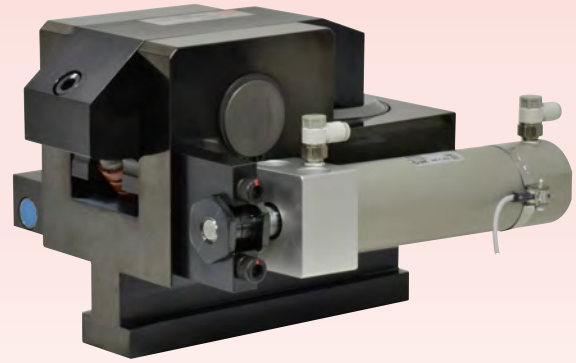


# Hydraulic Clamp

Longer Stroke / T-Slot Automatic-Slide

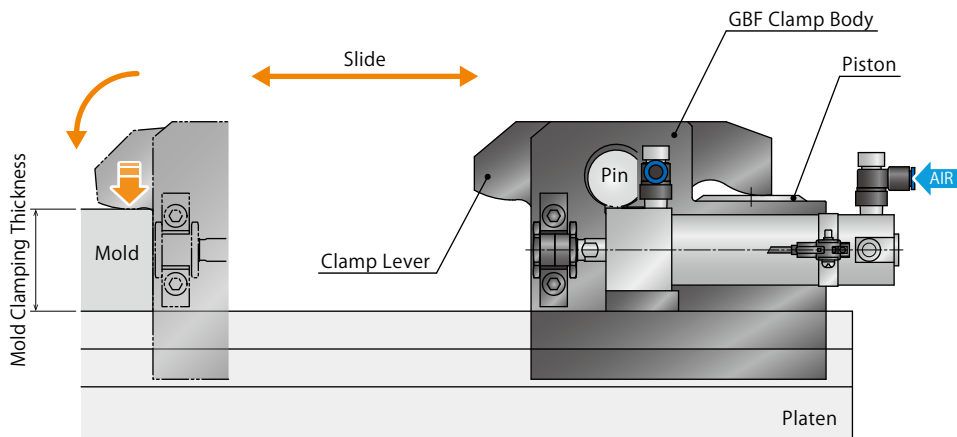
Model GBF



## GBC Clamp with an Air Cylinder

Automatic slide clamp with longer stroke allows for variation in mold clamping thicknesses. Clamp movement is automated.

### Action Description



#### Locked State

GBF clamp moves forward with the air supply to the air cylinder.  
Supply hydraulic pressure after mold detection of proximity switch.  
The piston is lifted up, and the clamp lever pivots on the pin and locks the mold.

Forward End Detection  ON  
Backward End Detection  OFF

#### Released State

When hydraulic pressure is released, the piston descends with built-in spring force and the clamp lever is at released state.  
After that, supply the air to the air cylinder and GBF clamp moves backward automatically.  
(The backward-end detection switch detects that the GBE clamp moves backward.)

Forward End Detection  OFF  
Backward End Detection  ON

※ We provide GBF clamp according to the mold clamping thickness and T-slot dimension.  
Please refer to the external dimensions for detail.

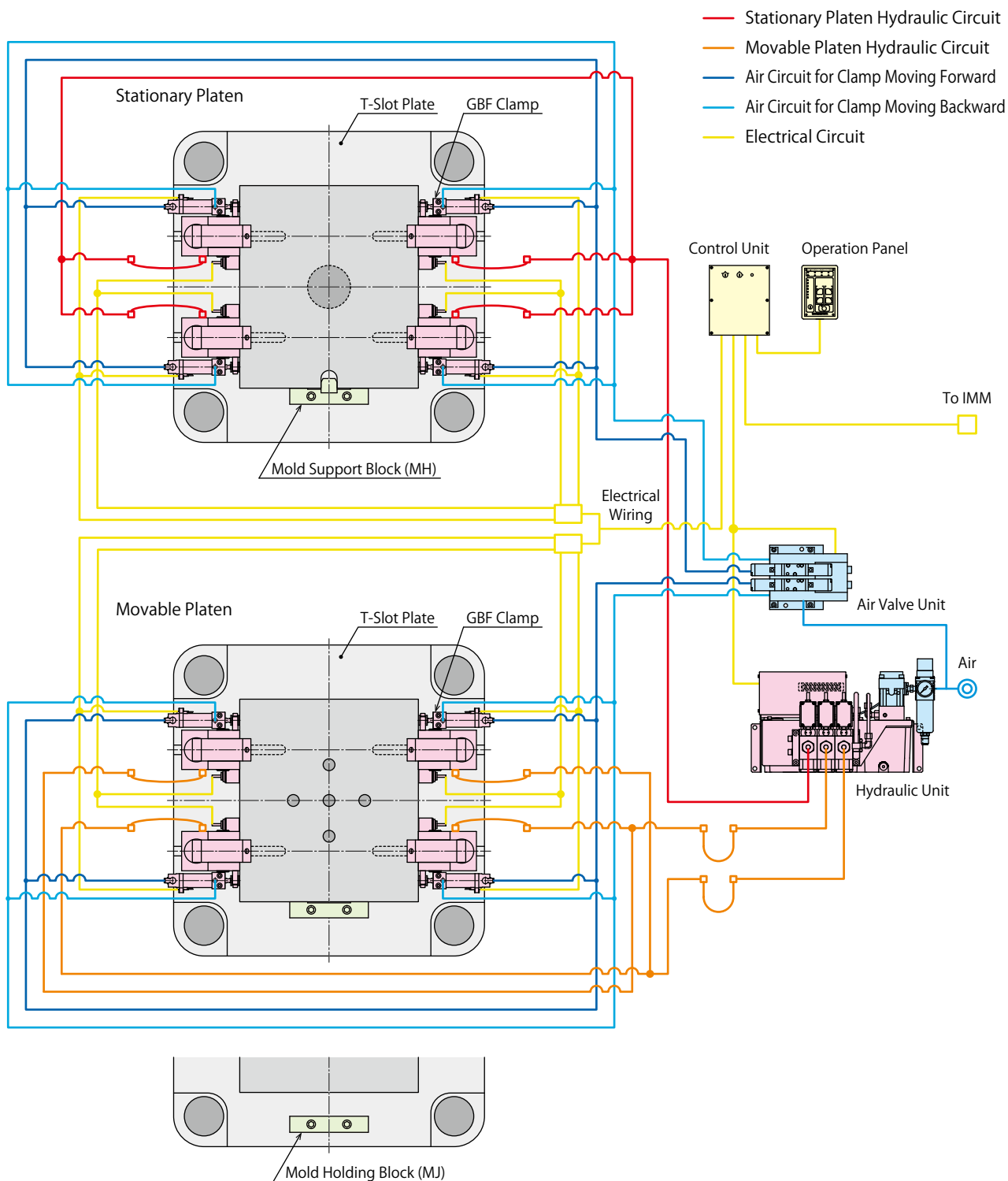
## System Structure Example

The basic structure with GBF clamp that is slid automatically in the T-slot by the air cylinder.

This system is able to control one stationary platen circuit and two movable platen circuits with a three-circuit hydraulic unit.

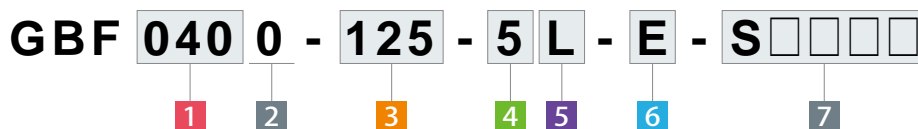
Clamps are slid by the air valve unit.

- Hydraulic Clamp : GBF Clamp
- Hydraulic Unit : CP□□ Unit
- Air Valve Unit : MV30□2 Valve Unit





Model No. Indication



**1 Clamping Force**

- |                                    |                                    |
|------------------------------------|------------------------------------|
| <b>025</b> : Clamping Force= 25kN  | <b>160</b> : Clamping Force= 160kN |
| <b>040</b> : Clamping Force= 40kN  | <b>250</b> : Clamping Force= 250kN |
| <b>063</b> : Clamping Force= 63kN  | <b>400</b> : Clamping Force= 400kN |
| <b>100</b> : Clamping Force= 100kN | <b>500</b> : Clamping Force= 500kN |

**2 Design No.**

**0** : Revision Number

**3 Slide Stroke**

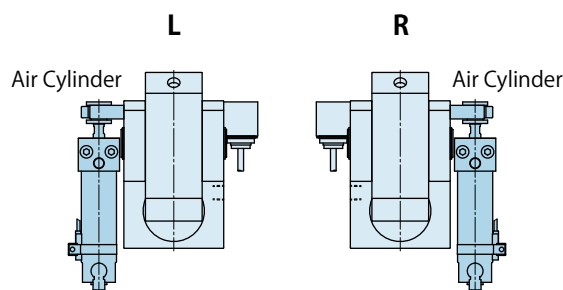
- 50** : Slide Stroke 50mm  
**125** : Slide Stroke 125mm

**4 Switch Load Voltage (Current)**

- 1** : AC100V  
**2** : AC200V  
**5** : DC24V (5~40mA)

**5 Air Cylinder Mounting Position**

- L** : Left (Left Side as Seen from Clamp Back Side)  
**R** : Right (Right Side as Seen from Clamp Back Side)



**6 Option** ※ Please contact us for specifications/external dimensions.

- E** : Reinforced Body
- H** : Extra Height Body (When h dimension is more than max. h dimension shown in the external dimension.)
- J** : Low Lever (When h dimension is less than min. h dimension shown in the external dimension.)
- K** : Rear Port
- L**□ : Wide Lever (For U-Cut of Mold) ※<sup>1</sup>
- N** : NPT Port ※<sup>2</sup>
- Q** : Double Cylinder
- R** : Longer D Dimension of T-Leg
- S** : Special Spacer
- U** : With Grease Nipple
- V** : High Temperature (0~120°C)

Notes

- ※1. Please indicate the U-cut dimension of the mold.
- ※2. Dimensions in the specification sheet and other documents are in inches.

**7 Production Number**

This number represents the main specification of the clamp's T-slot stem and the clamping height. After the specification is confirmed, we will create a number.

## Specifications

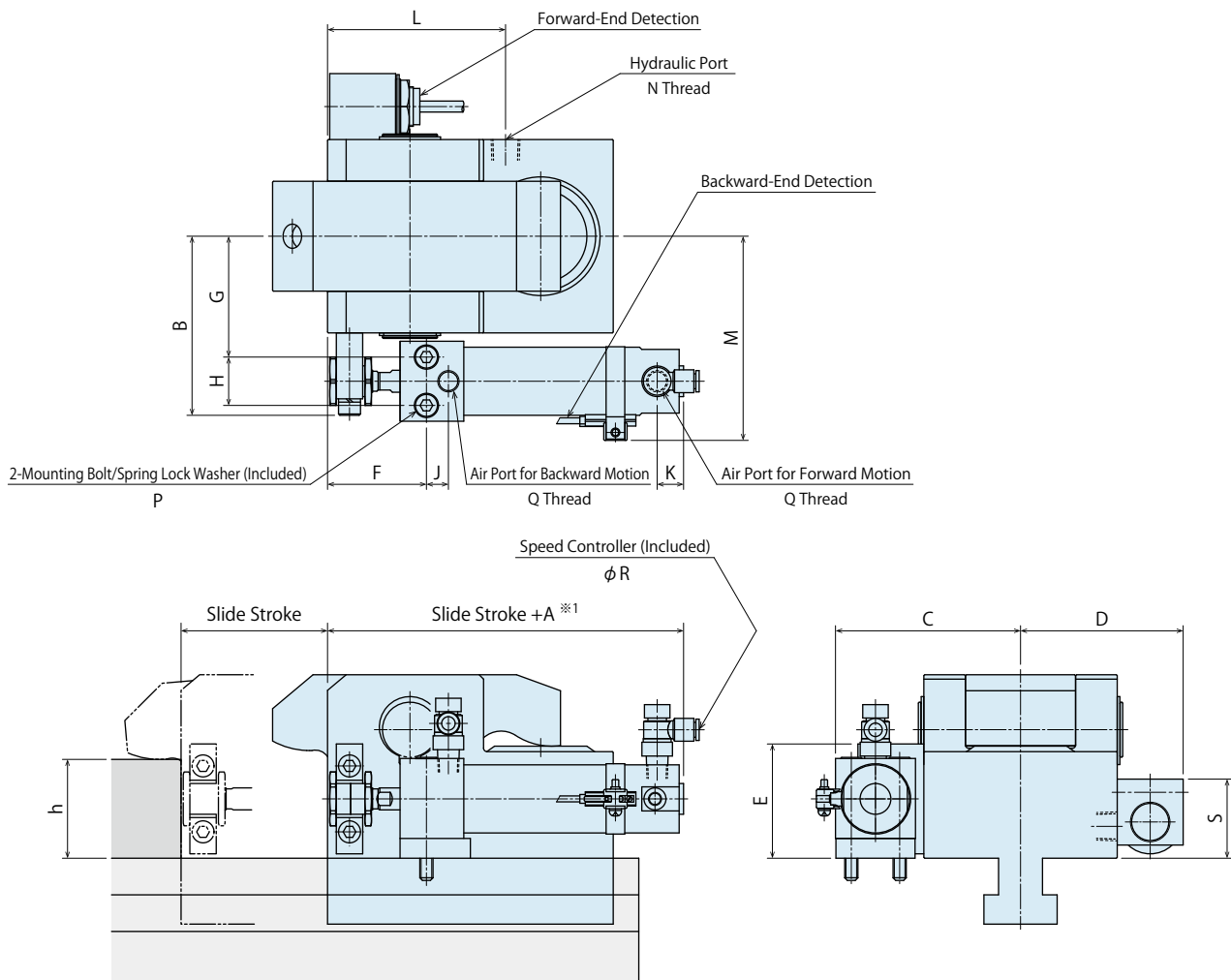
| Model No.                               | GBF0250         | GBF0400   | GBF0630 | GBF1000 | GBF1600 | GBF2500 | GBF4000 | GBF5000 |               |
|---|-----------------|---|---------|---------|---------|---------|---------|---------|---------------|
| GBC Model No.                           | GBC0250         | GBC0400   | GBC0630 | GBC1000 | GBC1600 | GBC2500 | GBC4000 | GBC5000 |               |
| Clamping Force                          | kN              | 25  | 40      | 63      | 100     | 160     | 250     | 400     | 500           |
| Working Pressure                        | MPa             | 25 (For Rated Clamp Force)                              |         |         |         |         |         |         |               |
| Withstanding Pressure                   | MPa             | 37  |         |         |         |         |         |         |               |
| Slide Stroke Range                      | mm              | 25~200  | 25~200  | 50~200  | 50~200  | 50~300  | 50~300  | 50~300  | 50~300        |
| Full Stroke                             | mm              | 10  | 12      | 15      | 15.5    | 16      | 16      | 16      | 16.5          |
| Clamp Stroke                            | mm              | 1.5   | 3.5     | 1       | 1.5     | 2       | 2       | 2       | 2.5           |
| Extra Stroke                            | mm              | 8.5   | 8.5     | 14      | 14      | 14      | 14      | 14      | 14            |
| Cylinder Capacity (At Full Stroke)      | cm <sup>3</sup> | 10  | 19      | 38      | 63      | 105     | 160     | 253     | 331           |
| Operating Temperature <sup>※3</sup>     | °C              | 0~70 (High temperature option is available for 0~120°C) |         |         |         |         |         |         |               |
| Use Frequency <sup>※4</sup>             |                 | Less than 20 Cycles / Day                               |         |         |         |         |         |         |               |
| Pressurizing Agent <sup>※5 ※6 ※7</sup>  |                 | General Hydraulic Oil Equivalent to ISO-VG-32           |         |         |         |         |         |         |               |
| Min. T-Slot Width a (JIS) <sup>※8</sup> | mm              | 14  | 18      | 22      | 24      | 28      | 36      | 36      | 36 (2 T-Legs) |
| Max. T-Slot Width a (JIS) <sup>※8</sup> | mm              | 32  | 42      | 42      | 54      | 54      | 54      | 54      | 48 (2 T-Legs) |

### Notes

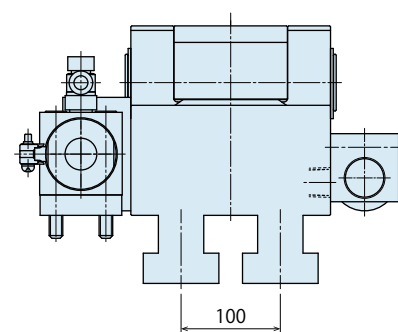
- ※3. Option **V**: High Temperature (0~120°C) is for operating in temperatures of 70°C or more.
- ※4. Please contact us for more frequent use.
- ※5. Please contact us for fluids other than those mentioned on the list.
- ※6. If hydraulic viscosity is higher than specified, action time will be longer.
- ※7. If using it at low temperature, action time will be longer because the viscosity of hydraulic oil becomes higher.
- ※8. It shows reference dimensions. The dimension may differ from specification depending on T-slot (T-leg) dimension, dimension of clamp cylinder that sticks out of T-slot during lock action, or body material.
  1. Please refer to GBC clamp pages (p. 19-24) for details of clamp body.

External Dimensions

※ This drawing shows GBF0250 ~ GBF4000 standard model.  
 Contact us for external dimensions for options.  
 Please refer to GBC clamp pages (p. 19-24) for details of clamp body.



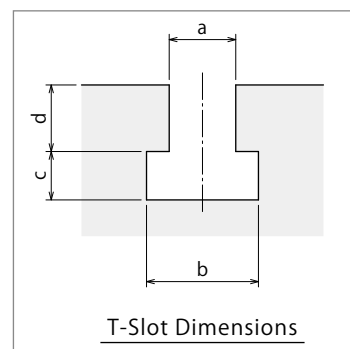
※ GBF5000 has two T-legs.  
 Contact us for external dimensions for options.  
 Please refer to GBC clamp pages (p. 19-24) for details of clamp body.



Notes

1. Do not exceed the clamping force on the specification.
2. Specifications/Contents in this catalog are subject to change without prior notice. Ask for the approval drawing before deciding to purchase.

T-Slot Dimensions



## External Dimensions

(mm)

| Model No.           | GBF0250   | GBF0400   | GBF0630 | GBF1000    | GBF1600    | GBF2500     | GBF4000   | GBF5000   |
|---------------------|-----------|-----------|---------|------------|------------|-------------|-----------|-----------|
| GBC Clamp Model No. | GBC0250   | GBC0400   | GBC0630 | GBC1000    | GBC1600    | GBC2500     | GBC4000   | GBC5000   |
| Full Stroke         | 10        | 12        | 15      | 15.5       | 16         | 16          | 16        | 16.5      |
| Clamp Stroke        | 1.5       | 3.5       | 1       | 1.5        | 2          | 2           | 2         | 2.5       |
| Extra Stroke        | 8.5       | 8.5       | 14      | 14         | 14         | 14          | 14        | 14        |
| A <sup>※1</sup>     | 105       | 105       | 112     | 118        | 136        | 157         | 184       | 184       |
| B                   | 60.5      | 65.5      | 81.5    | 92.5       | 112        | 137         | 189       | 201.5     |
| C                   | 63.5      | 68.5      | 84.5    | 94.5       | 116.5      | 142         | 218.5     | 231       |
| D                   | 59        | 64        | 74      | 78.5       | 88.5       | 102         | 117.5     | 130       |
| E                   | 37        | 37        | 52      | 58         | 70.5       | 81          | 119       | 119       |
| F                   | 39        | 39        | 45      | 46         | 56         | 64          | 57        | 57        |
| G                   | 39        | 44        | 55      | 61         | 74         | 89          | 106.5     | 119       |
| H                   | 18        | 18        | 22      | 24         | 32         | 41          | 96        | 96        |
| J                   | 9         | 9         | 10      | 13         | 14         | 16          | 36        | 36        |
| K <sup>※1</sup>     | 12        | 12        | 12      | 12         | 12         | 14          | 19        | 19        |
| L                   | 75.5      | 93.5      | 81      | 91         | 126        | 170.5       | 215       | 250       |
| M                   | 72.5      | 77.5      | 93      | 103.5      | 125        | 150.5       | 213.5     | 226       |
| N                   | Rc1/8     | Rc1/4     | Rc1/4   | Rc1/4      | Rc1/4      | Rc1/4       | Rc3/8     | Rc3/8     |
| P                   | M5x0.8x40 | M5x0.8x40 | M6x1x50 | M8x1.25x55 | M10x1.5x70 | M12x1.75x85 | M16x2x130 | M16x2x130 |
| Q                   | Rc1/8     | Rc1/8     | Rc1/8   | Rc1/8      | Rc1/8      | Rc1/4       | Rc3/8     | Rc3/8     |
| R <sup>※2</sup>     | 6         | 6         | 6       | 6          | 6          | 10          | 10        | 10        |
| S                   | 40.5      | 40.5      | 36      | 36         | 36         | 36          | 36        | 36        |
| min. h              | 25        | 25        | 30      | 40         | 40         | 45          | 50        | 60        |
| max. h              | 50        | 50        | 60      | 70         | 80         | 80          | 85        | 85        |

### Notes

- ※1. "A" and "K" dimensions are different when exceeding the stroke value written in the list. Please contact us for detail.
- ※2. For -N:NPT Port, "R" dimension is in inches.
  1. If you would like to change the ratio of clamp stroke and extra stroke, please contact us.
  2. When making an order, please indicate a, b, c, d dimension of T-slot and h dimensions of clamping mold thickness.
  3. Please refer to GBC clamp pages (p. 19-24) for unlisted dimensions.

## Slide Stroke List

| Model No. | Slide Stroke (mm) |    |    |     |     |     |     |     |     |
|-----------|-------------------|----|----|-----|-----|-----|-----|-----|-----|
|           | 25                | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 |
| GBF0250   | ○                 | ○  | ○  | ○   | ○   | ○   | ○   |     |     |
| GBF0400   | ○                 | ○  | ○  | ○   | ○   | ○   | ○   |     |     |
| GBF0630   |                   | ○  | ○  | ○   | ○   | ○   | ○   |     |     |
| GBF1000   |                   | ○  | ○  | ○   | ○   | ○   | ○   |     |     |
| GBF1600   |                   | ○  | ○  | ○   | ○   | ○   | ○   | ○   | ○   |
| GBF2500   |                   | ○  | ○  | ○   | ○   | ○   | ○   | ○   | ○   |
| GBF4000   |                   | ○  | ○  | ○   | ○   | ○   | ○   | ○   | ○   |
| GBF5000   |                   | ○  | ○  | ○   | ○   | ○   | ○   | ○   | ○   |

### Note:

1. "A" and "K" dimensions are different when exceeding the stroke value written in the list. Please contact for detail.

# Sales Offices

## Sales Offices across the World

|  |   |                               |
|--|---|-------------------------------|
| Japan  | <b>TEL. +81-78-991-5162</b>   | <b>FAX. +81-78-991-8787</b>   |
| Overseas Sales                                     | KOSMEK LTD. 1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, Japan 651-2241<br>〒651-2241 兵庫県神戸市西区室谷2丁目1番5号                                 |                               |
| USA  | <b>TEL. +1-630-241-3465</b>   | <b>FAX. +1-630-241-3834</b>   |
| KOSMEK (USA) LTD.                                  | 1441 Branding Avenue, Suite 110, Downers Grove, IL 60515 USA  |                               |
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| P.T PANDU HYDRO PNEUMATICS                         | Ruko Green Garden Blok Z- II No.51 Rt.005 Rw.008 Kedoya Utara-Kebon Jeruk Jakarta Barat 11520 Indonesia                                       |                               |

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