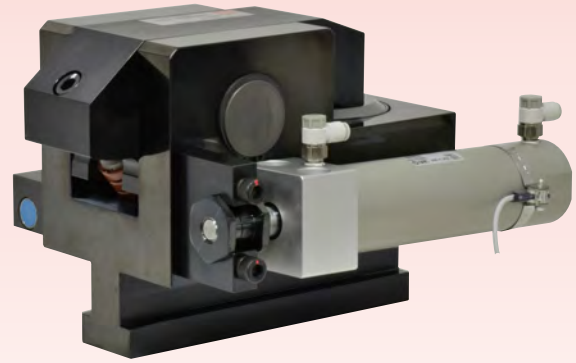


# Hydraulic Clamp

Longer Stroke / T-Slot Automatic-Slide

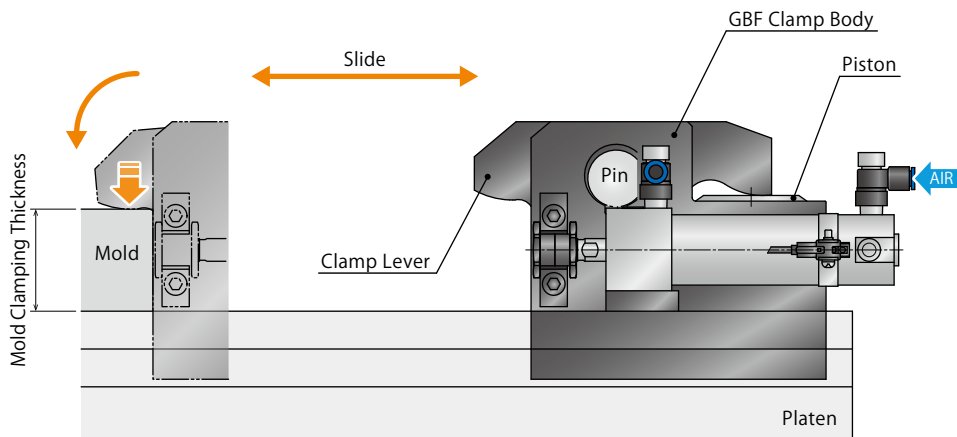
Model GBF



## 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.

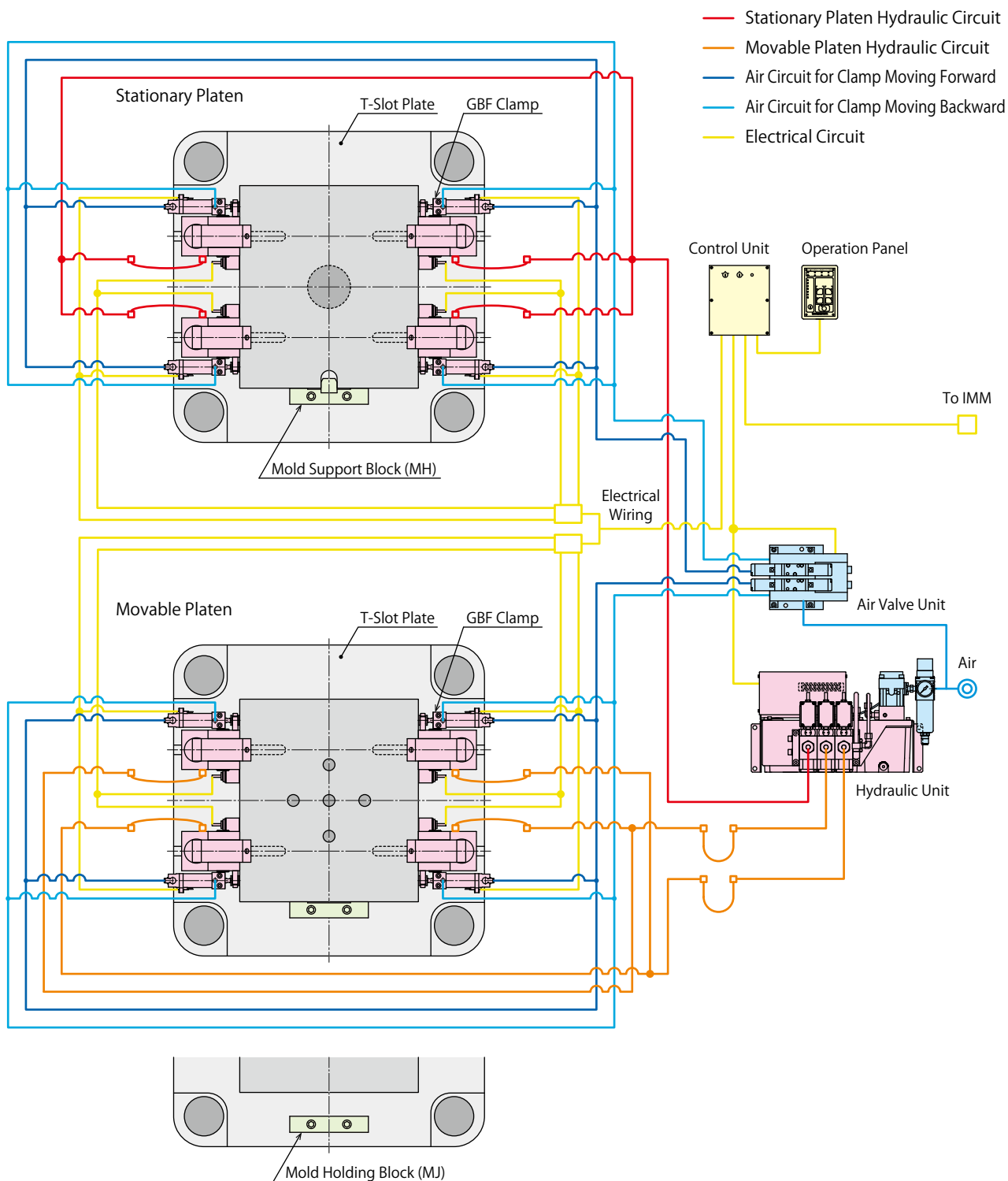
● **System Structure Example**

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

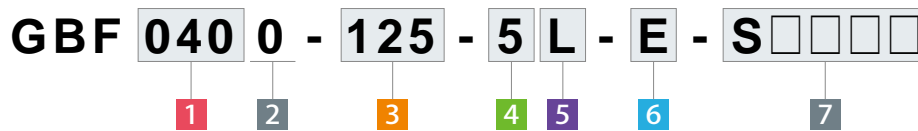
This system is able to control one stationary platen circuit and two movable platen circuits with a three-circuit hydraulic unit.

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**

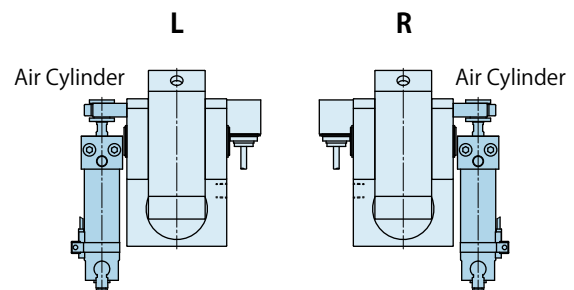
- 50** : Slide Stroke 50mm  
**125** : Slide Stroke 125mm

**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

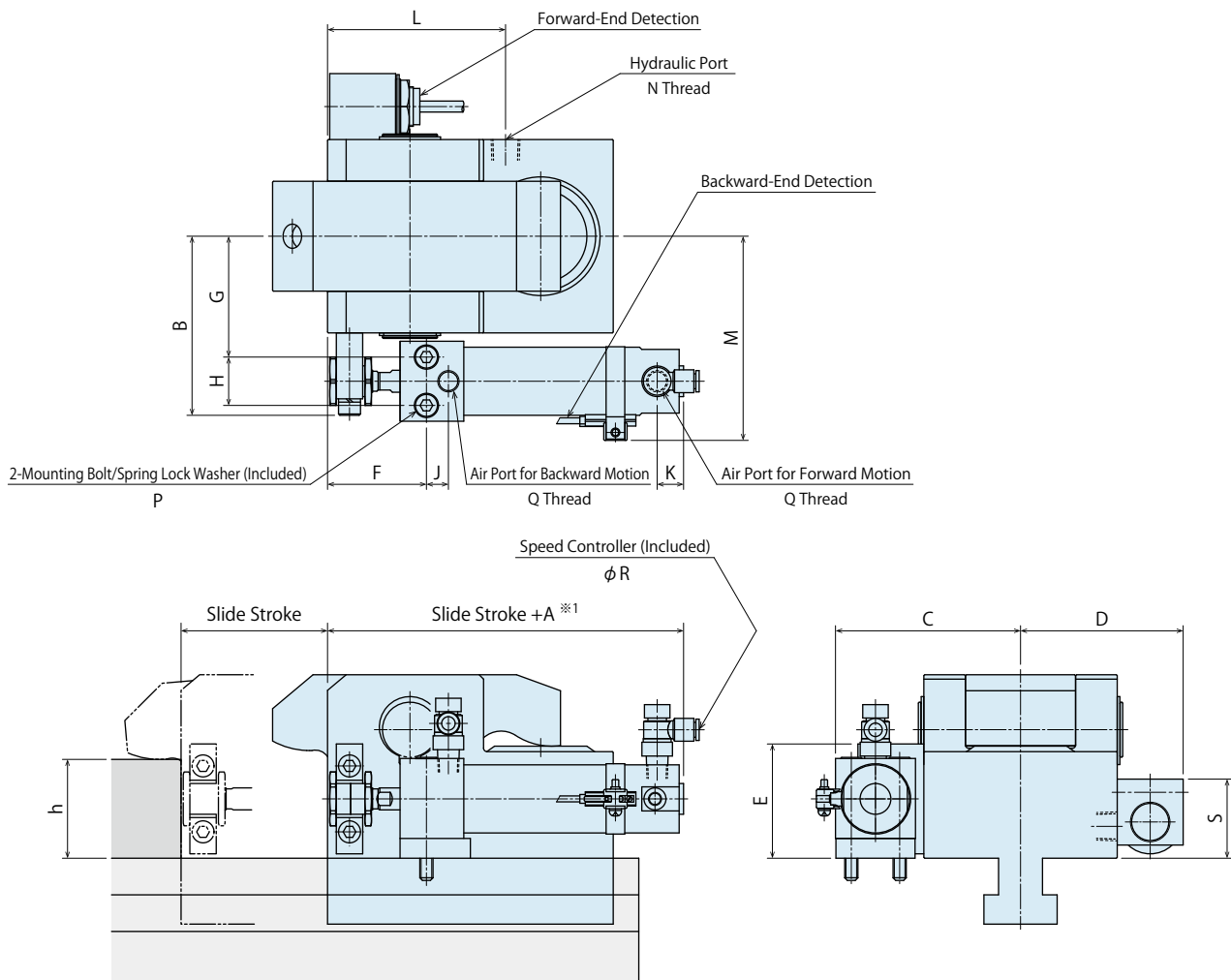
Model No.	GBF0250	GBF0400	GBF0630	GBF1000	GBF1600	GBF2500	GBF4000	GBF5000	
GBC Model No.	GBC0250	GBC0400	GBC0630	GBC1000	GBC1600	GBC2500	GBC4000	GBC5000	
Clamping Force	kN	25	40	63	100	160	250	400	500
Working Pressure	MPa	25 (For Rated Clamp Force)							
Withstanding Pressure	MPa	37							
Slide Stroke 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 ※3	°C	0~70 (High temperature option is available for 0~120°C)							
Use Frequency ※4		Less than 20 Cycles / Day							
Pressurizing Agent ※5 ※6 ※7		General Hydraulic Oil Equivalent to ISO-VG-32							
Min. T-Slot Width a (JIS) ※8	mm	14	18	22	24	28	36	36	36 (2 T-Legs)
Max. T-Slot Width a (JIS) ※8	mm	32	42	42	54	54	54	54	48 (2 T-Legs)

### Notes

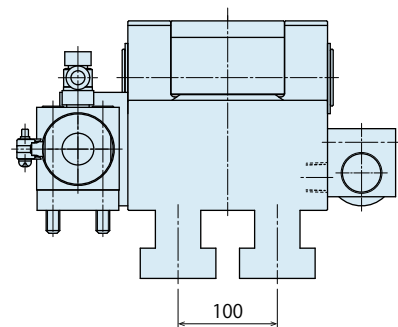
- ※3. Option **V**: High Temperature (0~120°C) is for operating in temperatures of 70°C or more.
- ※4. Please contact us for more frequent use.
- ※5. Please contact us for fluids other than those mentioned on the list.
- ※6. If hydraulic viscosity is higher than specified, action time will be longer.
- ※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.



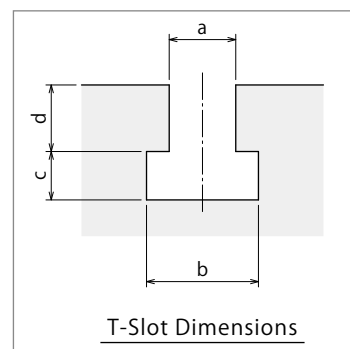
※ GBF5000 has two T-legs.  
 Contact us for external dimensions for options.  
 Please refer to GBC clamp pages (p. 19-24) for details of clamp body.



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.

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