

# Hydraulic Clamp

Fixed Bolt

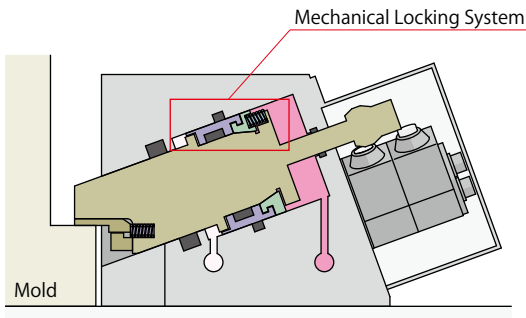
Model **GWA**



## Stationary Clamp with Built-in Mechanical Lock

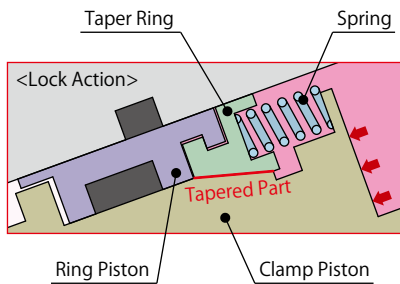
Highly reliable clamp with mechanical locking system maintains the holding force even when the locking pressure is removed.

### ● Features and Action Description



The mechanical locking system prevents a mold from falling.

The built-in mechanical lock holds the mold with a powerful holding force even when the locking pressure drops to zero in case of piping damage etc.

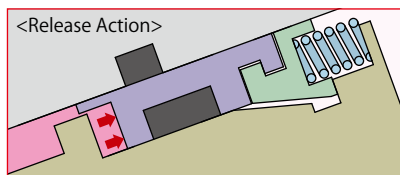


#### <Lock Action>

The taper ring expands to the tapered part of the clamp piston by the lock hydraulic pressure and spring force. (Mechanical Locking). Oil bath structure prevents the taper ring from sticking to the clamp piston.

#### <Lock Hydraulic Pressure at 0MPa>

The clamp piston maintains the locked state with the holding pressure created by the mechanical locking system.



#### <Release Action>

With the release pressure, the ring piston pushes up the taper ring to perform a smooth release action.

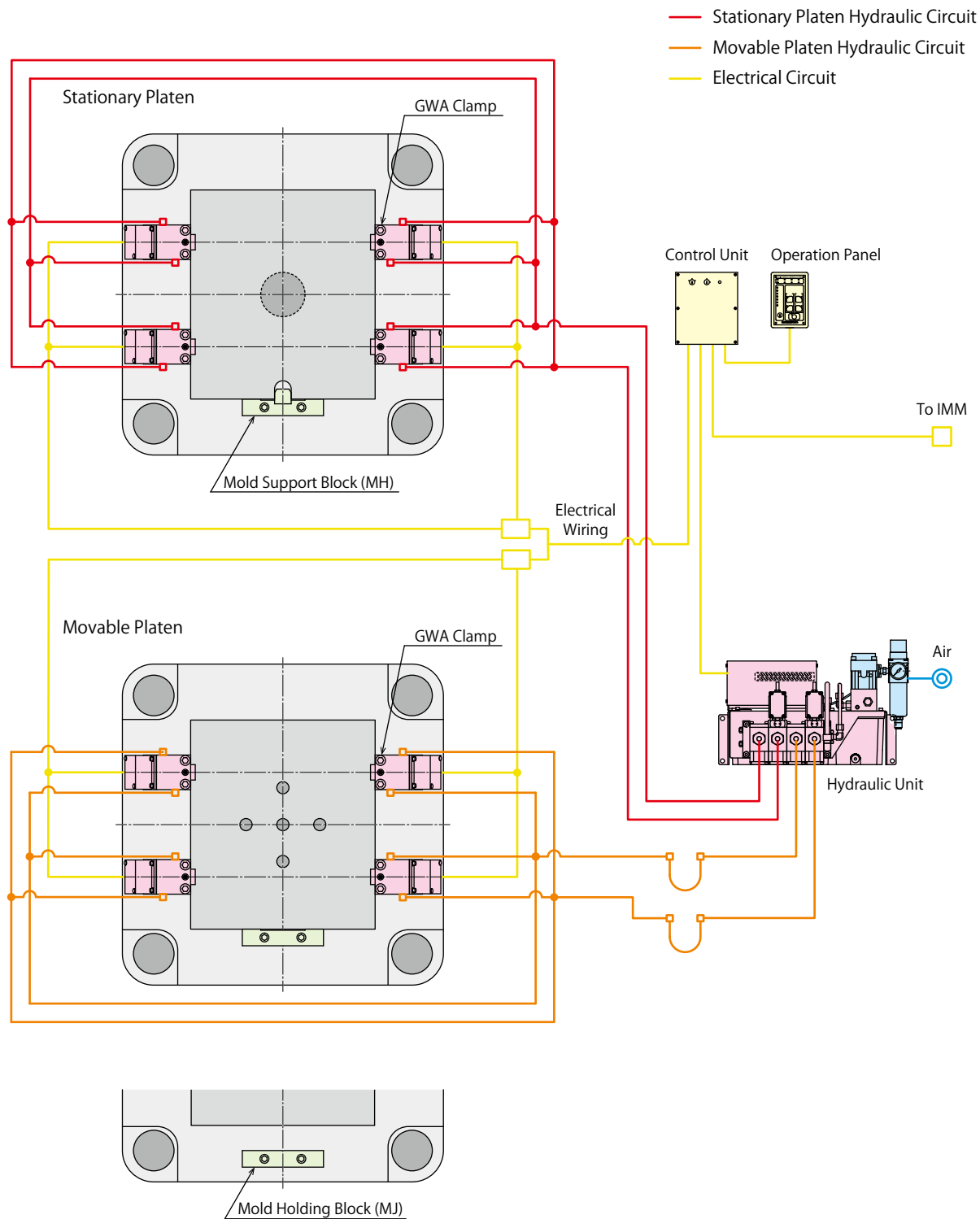
## System Structure Example

The basic structure with GWA fixed-bolt clamp.

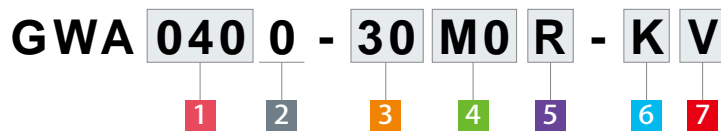
The system is able to control one stationary platen circuit and movable platen circuit with a two-circuit hydraulic unit.

Hydraulic Clamp : GWA Clamp

Hydraulic Unit : CP□□ Unit



Model No. Indication



**1 Clamping Force**

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| <b>010</b> : Clamping Force= 10kN | <b>100</b> : Clamping Force= 100kN |
| <b>016</b> : Clamping Force= 16kN | <b>160</b> : Clamping Force= 160kN |
| <b>025</b> : Clamping Force= 25kN | <b>250</b> : Clamping Force= 250kN |
| <b>040</b> : Clamping Force= 40kN | <b>400</b> : Clamping Force= 400kN |
| <b>063</b> : Clamping Force= 63kN | <b>500</b> : Clamping Force= 500kN |

**2 Design No.**

**0** : Revision Number

**3 Mold Clamping Thickness**

- 30** : Mold Clamping Thickness h=30mm  
**50** : Mold Clamping Thickness h=50mm

**4 Wiring System**

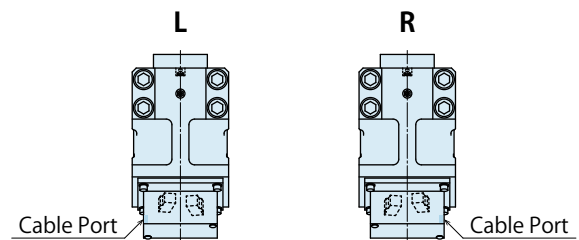
- M0** : Metallic Conduit ※1  
**M4** : Metallic Conduit ※1 (With 4m Cable) ※2  
**C1** : Conduit with  $\phi$  16mm Hole  
**C2** : Conduit with  $\phi$  22mm Hole

Notes

- ※1. Use metallic conduit plug SCK-14 (Sanwa) for cable side.  
 ※2. Cable end is composed of wires covered by a marker tube.

**5 Piping/Wiring Connection Direction** Both sides of the hydraulic ports are usable.

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



**6 Electrical Rating**

- Blank** : 3A Rating  
**K** : For Extremely Small Load

**7 Option**

- Blank** : Standard (0~70°C)  
**V** : High Temperature (0~120°C)

## Specifications

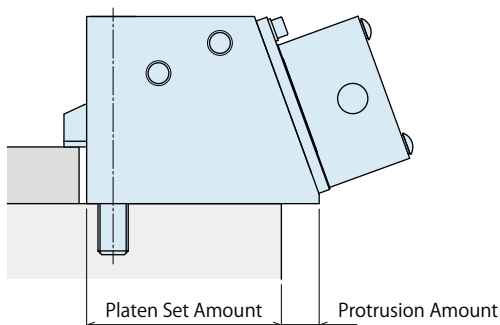
Model No.		GWA0100	GWA0160	GWA0250	GWA0400	GWA0630	GWA1000	GWA1600	GWA2500	GWA4000	GWA5000
Clamping Capacity	kN	10	16	25	40	63	100	160	250	400	500
Clamping Force (At 14MPa)	kN	10	16	25	40	63	100	160	250	400	400
Holding Force (At 0MPa)	kN	4	6.3	10	16	25	40	64	100	160	160
Working Pressure	MPa	14.0									
Withstanding Pressure	MPa	21.0									
Extra Stroke	mm	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Cylinder Capacity	Lock	6	11	19	35	64	121	227	411	757	757
	Release	3	4	8	13	24	48	102	177	349	349
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									

### 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.
  1. Do not exceed the clamp's capacity.
  2. There is ±10% variation in holding force and clamping force.
  3. The accuracy of the mold clamping thickness (h dimension) should be within ±0.5mm.

## GWA Clamp The Allowable Protrusion Amount of Cylinder

For GWA0100 ~ GWA1000



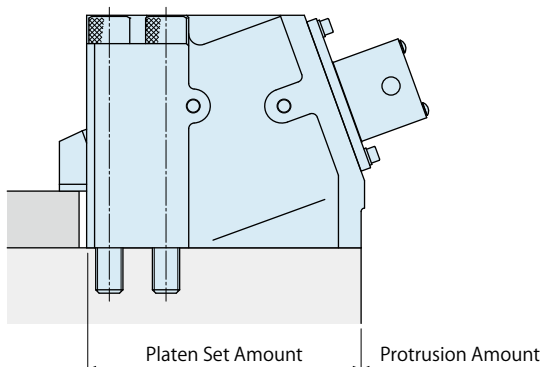
(mm)

Model No.	Min. Platen Set Amount	Allowable Protrusion Amount
GWA0100	46	35
GWA0160	55	38
GWA0250	84	23
GWA0400	61	62
GWA0630	75	65
GWA1000	120	35
GWA1600	205	0
GWA2500	245	0
GWA4000	305	0
GWA5000	305	0

### Note:

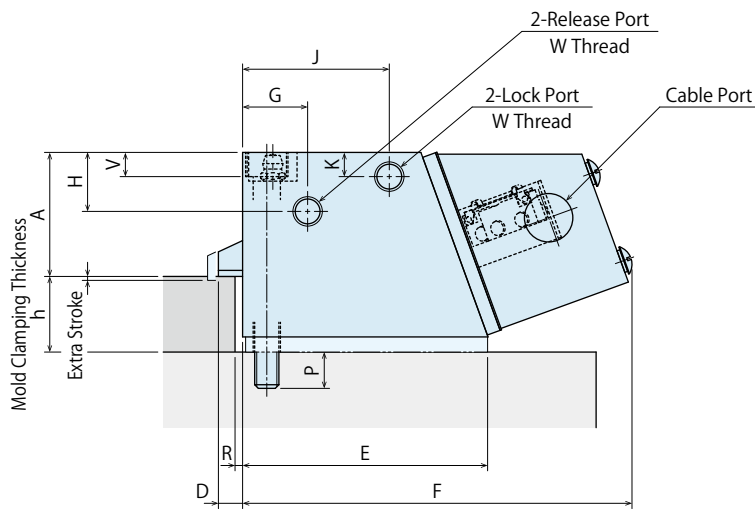
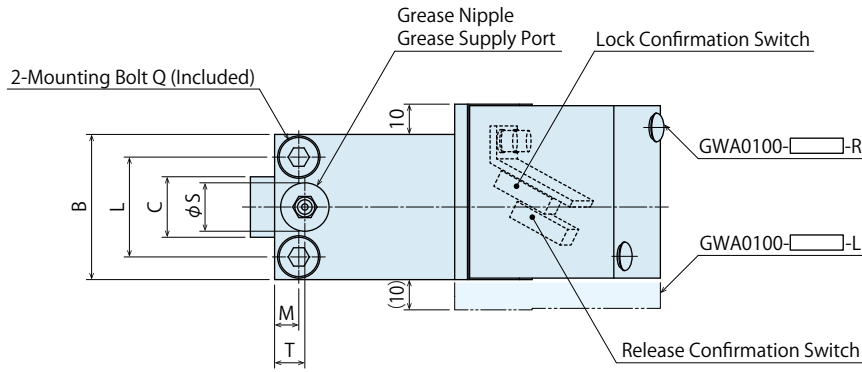
1. The dimensions listed above are reference.

For GWA1600 ~ GWA5000

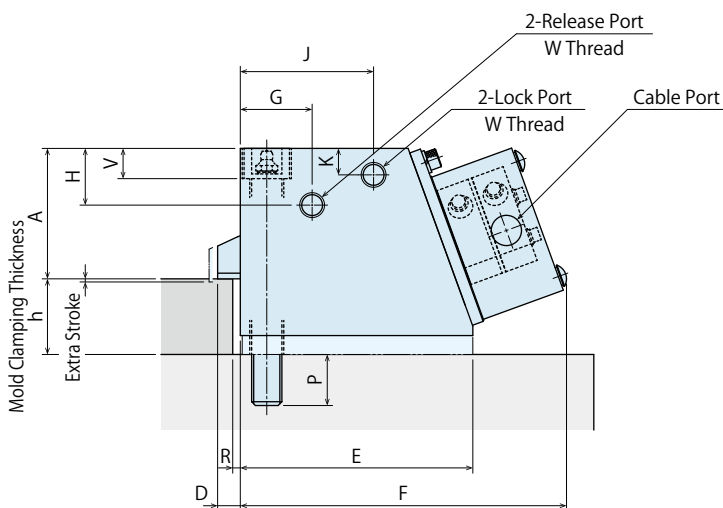
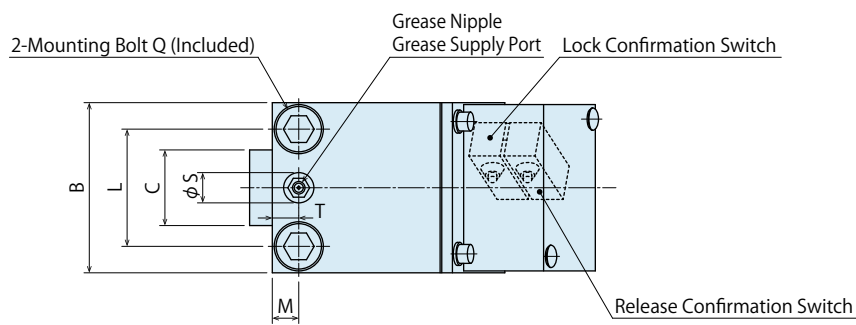


External Dimensions

※ This drawing shows GWA0100-□-R.

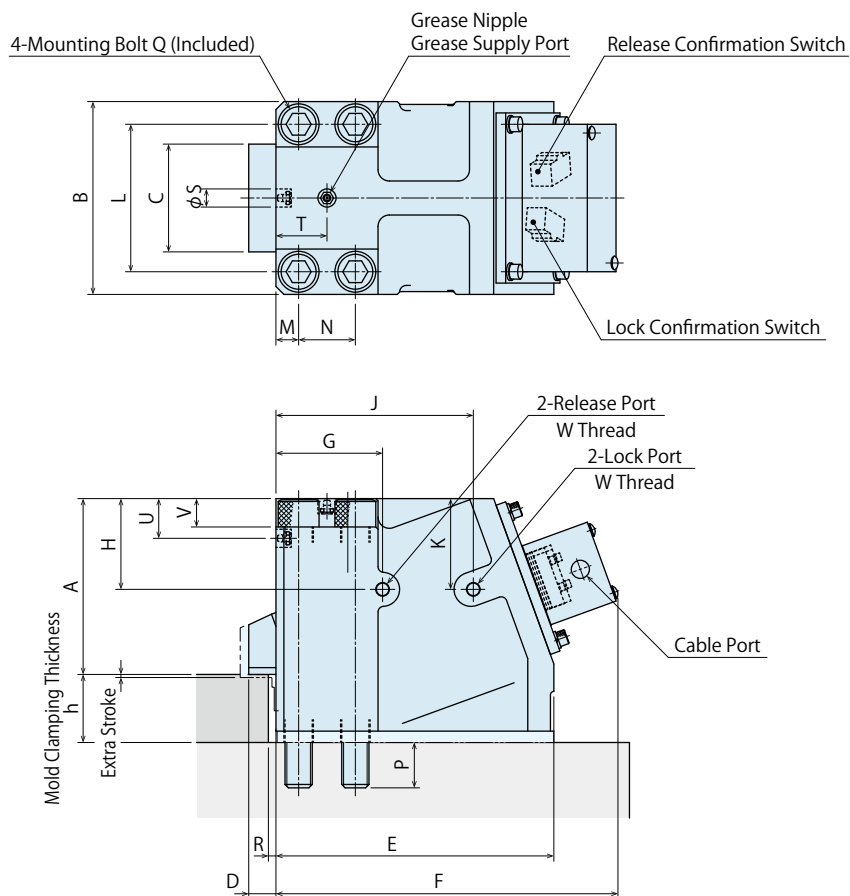


※ This drawing shows GWA0160 ~ GWA1000.



## External Dimensions

※ This drawing shows GWA1600 ~ GWA5000.



## External Dimensions

(mm)

Model No.	GWA0100	GWA0160	GWA0250	GWA0400	GWA0630	GWA1000	GWA1600	GWA2500	GWA4000	GWA5000
Extra Stroke	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
A	41	48	56	69	82	98	128	155	195	195
B	48	58	72	90	110	135	138	170	215	215
C	20	25	31.5	40	50	63	75	95	118	118
D	8	9	10	12	14	17	20	24	28	28
E	81	93	107	123	140	152	205	245	305	305
F	129	140	150	173	194	208	256	302	355	355
G	21.5	28	30.5	38	41	44	80	94	119	119
H	19.5	23	24	30	33	50	63	80	90	90
J	48.5	56.5	64	70.5	83	102	143.5	174	208	208
K	8	9.5	17	14	22	50	63	80	90	90
L	33	39	50	62	76	95	104	130	162	162
M	8	9.5	11	14	17	20	17	20	27	27
N	-	-	-	-	-	-	40	50	60	60
P	12	17	21	27	33	36	33	40	50	50
Q	M8 x 1.25	M10 x 1.5	M12 x 1.75	M16 x 2	M20 x 2.5	M24 x 3	M20 x 2.5	M24 x 3	M30 x 3.5	M33 x 3.5
R	1.5	1.5	2	2	3	3	5	5	5	5
S	16	16	16	16	16	16	16	16	16	16
T	10	12	11	14	15	20	40	45	65	65
U	-	-	-	-	-	35	35	35	40	40
V	8	10	12	16	20	24	21	25	35	35
W	Rc1/8	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc3/8	Rc3/8
h (Standard)	20 <sup>±0.5</sup>	20 <sup>±0.5</sup>	30 <sup>±0.5</sup>	30 <sup>±0.5</sup>	35 <sup>±0.5</sup>	40 <sup>±0.5</sup>	40 <sup>±0.5</sup>	50 <sup>±0.5</sup>	50 <sup>±0.5</sup>	50 <sup>±0.5</sup>

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