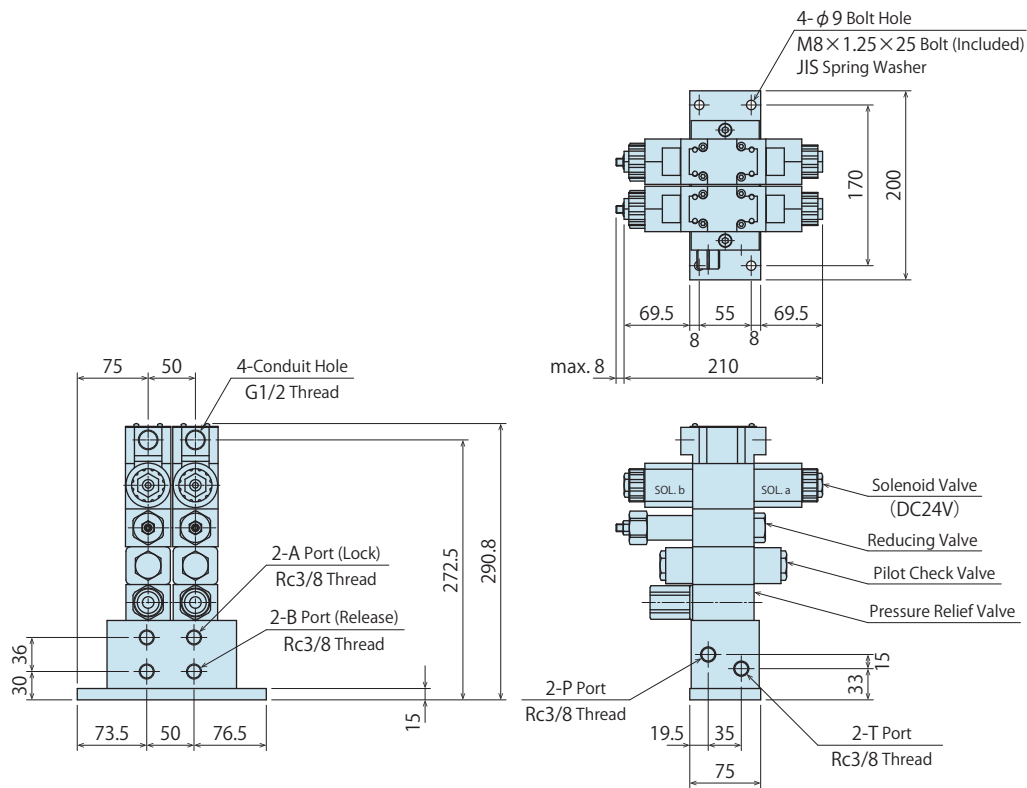
- ※1. **5** Option ② **N** : NPT Port includes the adaptor for connecting NPT port.  
The dimensions in the specification sheet and other documents are in inches.



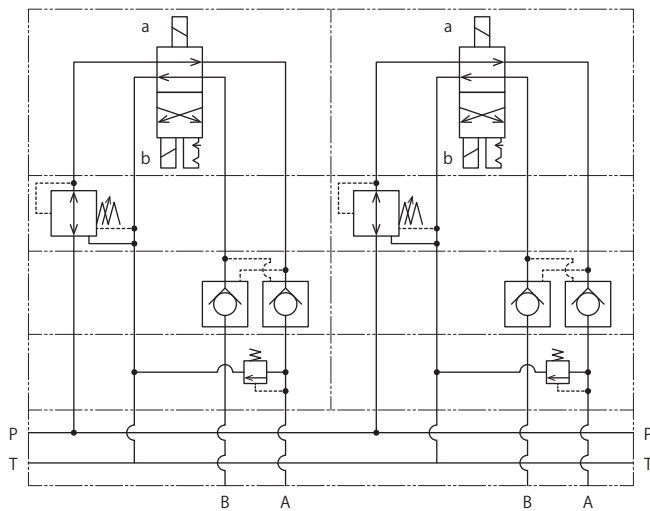
● Circuit Symbol : MV0021-5 (For IMM Pressure 14MPa-21MPa)



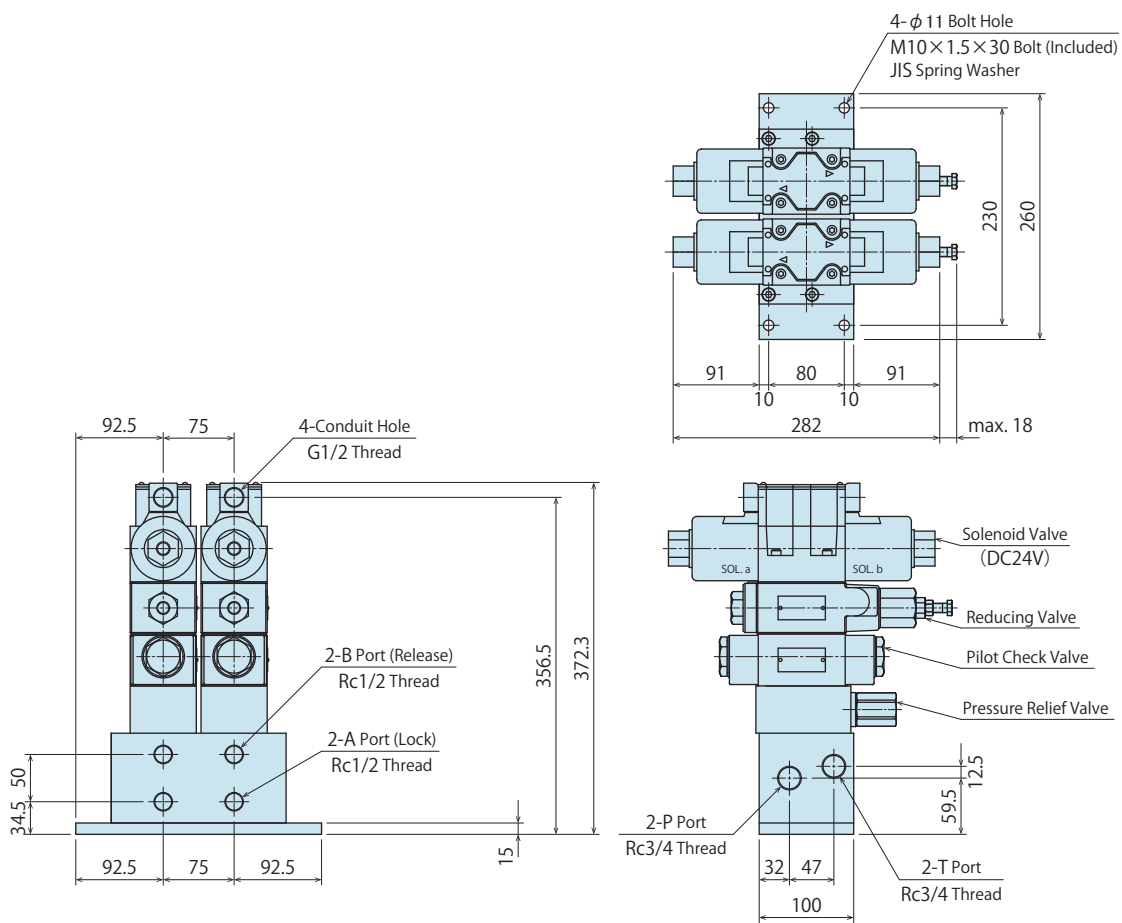
● External Dimensions : MV0021-5 (For IMM Pressure 14MPa-21MPa)



● **Circuit Symbol : MV0061-5 (For IMM Pressure 14MPa-21MPa)**



● **External Dimensions : MV0061-5 (For IMM Pressure 14MPa-21MPa)**

Hydraulic  
Clamping System

Hydraulic Clamp

Hydraulic Unit

Valve Unit

Air Valve Unit

Operational Panel  
Control Unit

Auto Coupler

Cautions  
Others

Valve Unit

MV0



## Cautions

### Notes for Design

#### 1) Check Specifications

- Please use each product according to its specifications.

#### ● 【GBB/GBC/GBE/GBF/GBM/GBR】

Operating hydraulic pressure is 25 MPa.

Operate within the specified condition. Failure to do so may result in damage on clamps, falling of molds and injury. In order to reduce clamping force, use the product with lower operating pressure.

#### 【GWA/GLA】

Operating hydraulic pressure is 14MPa. Hydraulic pressure must be continuously supplied.

However, if using IMM hydraulic source and supply hydraulic pressure fluctuates, supply 14MPa hydraulic pressure to the clamp when opening the mold. Otherwise, the specification of the clamp is not satisfied and it may cause injury due to falling of the mold.

Do not use clamps with excessive hydraulic pressure. Failure to do so may result in damage on clamps, falling of molds and injury.

- The ambient operating temperature of clamp should be 0 ~ 70°C. (High Temperature Model : 0 ~ 120°C.)

#### 2) Mold Clamping Thickness

#### ● 【GBB/GBC/GBE/GBF/GBM/GBR】

Check the mold clamping thickness.

#### 【GWA/GLA】

The mold clamping thickness should be  $h \pm 0.5\text{mm}$ .

- Use of a mold other than specified may result in incomplete locking of the clamp, leading to injury due to falling of the mold.

#### 3) Check the dimensions of T-slot.

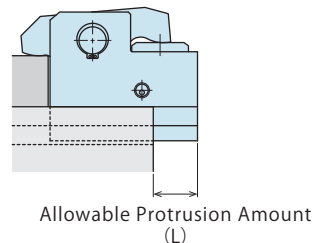
#### ● 【GBB/GBC/GBE/GBF/GLA】

If the T-slot you are using differs from the clamp specification, the clamp will not operate properly, and this could lead to falling of the mold and injury.

#### 4) Allowable Protrusion Amount when Clamping

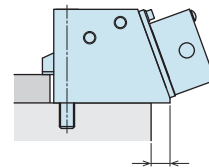
#### ● 【GBB/GBC/GBE/GBF/GWA/GLA】

Do not exceed the allowable protrusion amount. Otherwise, excessive force will be applied to the clamp, deforming or dropping the clamp out of T-slot. It may cause falling of a mold and injury.



Allowable Protrusion Amount

| Model No.                       | L (mm) |
|---------------------------------|--------|
| GBB0100/GBC0100                 | 17.5   |
| GBB0160/GBC0160                 | 21     |
| GBB0250/GBC0250/GBE0250/GBF0250 | 25     |
| GBB0400/GBC0400/GBE0400/GBF0400 | 32     |
| GBB0630/GBC0630/GBE0630/GBF0630 | 39     |
| GBB1000/GBC1000/GBE1000/GBF1000 | 45     |
| GBB1600/GBC1600/GBE1600/GBF1600 | 57     |
| GBB2500/GBC2500/GBE2500/GBF2500 | 69.5   |
| GBB4000/GBC4000/GBE4000/GBF4000 | 0      |
| GBB5000/GBC5000/GBE5000/GBF5000 | 0      |



Allowable Protrusion Amount (L)

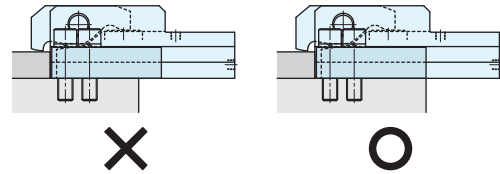
Allowable Protrusion Amount

| Model No.       | L (mm) |
|-----------------|--------|
| GWA0100/GLA0100 | 35     |
| GWA0160/GLA0160 | 38     |
| GWA0250/GLA0250 | 23     |
| GWA0400/GLA0400 | 62     |
| GWA0630/GLA0630 | 65     |
| GWA1000/GLA1000 | 35     |
| GWA1600/GLA1600 | 0      |
| GWA2500/GLA2500 | 0      |
| GWA4000/GLA4000 | 0      |
| GWA5000/GLA5000 | 0      |

#### 5) Be careful with a mounting position of a clamp.

#### ● 【GBM/GBR】

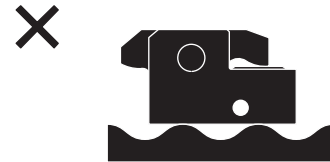
The mounting block should not protrude out from the mounting surface. Otherwise, excessive force will be applied to the clamp leading to deformation and dislocation which may cause falling of a mold leading to injury.



#### 6) Make sure the sliding surface is smooth (without any bumps).

#### ● 【GBB/GBC/GBE/GBF/GBM/GBR/GLA】

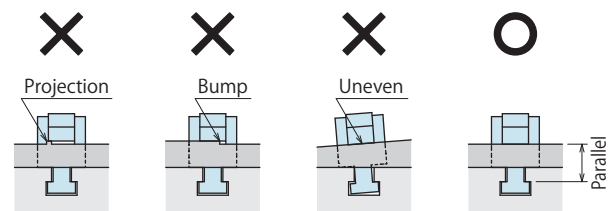
If the sliding surface is not smooth, the clamp will not slide properly.



#### 7) Mold clamping surface

#### ● 【GBB/GBC/GBE/GBF/GBM/GBR】

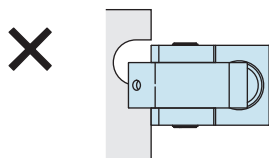
The mold clamping surface and T-slot must be parallel to the mold mounting surface. If the clamping surface has a bump or is not flat, excessive force will be applied to the clamp. It may deform the clamp body, lever and pins, resulting in falling of the clamp or the mold and injury.



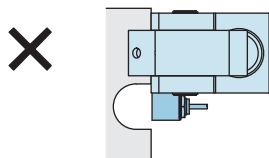
#### ● 【GWA/GLA】

The mold clamping surface must be parallel to the IMM platen. If the clamping surface has a bump or is not flat, excessive force will be applied to the clamp. It may deform the clamp body and the clamp piston, resulting in falling of the mold and injury.

- 8) Make sure there is no notch such as U-cut on the clamping area of the mold.
- If there are U-cuts (notches) on the clamping area of a mold, the clamp will not be able to operate properly, leading to falling of the mold and injury.
- For use of molds with U-cuts (notches) , please contact us.



- 9) Make sure there is no notch such as U-cut on the mold surface where the mold confirmation proximity switch contacts.
- The mold confirmation proximity switch does not operate properly if there are U-cuts (notches) on the mold surface where the mold confirmation proximity switch contacts.

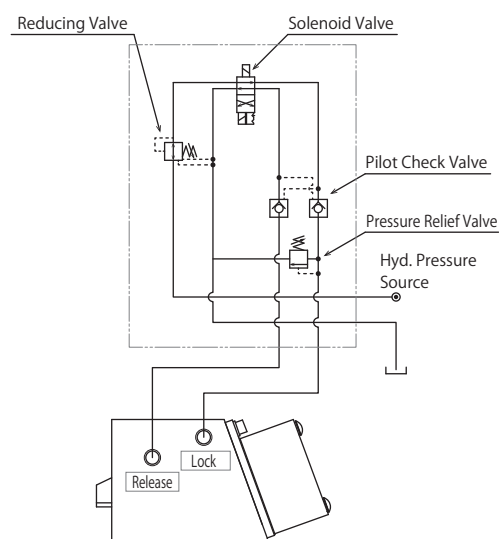


- 10) Make sure that advance/retraction of the clamp is smoothly conducted.
- 【GBE/GBF/GBR/GLA】
  - ① Supply more than 0.4MPa air pressure to air cylinder.
  - ② Adjust the moving speed of the clamp with speed controllers to fully stroke within 1 to 2 seconds.
  - ③ Proximity switch is used for forward-end confirmation. Make sure the mold surface on the switch side has no U-cut.
  - ④ The clamp sliding surface must be smooth (without any bumps).
- 11) Interlock
- Make sure to control with the interlock so that clamps lock or release only when IMM is at mold close (pressurized) state.

- 12) Design the hydraulic circuit carefully.

- 【GWA/GLA】
- When designing the hydraulic circuit, make sure to install a check valve in the circuit. Install a pressure relief valve in case the oil temperature in the circuit increases while clamping, since the pressure may exceed the value in the specification. Clamp damage may lead to falling of a mold and injury.

#### 【Reference Circuit】



- 13) Control the solenoid valve carefully.

- 【GWA/GLA】
- When controlling the solenoid valve, always energize the excitation circuits. If not energize the excitation circuits, it may be switched by unexpected causes resulting in falling of a mold and injury.

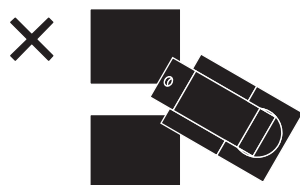
- 14) Clamp control

- 【GWA/GLA】
- A micro switch of mechanical interface is used for confirming the lock/release operation. It may happen to disconnect the connection of the switch caused by vibration during the machine running.
- It is recommended to install an off-delay timer in the control circuits of the program.

## Cautions

### Installation Notes

- 1) Prevent the clamps dropping out from the T slot.  
【GBB/GBC/GBE/GBF/GLA】
- Fall of the clamp will lead to injury.



- 2) Check the Usable Fluid.
  - Use the appropriate fluid by referring to the Hydraulic Fluid List. Please contact us when using fluid which is not on the list.
- 3) Procedure before piping
  - The pipeline and piping connector should be cleaned by thorough flushing. The dust and cutting chips in the circuit may lead to fluid leakage and malfunction. (The filter which removes contaminant in the hydraulic piping or hydraulic system is not provided.)
- 4) Please supply filtered clean dry air.
  - Install an air filter/air dryer in order to prevent rust and dirt. Otherwise it may lead to malfunction.
- 5) Applying Sealing Tape
  - Wrap with tape 1 to 2 times following the screwing direction. When piping, be careful that contaminants such as sealing tape do not enter in products. Pieces of the sealing tape can lead to fluid leakage and malfunction.
- 6) Installation of the Clamp  
【GBE/GBF/GLA】  
After setting the clamp in the T-slot, use attached hex. socket bolts and tighten them with the torque shown below.

| Model No.   | Bolt Size | Tightening Torque (N·m) |
|-------------|-----------|-------------------------|
| GBE/GBF025□ | M5×0.8    | 6.3                     |
| GBE/GBF040□ | M5×0.8    | 6.3                     |
| GBE/GBF063□ | M6×1      | 10                      |
| GBE/GBF100□ | M8×1.25   | 25                      |
| GBE/GBF160□ | M10×1.5   | 50                      |
| GBE/GBF250□ | M12×1.75  | 80                      |
| GBE/GBF400□ | M16×2     | 200                     |
| GBE/GBF500□ | M16×2     | 200                     |

| Model No. | Bolt Size | Tightening Torque (N·m) |
|-----------|-----------|-------------------------|
| GLA160□   | M12×1.75  | 80                      |
| GLA250□   | M16×2     | 200                     |
| GLA400□   | M20×2.5   | 400                     |
| GLA500□   | M20×2.5   | 400                     |

### 【GBM/GBR】

After setting the clamp, use attached hex. socket bolts and tighten them with the torque shown below.

| Model No.   | Bolt Size | Tightening Torque (N·m) |
|-------------|-----------|-------------------------|
| GBM/GBR025□ | M12×1.75  | 80                      |
| GBM/GBR040□ | M16×2     | 200                     |
| GBM/GBR063□ | M20×2.5   | 400                     |
| GBM/GBR100□ | M24×3     | 630                     |
| GBM/GBR160□ | M30×3.5   | 1250                    |

### 【GWA】

Use attached hex. socket bolts and tighten them with the torque shown below.

| Model No. | Bolt Size | Tightening Torque (N·m) |
|-----------|-----------|-------------------------|
| GWA010□   | M8×1.25   | 6.3                     |
| GWA016□   | M10×1.5   | 6.3                     |
| GWA025□   | M12×1.75  | 10                      |
| GWA040□   | M16×2     | 25                      |
| GWA063□   | M20×2.5   | 50                      |
| GWA100□   | M24×3     | 80                      |
| GWA160□   | M20×2.5   | 200                     |
| GWA250□   | M24×3     | 200                     |
| GWA400□   | M30×3.5   | 1250<br>(800)           |
| GWA500□   | M33×3.5   | 1600<br>(1000)          |

Note: The table shows tightening torque when bolts and screw parts are dry.  
Values in brackets indicate values when the bolt seating surfaces and screw parts are lubricated with grease.

### 7) Piping and Wiring

- For piping and wiring, make sure not to cut the hydraulic hoses and wiring by the clamp when it moves back and forth.

### 8) Air Bleeding of the Hydraulic Circuit

- Excessive air in the hydraulic circuit may result in insufficient clamping force or a longer operating time.  
If air enters the circuit after connecting the pipes or when the oil tank is empty, bleed air at the ends of the pipes.

### 9) Wiring of Forward End Confirmation Switch

- For wiring, please make sure that the clamp does not cut the code of Forward End Confirmation Switch when it moves back and forth.

## ● Hydraulic Fluid List

| ISO Viscosity Grade ISO-VG-32 |                           |                             |
|-------------------------------|---------------------------|-----------------------------|
| Maker                         | Anti-Wear Hydraulic Oil   | Multi-Purpose Hydraulic Oil |
| Showa Shell Sekiyu            | Tellus S2 M 32            | Morlina S2 B 32             |
| Idemitsu Kosan                | Daphne Hydraulic Fluid 32 | Daphne Super Multi Oil 32   |
| JX Nippon Oil & Energy        | Super Hyrando 32          | Super Mulpus DX 32          |
| Cosmo Oil                     | Cosmo Hydro AW32          | Cosmo New Mighty Super 32   |
| ExxonMobil                    | Mobil DTE 24              | Mobil DTE 24 Light          |
| Matsumura Oil                 | Hydol AW-32               |                             |
| Castrol                       | Hyspin AWS 32             |                             |

Note : Please contact manufacturers when customers require products in the list above.

Hydraulic  
Clamping System

Hydraulic Clamp

Hydraulic Unit

Valve Unit

Air Valve Unit

Operational Panel  
Control Unit

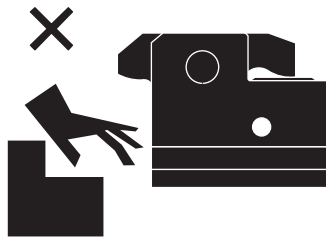
Auto Coupler

Cautions  
Others

## ● Cautions

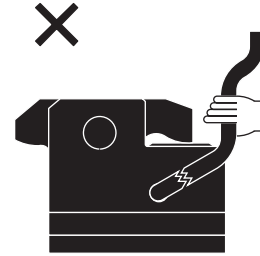
### ● Notes on Handling

- 1) Close the mold after molding is completed.
  - Failure to do so may result in mold dropping and injury.
- 2) Do not disassemble or modify the air cylinder.
  - Built-in spring is very strong and can be dangerous. If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.
- 3) It should be handled by qualified personnel.
  - The hydraulic/pneumatic equipment should be handled and maintained by qualified personnel.
- 4) Do not handle or remove the product unless the safety protocols are ensured.
  - ① The machine and equipment can only be inspected or prepared when it is confirmed that the preventive devices are in place.
  - ② Before removing the product, make sure that the above-mentioned safety measures are in place. Shut off the pressure and power source, and make sure no pressure exists in the hydraulic circuits.
  - ③ After stopping the product, do not remove until the equipment cools down.
  - ④ Make sure there is no abnormality in the bolts and respective parts before restarting the machine or equipment.
- 5) Do not apply load to the clamp when at 0MPa.
  - In case of hydraulic source trouble, the clamp has holding force with mechanical lock even when hydraulic pressure is at 0MPa. However, do not apply load on the clamp at this state.
- 6) Do not touch clamps while they are working.
  - Otherwise, your hands may be injured.

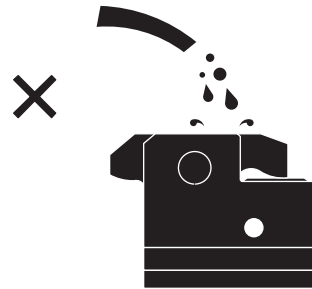


- 7) When changing a mold width, make sure to check the allowable protrusion amount.
  - If using it with beyond allowable protrusion amount, excessive force is applied to the clamp which deforms or damages the clamp resulting in falling of the mold and injury. It may cause product malfunction or deterioration, which may lead to an accident.

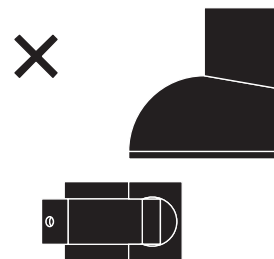
- 8) Hold the clamp body when moving and removing the clamp.
  - Pulling on a hose leads to a clamp fall and injury. Also, rivet part of the hose will be loosened leading to fluid leakage.



- 9) Do not pour water or oil over the product.
  - It may lead to malfunction or deterioration of the product and cause an accident.



- 10) Do not disassemble or modify.
  - If the product is taken apart or modified, the warranty will be voided even within the warranty period.
- 11) Do not apply excessive force to clamps.
  - The clamp may be damaged or deformed, resulting in malfunction.



## ● Maintenance and Inspection

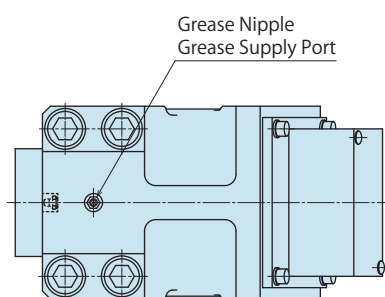
- 1) Removal of the Product and Shut-off of Pressure Source
  - Before removing the product, make sure that the safety measures mentioned earlier are in place. Shut off the pressure and power source, and make sure no pressure exists in the air/hydraulic circuits.

Also, make sure there is no abnormality in the bolts and respective parts before restarting.

- 2) Lubricate grease periodically.

【GWA/GLA】

- Lubricate grease from the grease nipple periodically (once a year is recommended) to maintain clamp performance. Especially when process water often splashes on the clamps, release operation failure is likely to occur. In such cases, lubricate the clamps with grease more frequently than recommended, if necessary.



If release operation failure should occur, it is effective to lubricate grease and repeat lock and release actions of the clamp 2 to 3 times without the mold.

- 3) Regularly tighten pipes and mounting bolts to ensure proper use.
- 4) Periodically ensure that the supply hydraulic/air pressure is a specified value.
- 5) Make sure the hydraulic fluid has not deteriorated.
- 6) Make sure there is a smooth action without an irregular noise. (Especially when it is restarted after left unused for a long period, make sure it operates correctly.)
- 7) The products should be stored in the cool and dark place without direct sunshine or moisture.
- 8) Please contact us for overhaul and repair.

## ● Warranty

- 1) Warranty Period

- The product warranty period is 18 months from shipment from our factory or 12 months from initial use, whichever is earlier.

- 2) Warranty Scope

- If the product is damaged or malfunctions during the warranty period due to faulty design, materials or workmanship, we will replace or repair the defective part at our expense. Defects or failures caused by the following are not covered.

- ① If the stipulated maintenance and inspection are not carried out.
- ② If the product is used while it is not suitable for use based on the operator's judgment, resulting in defect.
- ③ If it is used or operated in an inappropriate way by the operator. (Including damage caused by the misconduct of the third party.)
- ④ If the defect is caused by reasons other than our responsibility.
- ⑤ If repair or modifications are carried out by anyone other than Kosmek, or without our approval and confirmation, it will void warranty.
- ⑥ Other caused by natural disasters or calamities not attributable to our company.
- ⑦ Parts or replacement expenses due to parts consumption and deterioration. (Such as rubber, plastic, seal material and some electric components.)

Damages excluding from direct result of a product defect shall be excluded from the warranty.

# Sales Offices

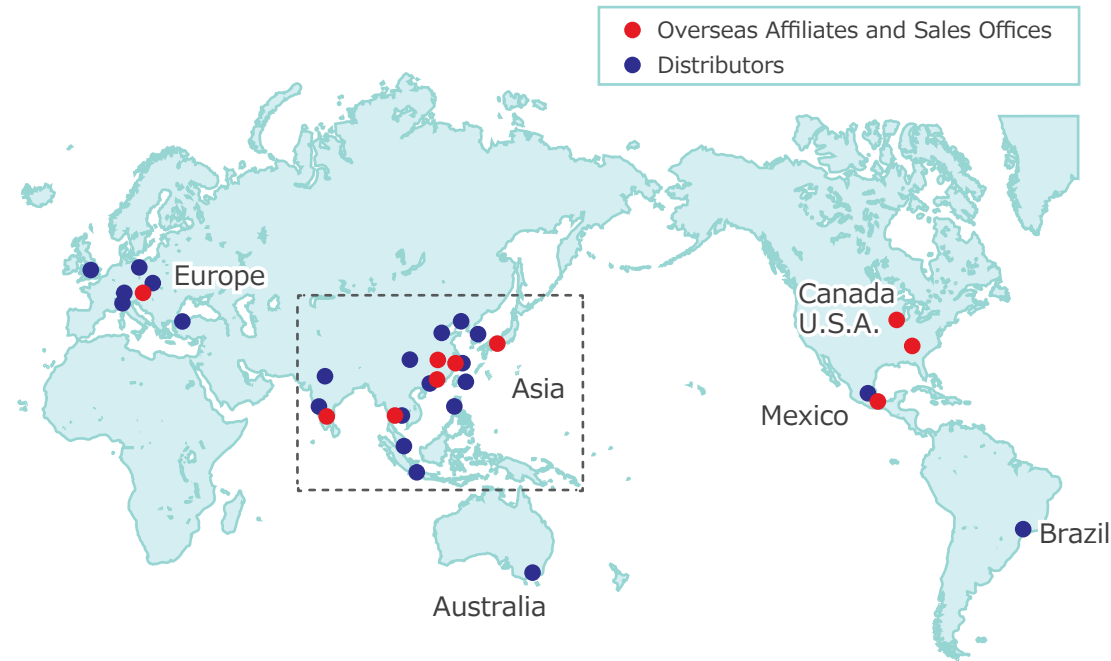
## Sales Offices across the World

|             |  |   |
|-------------|--|---|
| Japan       | KOSMEK LTD.<br>HEAD OFFICE   | <b>TEL. +81-78-991-5162</b> FAX. +81-78-991-8787<br>1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, Japan 651-2241  |
| USA         | KOSMEK (USA) LTD.<br>Overseas Affiliate                                  | <b>TEL. +1-630-620-7650</b> FAX. +1-630-620-9015<br>650 Springer Drive, Lombard, IL 60148 USA   |
|             | KOSMEK (USA) LTD. Atlanta Branch Office                                  | <b>TEL. +1-708-577-3275</b><br>303 Perimeter Center North, Suite 300, Atlanta, GA 30346 USA   |
| Mexico      | KOSMEK (USA) LTD. Mexico Branch Office                                   | <b>TEL. +52-1-55-3044-9983</b><br>Av. Santa Fe 103, Int. 59, col. Santa Fe Juriquilla, Queretaro, QRO, 76230, Mexico  |
| Europe      | KOSMEK EUROPE GmbH<br>Overseas Affiliate                                 | <b>TEL. +43-463-287587</b> FAX. +43-463-287587-20<br>Schleppplatz 2 9020 Klagenfurt am Wörthersee Austria   |
| China       | KOSMEK (CHINA) LTD.<br>Overseas Affiliate                                | <b>TEL.+86-21-54253000</b> FAX.+86-21-54253709<br>Room601, RIVERSIDE PYRAMID No.55, Lane21, Pusan Rd, Pudong Shanghai 200125, China                                   |
|             | KOSMEK (CHINA) LTD. Dongguan Office<br>Overseas Affiliate (Sales Office) | <b>TEL.+86-769-85300880</b><br>Room301, AcerBuilding No.15, Dezheng(W)Road, Changan Town Dongguan Guangdong 523843, P.R.China   |
|             | KOSMEK (CHINA) LTD. Wuhan Office<br>Overseas Affiliate (Sales Office)    | <b>TEL.+86-27-59822303</b><br>Room502, Building A, Jingkai Future City, Zhuankou Economic Development Zone, Wuhan City, Hubei Province, 430050 China                  |
| India       | KOSMEK LTD. - INDIA<br>Branch  | <b>TEL. +91-9880561695</b><br>4A/Old No:649, Ground Floor, 4th D cross, MM Layout, Kavalbyrasandra, RT Nagar, Bangalore -560032 India                                 |
| Thailand    | KOSMEK Thailand Representative Office<br>Representative Office           | <b>TEL. +66-2-300-5132</b> FAX. +66-2-300-5133<br>67 Soi 58, RAMA 9 Rd., Phatthanakan, Suanluang, Bangkok 10250, Thailand   |
| Taiwan      | FULL LIFE TRADING CO., LTD.<br>Taiwan Exclusive Distributor              | <b>TEL. +886-2-82261860</b> FAX. +886-2-82261890<br>16F-4, No.2, Jian Ba Rd., Zhonghe District, New Taipei City Taiwan 23511  |
| Philippines | G.E.T. Inc, Phil.<br>Philippines Exclusive Distributor                   | <b>TEL.+63-2-310-7286</b> FAX. +63-2-310-7286<br>Victoria Wave Special Economic Zone Mt. Apo Building, Brgy. 186, North Caloocan City, Metro Manila, Philippines 1427 |
| Indonesia   | PT. Yamata Machinery<br>Indonesia Exclusive Distributor                  | <b>TEL. +62-21-29628607</b> FAX. +62-21-29628608<br>Delta Commercial Park I, Jl. Kenari Raya B-08, Desa Jayamukti Kec. Cikarang Pusat Kab. Bekasi 17530 Indonesia     |

## Sales Offices in Japan

|   |  |
|---|--|
| Head Office<br>Osaka Sales Office<br>Overseas Sales | <b>TEL. 078-991-5162</b> FAX. 078-991-8787<br>1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, 651-2241, Japan            |
| Tokyo Sales Office                                  | <b>TEL. 048-652-8839</b> FAX. 048-652-8828<br>81, 4-chome, Onari-cho, Kita-ku, Saitama City, Saitama, 331-0815, Japan        |
| Nagoya Sales Office                                 | <b>TEL. 0566-74-8778</b> FAX. 0566-74-8808<br>10-1, 2-chome, Misono-cho, Anjo City, Aichi, 446-0076, Japan                   |
| Fukuoka Sales Office                                | <b>TEL. 092-433-0424</b> FAX. 092-433-0426<br>8-10-101, 1-chome, Kamimuta, Hakata-ku, Fukuoka City, Fukuoka, 812-0006, Japan |

# Global Network



Asia Detailed Map



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