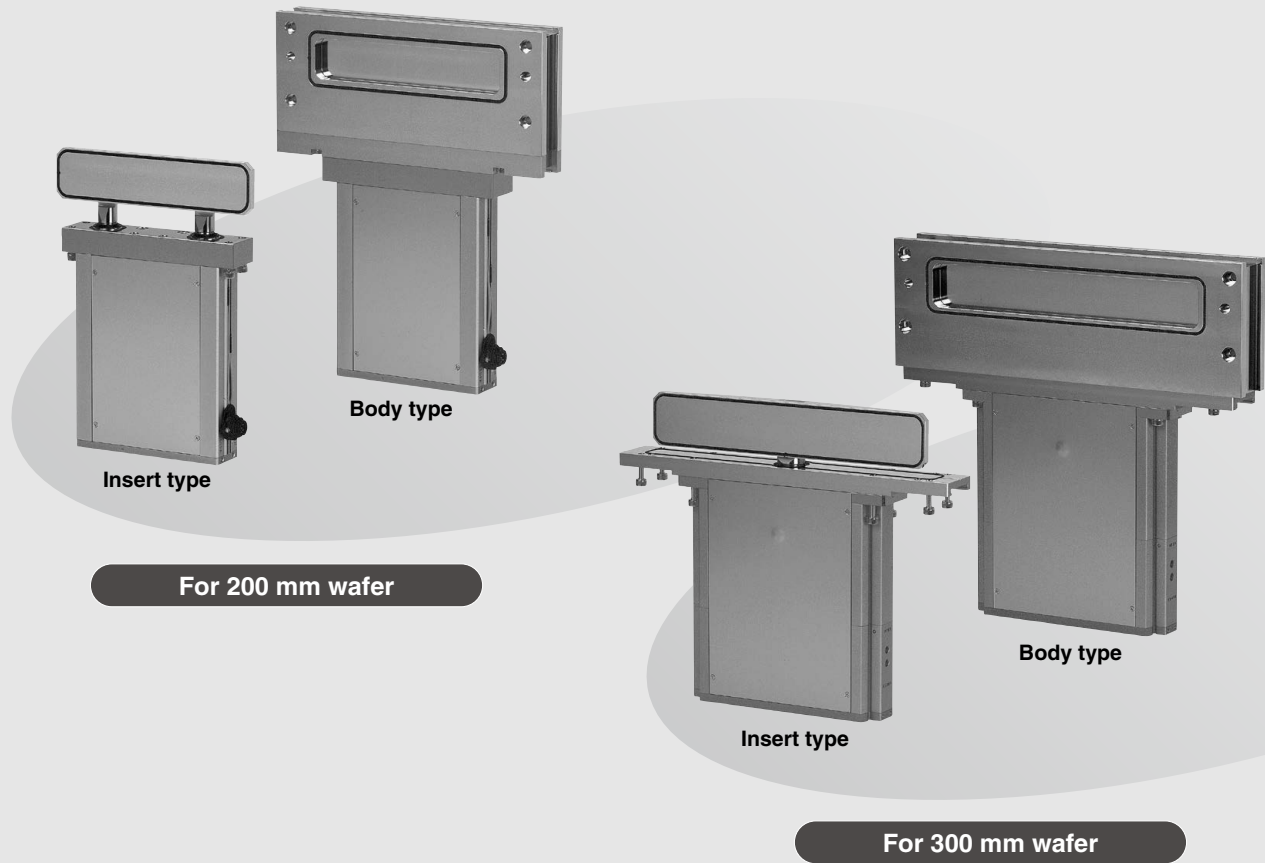


# Slit Valve

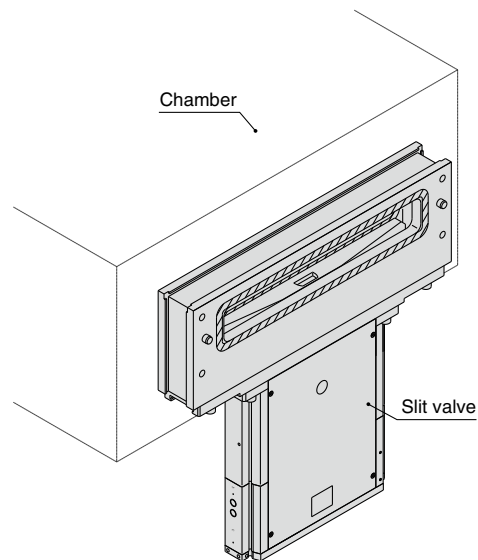
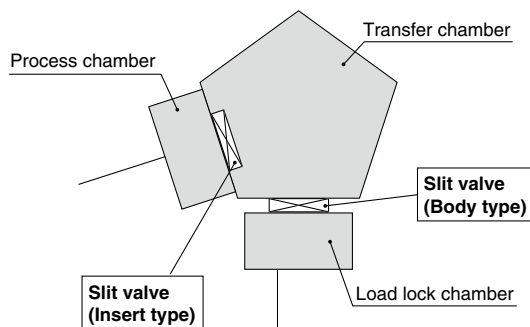
## XGT Series



■ **With end lock mechanism**  
Can be held open/close of the gate when emergency stop.

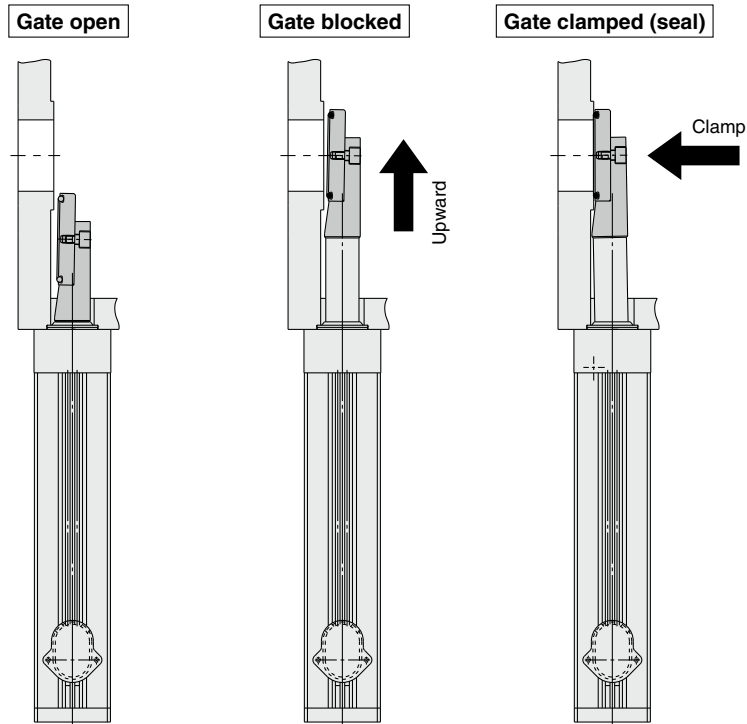
■ **Service life of two million cycles.**  
\* With SMC's life conditions.

This product is suitable for the partition valve between the load lock chamber and the transfer chamber or between the transfer chamber and the process chamber in semiconductor equipment or other equipment.



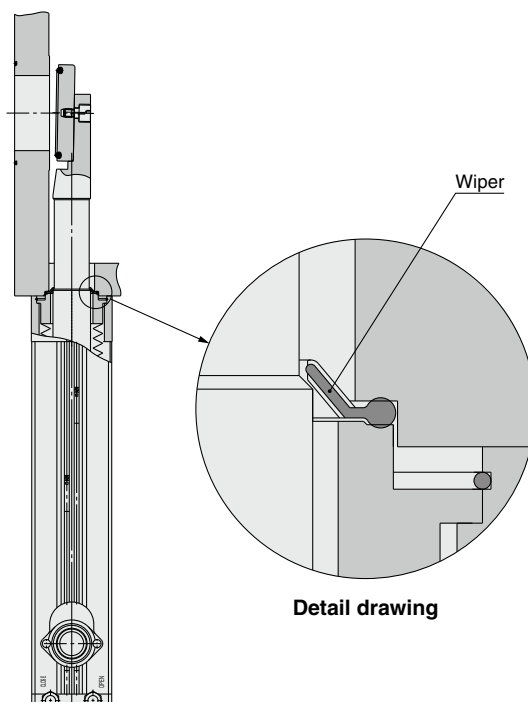
## J motion structure

Gate construction for two-stage operation consisting of a direct up and down movement and a clamp operation to seal the gate.



## Bellows protection structure

The adoption of a wiper decreases the intrusion of foreign objects, resulting from wafer damage and or other sources.



# Slit Valve XGT Series



## How to Order

**XGT 22 2 - 46236 - 1 C**

High vacuum slit valve ●

Valve size ●

Symbol	Number of axis	Applicable wafer size
<b>22</b>	Two axes bellows	200 mm
<b>31</b>	One axis bellows	300 mm

Auto switch and the connector  
(Refer to the table below)

Gate O-ring material

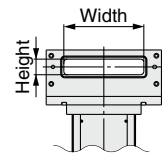
Symbol	Material
<b>1</b>	FKM
<b>2</b>	Kalrez® 4079*1
<b>F1</b>	FKM*2
<b>F2</b>	Kalrez® 4079*1, 3, 4

- \*1 Kalrez® 4079 is a registered trademark of E. I. du Pont de Nemours and Company or its affiliates.
- \*2 Specifications equivalent to the standard FKM O-ring (From another manufacturer)  
The O-rings of vacuum parts which come in contact with gas have the same specifications.
- \*3 Aside from the gate O-ring, the O-rings of vacuum parts which come in contact with gas have the same specifications as the standard FKM O-ring.
- \*4 There is no "XGT221-□-F2□."

Opening window size

Symbol	Height x width (mm)	Applicable wafer size
<b>32222</b> <sup>Note)</sup>	32 x 222	200 mm
<b>46236</b>	46 x 236	
<b>50336</b>	50 x 336	300 mm

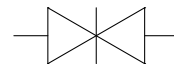
Note) Neither body type Half MESK nor body type Full MESK are set.



Valve type ●

Symbol		1	2	3	4
Valve type		Insert type	Body type Standard	Body type Half MESK	Body type Full MESK
Applicable wafer size	200 mm	●	●	●	●
	300 mm	●	●	●	—

Symbol



Made to Order specifications  
(For details, refer to page 151.)

Insert type



For 200 mm wafer



For 300 mm wafer

Body type



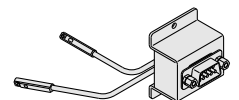
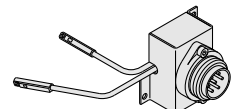
For 200 mm wafer



For 300 mm wafer

Auto switch and connector

Symbol	Auto switch	Connector
<b>Nil</b>	None	—
<b>A</b>		Lead wire: 0.5 m (without connector)
<b>C</b>	D-A93 (With 2 pcs. for opening and closing)	With multiple connector <sup>Note 1)</sup> (C016 30C006 10012: Made by AMP)
<b>F</b>		With D-sub connector <sup>Note 2)</sup> (CDE-9PF(05): Made by HIROSE ELECTRIC CO., LTD.)



- Note 1) C016 30D006 10012 made by AMP is recommended for the connector (female type).
- Note 2) CDE-9S made by HIROSE ELECTRIC CO., LTD. is recommended for the connector (female type).

## Specifications

Model		XGT22□-32222	XGT22□-46236	XGT31□-50336
Wafer size (mm)		200		300
Opening window size (Height x Width) (mm)		32 x 222	46 x 236	50 x 336
Number of axes		2		1
Operating environmental pressure <sup>Note 1)</sup> (Pa) (abs)		Atmospheric pressure to 10 <sup>-6</sup>		
Operating pressure differential (kPa)		4 or less		
Operating pressure range (MPa) (G)		0.45 to 0.6		
Internal leak <sup>Note 2)</sup> (Pa·m <sup>3</sup> /s) (He)	O-ring: FKM	6.5 x 10 <sup>-10</sup>		
	O-ring: Kalrez <sup>®</sup>	6.5 x 10 <sup>-9</sup>		
Internal leak <sup>Note 2)</sup> (Pa·m <sup>3</sup> /s) (He) at reversed pressure [Reversed pressure: 0.1 MPa (abs) or less]	O-ring: FKM	6.5 x 10 <sup>-8</sup>		
	O-ring: Kalrez <sup>®</sup>	6.5 x 10 <sup>-7</sup>		
External leak <sup>Note 2)</sup> (Pa·m <sup>3</sup> /s) (He)		6.5 x 10 <sup>-11</sup>		
Operation temperature <sup>Note 3)</sup> (°C)	Gate part	5 to 150		
	Actuator part	5 to 60		
Fluid		Inert gas under vacuum		
Operating time <sup>Note 4)</sup> (s)		0.6 to 1		
Main material of vacuum part	Seal material	FKM, Kalrez <sup>®</sup> 4079 <sup>Note 6)</sup>		
	Bellows	Equivalent to AM350		
	Gate	A6063		
	Body	A5052		
	Bonnet	A5052		
	Others	Stainless steel 304		
Exhaust direction		Free		
Mounting direction		Vertical		
Port size		M5 x 0.8	Rc 1/8	
End-lock mechanism		With lock mechanism at opening/closing position <sup>Note 5)</sup>		
Cylinder volume (L)		0.12	0.2	
Weight (kg)	Insert type	8	14	
	Body type: Standard	12	20	
	Body type: Half MESK	—	12	20
	Body type: Full MESK	—	11	—

Note 1) Absolute pressure

Note 2) Value at normal temperature: Not including gas permeation.

Note 3) If the temperature at the gate exceeds 60°C, the operating temperature at actuator may go beyond the range. In this case, cool the actuator part.

Note 4) This shows the time after the switching valve activates and causes the gate to open and close.

Note 5) The holding function of the seal is not guaranteed when the gate is clamped.

Note 6) Kalrez<sup>®</sup> 4079 is a registered trademark of E. I. du Pont de Nemours and Company or its affiliates.

\* If the gate is left closed for a long period of time, the O-ring may stick and fall out when opened. When opening the gate after it has been left closed for a long period of time, check to see if the O-ring has fallen out or if it is twisted.

### Auto switch specifications

Auto switch type	D-A93	
Applicable load	Relay, PLC	
Load voltage	24 VDC	100 VAC
Load current range and maximum load current	5 to 40 mA	5 to 20 mA
Contact protection circuit	None	
Internal voltage drop	2.4 V or less (to 20 mA) / 3 V or less (40 mA)	
Indicator light	Red light emitting diode (LED) lights up when ON.	

### D-sub connector specifications

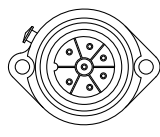
Description		Slit valve body side	Counter side
D-sub connector	Contacting division	Pin (male type)	Socket (female type)
	Shell size	E	
	Poles	9	

Prepare the socket contacting (female type) because the slit valve body is a pin contacting (male type).

**⚠ The product should be operated after thoroughly reading the manual and understanding its contents.**

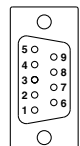
### Connector wiring diagram

#### C: Multiple connector (6P)



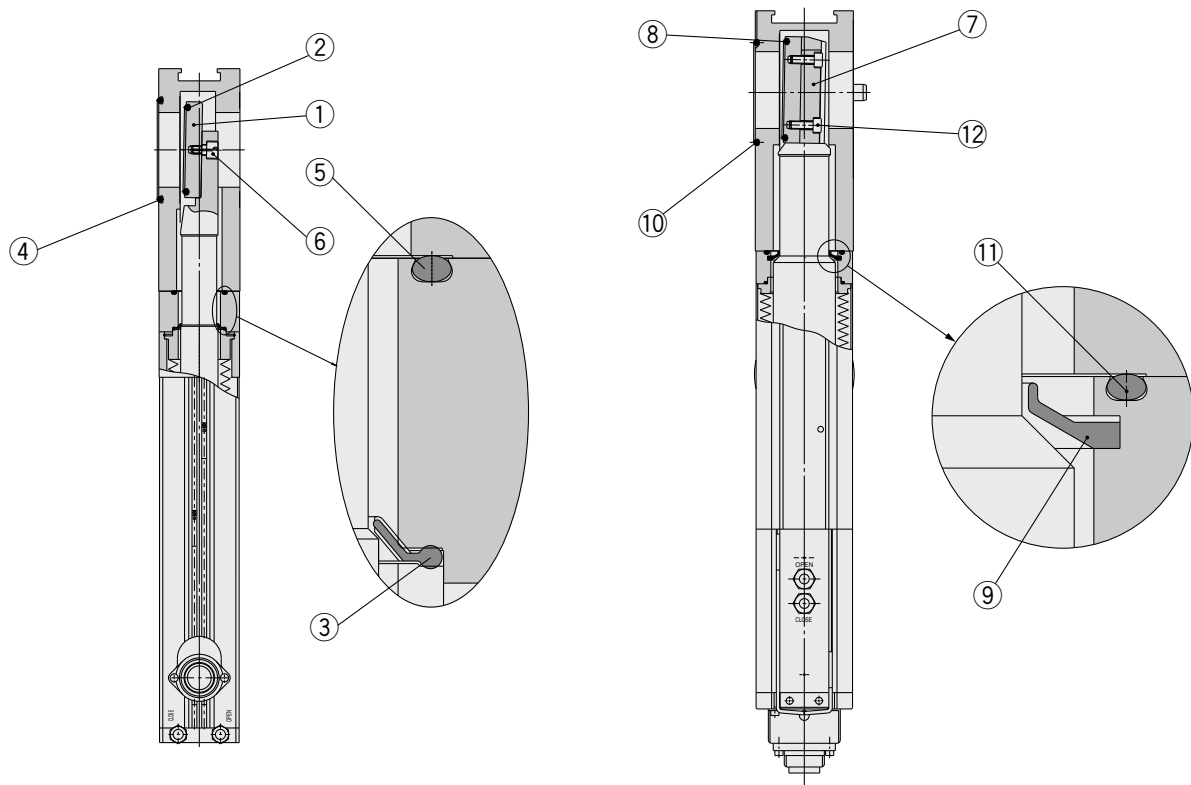
Terminal item no.	Lead wire color	Auto switch
1	Blue	OPEN (-)
2	Brown	OPEN (+)
3	—	—
4	—	—
5	Brown	CLOSE (+)
6	Blue	CLOSE (-)

#### F: D-sub connector (9P)



Terminal item no.	Lead wire color	Auto switch
1	Brown	OPEN (+)
2	Brown	CLOSE (+)
3	—	—
4	—	—
5	—	—
6	—	—
7	Blue	OPEN (-)
8	Blue	CLOSE (-)
9	—	—

**Construction**



**XGT22**  
For 200 mm wafer

**XGT31**  
For 300 mm wafer

**Component Parts**

**XGT22 (200 mm wafer type)**

No.	Description	Material	Part number	Corresponding model
1	Gate	A6063	XGT0101-2-1S	XGT22-32222-□□
			XGT0402-2-1S	XGT22-46236-□□
2	O-ring (Gate)	FKM	XGT200-9-13S	XGT22-32222-□□
		FKM (Equivalent to the standard FKM O-ring)	XGT200-9-13-F1S	
		Kalrez®4079	XGT200-9-14S	
		FKM	XGT200-9-7S	XGT22-46236-□□
		FKM (Equivalent to the standard FKM O-ring)	XGT200-9-7-F1S	
3	Gasket	FKM	XGT200-9-9S	XGT22-□□-□□
4	O-ring (Body opening side)	FKM	XGT200-4-9S	XGT222-32222-□□
		FKM	XGT200-9-12S	XGT222-46236-□□
		FKM (Equivalent to the standard FKM O-ring)	XGT200-9-12-F1S	XGT223-46236-□□
5	O-ring (Bonnet assembly)	FKM	XGT200-9-11S	XGT224-46236-□□
		FKM (Equivalent to the standard FKM O-ring)	XGT200-9-11-F1S	XGT222-32222-□□
6	Holding bolt	Stainless steel 304	XGT200-9-11-F1S	XGT222-46236-□□
			XGT200-2-5S	XGT223-46236-□□

**XGT31 (300 mm wafer type)**

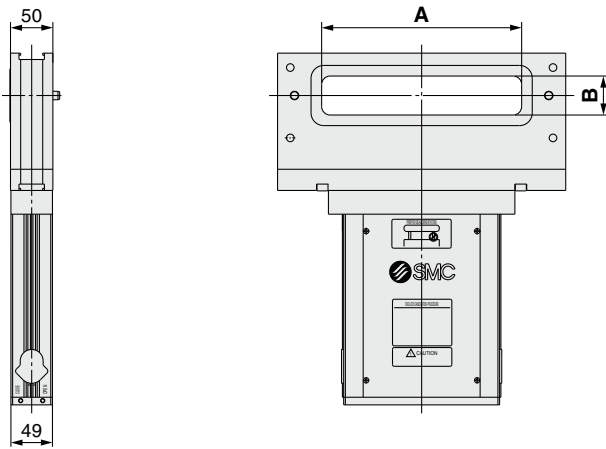
No.	Description	Material	Part number	Corresponding model
7	Gate	A6063	XGT300-2-1S	XGT31-50336-□□
8	O-ring (Gate)	FKM	XGT300-9-9S	
		FKM (Equivalent to the standard FKM O-ring)	XGT300-9-9-F1S	
		Kalrez®4079	XGT300-9-11S	
9	Wiper	FKM	XGT300-4-9S	
10	O-ring (Body opening side)	FKM	XGT300-9-10S	
		FKM (Equivalent to the standard FKM O-ring)	XGT300-9-10-F1S	
11	O-ring (Bonnet assembly)	FKM	XGT300-9-7S	
		FKM (Equivalent to the standard FKM O-ring)	XGT300-9-7-F1S	
12	Holding bolt	Stainless steel 316	XGT300-2-5S	

\* Kalrez® 4079 is a registered trademark of E. I. du Pont de Nemours and Company or its affiliates.

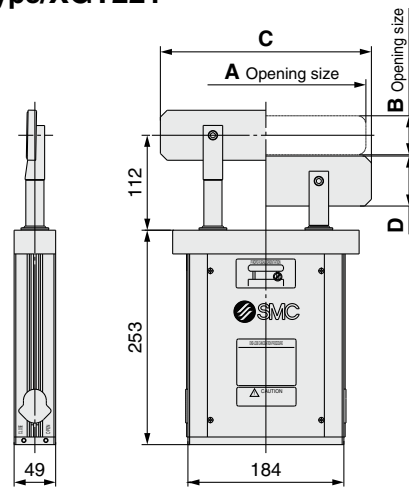
# XGT Series

## Dimensions

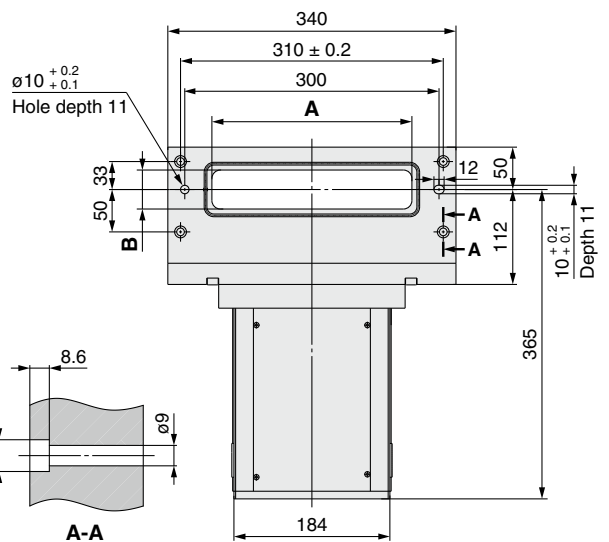
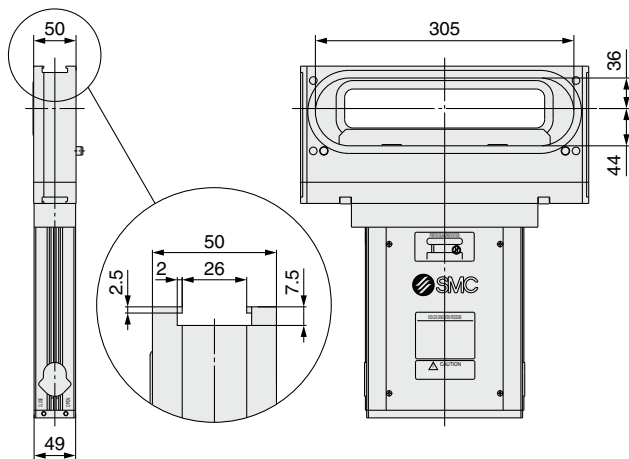
### Body type Standard/XGT222



### Insert type/XGT221

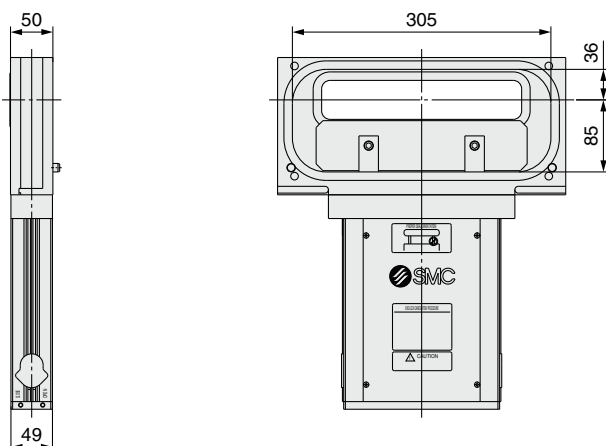


### Body type Half MESK/XGT223



Valve seat side (XGT222, 223, and 224 common)

### Body type Full MESK/XGT224



Model	Valve type	A	B	C	D
XGT221-32222	Insert type	222	32	235	45
XGT221-46236		236	46	249	59
XGT222-32222	Body type Standard	222	32	-	-
XGT222-46236		236	46	-	-
XGT223-46236	Body type Half MESK	236	46	-	-
XGT224-46236	Body type Full MESK	236	46	-	-



# XGT Series

# Made to Order Specifications:

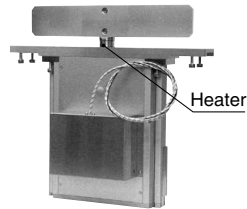
Please contact SMC for detailed dimensions, specifications and lead times.



## 1 With Built-in Heater (Up to 150°C) \* 120°C for the actuator portion



With heater on body



With heater on shaft  
(XGT300 only)

## 2 High Temperature Type (150°C) \* 120°C for the actuator portion

O-ring, guide etc. which is the part of actuator are changed to heat resistance.

## 3 Anodized Parts

The parts which come in contact with gas (oxalic acid aluminum alloy, stainless steel etc.) is changed.