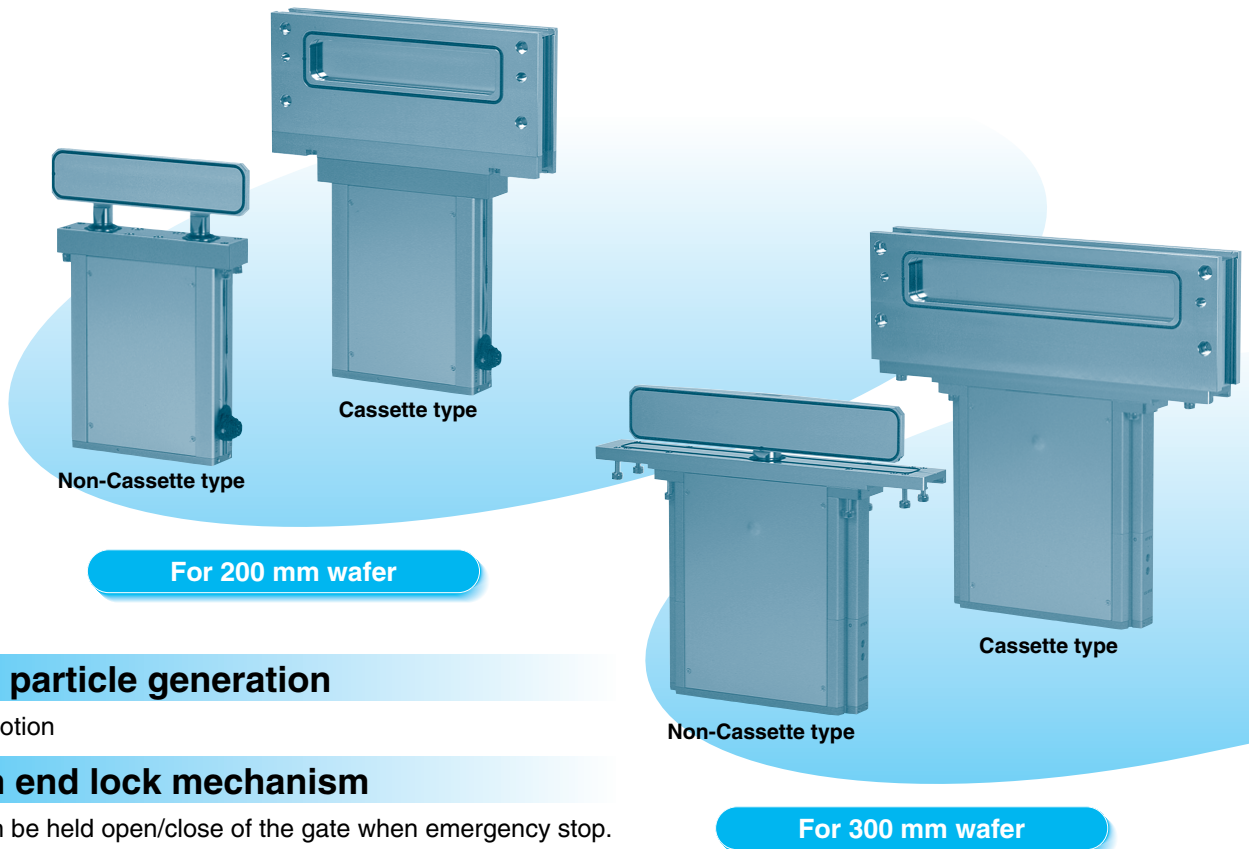


Slit Valve

XGT Series



Low particle generation

L motion

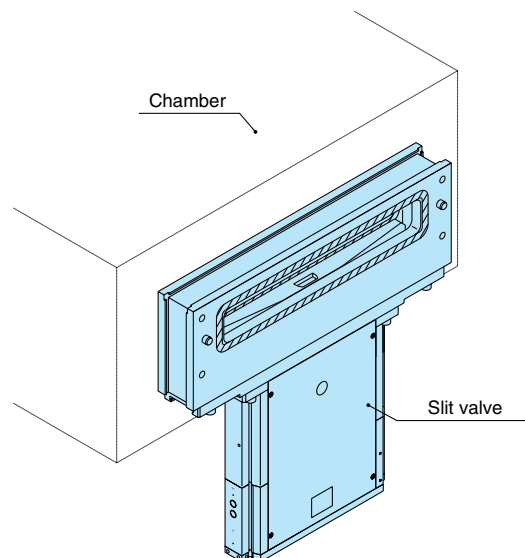
With end lock mechanism

Can be held open/close of the gate when emergency stop.

Service life of two million cycles.

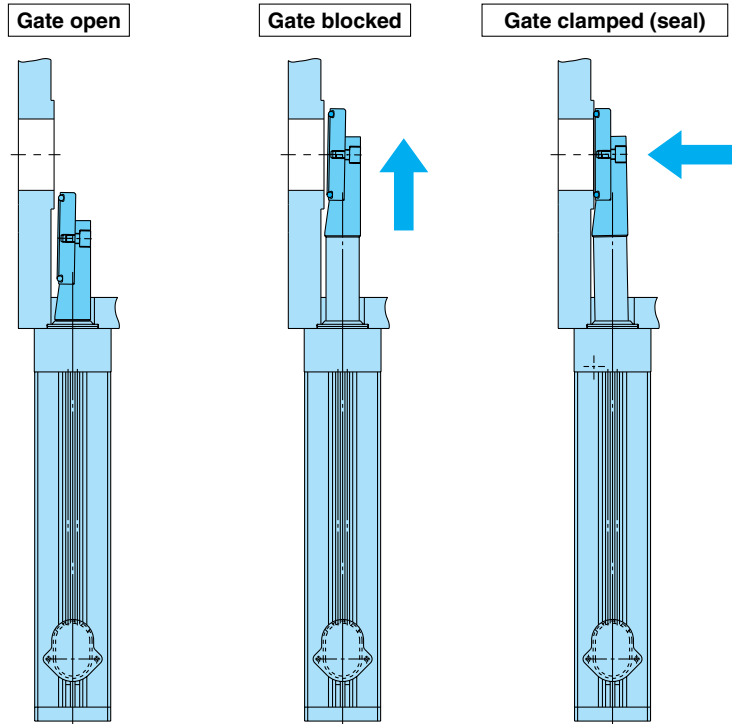
* With SMC's life conditions.

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.



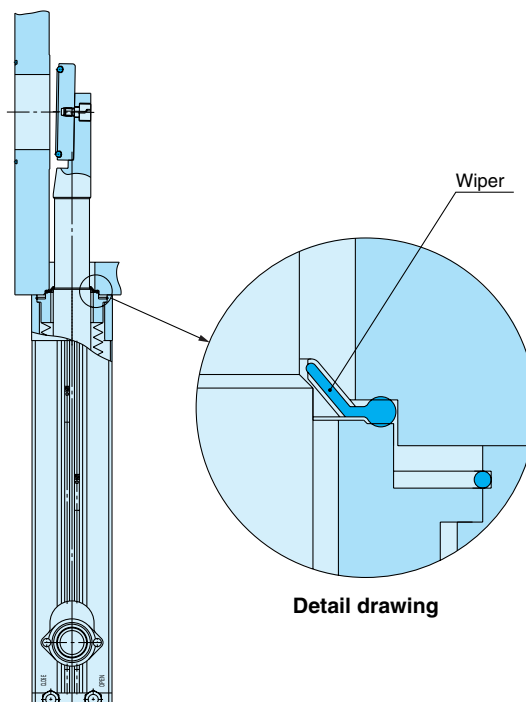
L motion structure

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 Series XGT

How to Order

XGT **22** **2** — **46236** — **1** **C**

High vacuum slit valve

Valve size

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

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

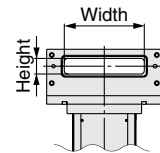
Gate O-ring material

Symbol	Material
1	FKM
2	Kalrez® 4079

Opening window size

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

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



Valve type

Symbol		1	2	3	4
		Non-Cassette type	Cassette type standard	Cassette type Half MESK	Cassette type Full MESK
Valve type					
Applicable wafer size	200 mm	●	●	●	●
	300 mm	●	●	●	—

Non-Cassette type

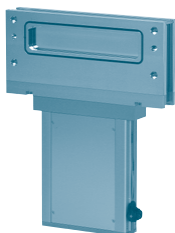


For 200 mm wafer



For 300 mm wafer

Cassette type



For 200 mm wafer



For 300 mm wafer

Auto switch and connector

Symbol	Auto switch	Connector
Nil	None	—
A		Lead wire: 0.5 m (without connector)
C	D-A93 (With 2 pcs. for opening and closing)	With multiple connector <small>Note 1)</small> (T3106 000: Made by AMP)
F		With D-sub connector <small>Note 2)</small> (CDE-9PF05: Made by HIROSE ELECTRIC CO., LTD.)

Note 1) T3105000 made by AMP is recommended for the connector (female type).

Note 2) CDE-9SF05 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 ^{Note 1)} Pa (abs)		Atmospheric pressure to 10 ⁻⁶		
Operating pressure differential kPa		4 or less		
Operating pressure range MPa (G)		0.45 to 0.6		
Internal leak ^{Note 2)} Pa·m ³ /s	O-ring: FKM	6.5 x 10 ⁻¹⁰		
	O-ring: Kalrez [®]	6.5 x 10 ⁻⁹		
Internal leak ^{Note 2)} Pa·m ³ /s at reversed pressure [Reversed pressure: 0.1 MPa (abs) or less]	O-ring: FKM	6.5 x 10 ⁻⁸		
	O-ring: Kalrez [®]	6.5 x 10 ⁻⁷		
External leak ^{Note 2)} Pa·m ³ /s		6.5 x 10 ⁻¹¹		
Operation temperature ^{Note 3)} °C	Gate part	5 to 150		
	Actuator part	5 to 60		
Fluid		Inert gas		
Operating time ^{Note 4)} s		0.6 to 1		
Main material of vacuum part	Seal material	FKM, Kalrez [®] 4079 (Option)		
	Bellows	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 ^{Note 5)}		
Cylinder volume ℓ		0.12		0.2
Weight kg	Non-Cassette type	8		14
	Cassette type: Standard	12		20
	Cassette type: Half MESK	—	12	20
	Cassette 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.

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).

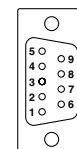
Connector wiring diagram

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 (-)

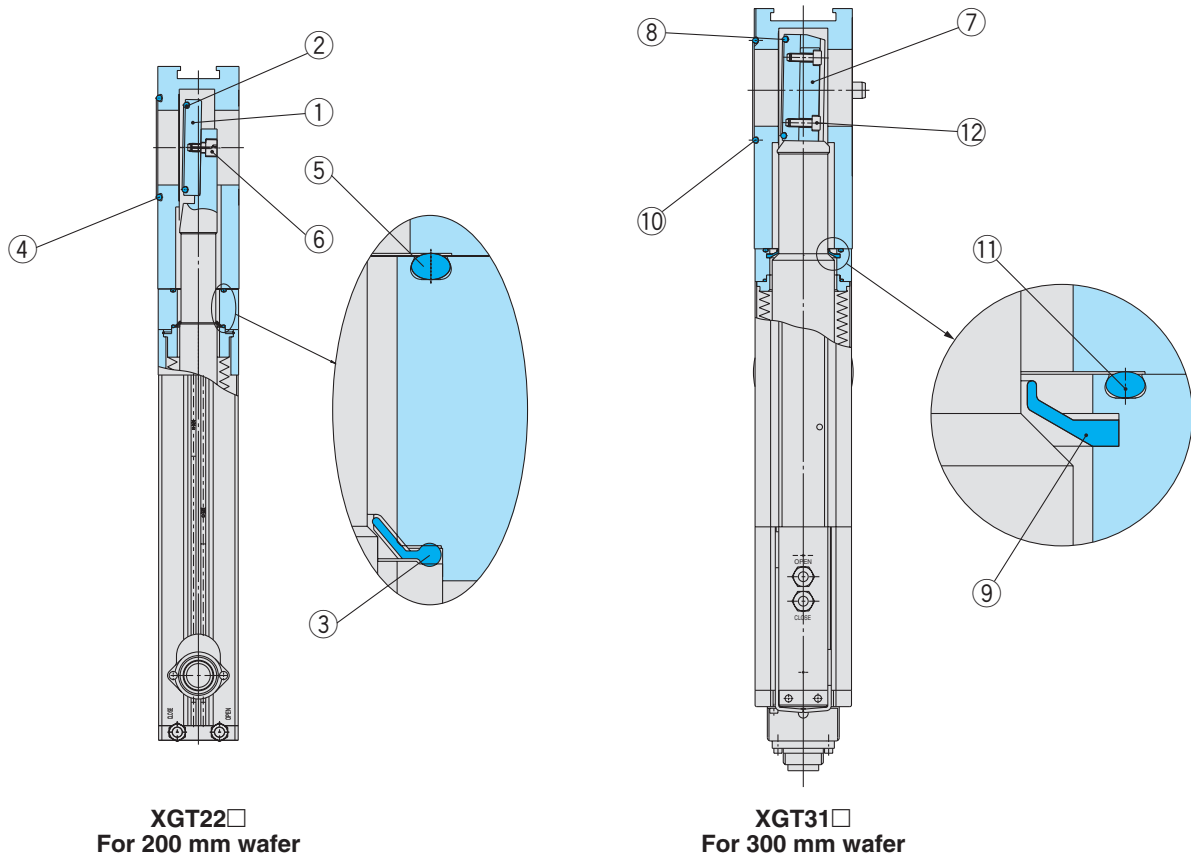
F: D-sub connector (9P)

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	—	—



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

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-□□
			Kalrez® 4079	
		FKM	XGT200-9-7S	XGT22-46236-□□
			Kalrez® 4079	
3	Wiper	FKM	XGT0402-4-9S	XGT22-□□-□□
4	O-ring (Body opening side)		XGT200-9-12S	XGT22-□□-□□
5	O-ring (Bonnet assembly)		XGT300-9-11S	XGT22-□□-□□
6	Holding bolt	Stainless steel 304	XGT200-2-5S	XGT22-□□-□□

XGT31 (300 mm wafer type)

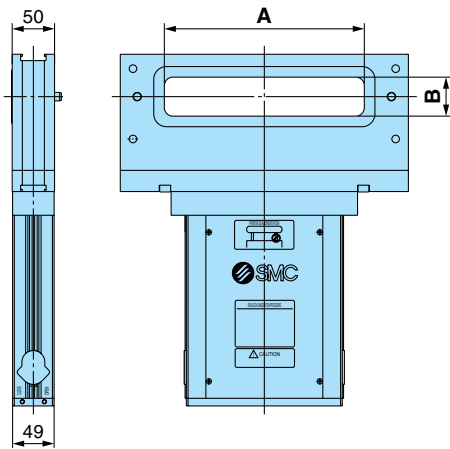
No.	Description	Material	Part number	Corresponding model
7	Gate	A6063	XGT300-2-1S	XGT31-50336-□□
8	O-ring (Gate)	FKM	XGT300-9-9S	
			Kalrez® 4079	
9	Wiper	FKM	XGT300-4-9S	XGT31-50336-□□
10	O-ring (body opening side)		XGT300-9-10S	
11	O-ring (Bonnet assembly)		XGT300-9-7S	XGT31-50336-□□
12	Holding bolt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

Kalrez® is a registered trademark of the Dupont Dow Elastomers.

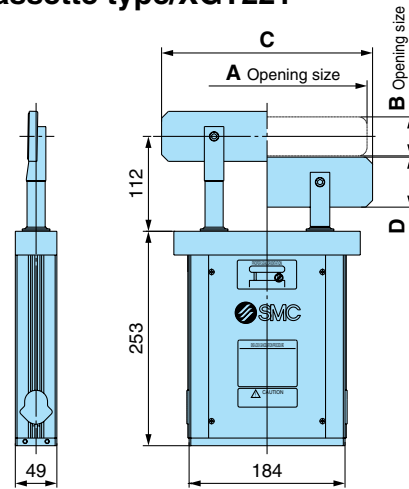
Series XGT

Dimensions

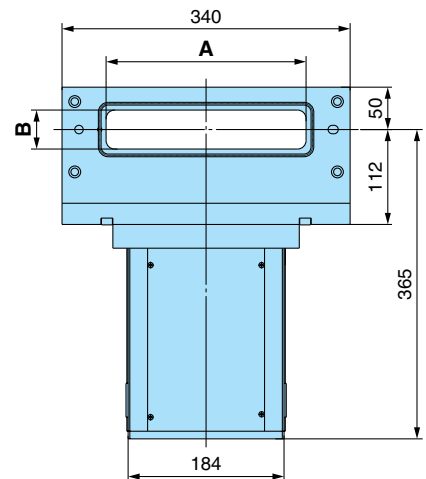
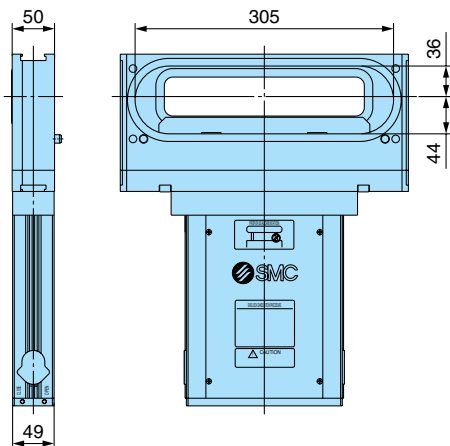
Cassette type Standard/XGT222



Non-Cassette type/XGT221

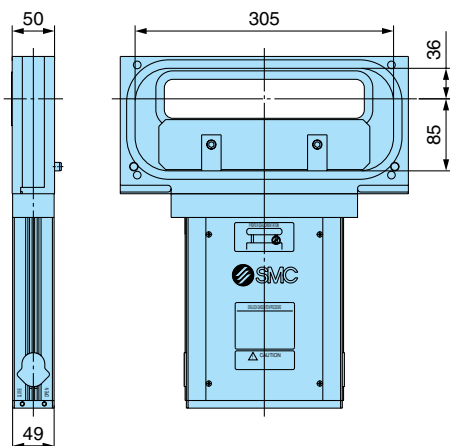


Cassette type Half MESK/XGT223



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

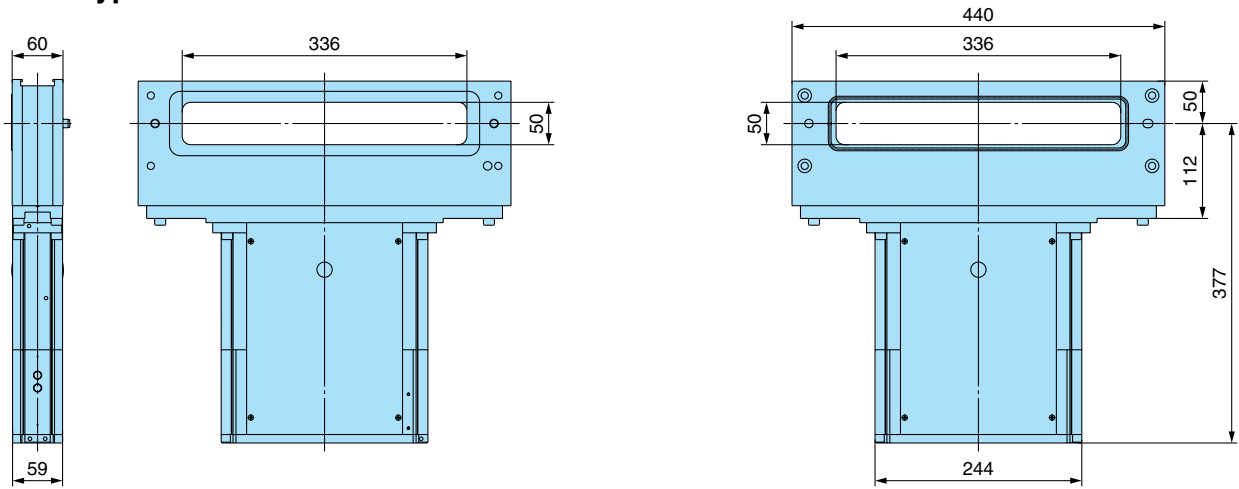
Cassette type Full MESK/XGT224



Model	Valve type	A	B	C	D
XGT221-32222	Non-Cassette type	222	32	235	45
XGT221-46236		236	46	249	59
XGT222-32222	Cassette type standard	222	32	—	—
XGT222-46236		236	46	—	—
XGT223-46236	Cassette type Half MESK	236	46	—	—
XGT224-46236	Cassette type Full MESK	236	46	—	—

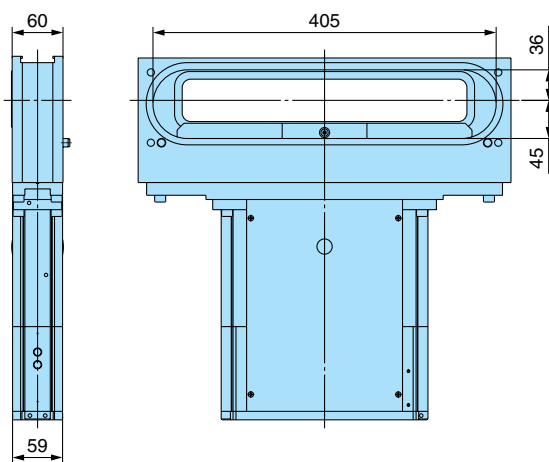
Dimensions

Cassette type Standard/XGT312

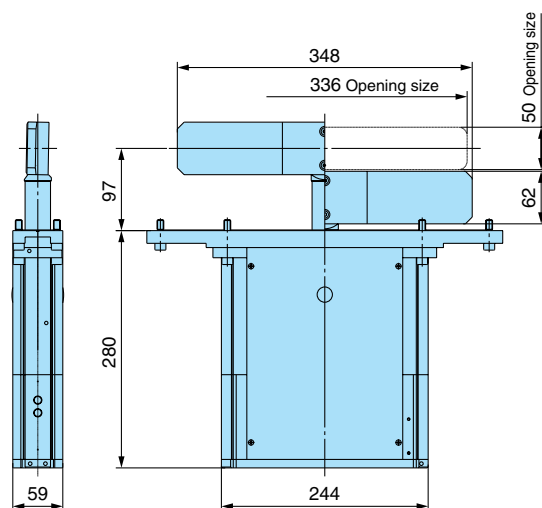


Valve seat side (XGT312, 313, and 311 commons)

Cassette type Half MESK/XGT313



Non-Cassette type/XGT311

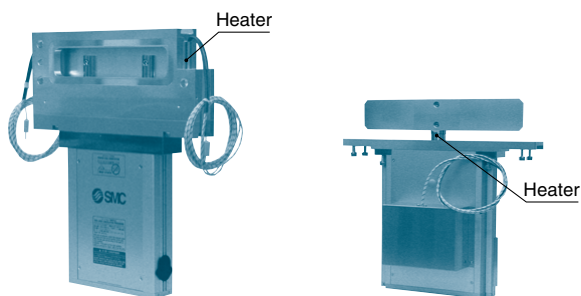


Series XGT Made to Order

Contact SMC for the detail.



With built-in heater (up to 150°C)



With heater on cassette

With heater on shaft

High temperature type (150°C)

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

Holding function of the seal (when operating pressure is stopped)

Sealing is maintained when operating pressure is stopped.

Anodized parts

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

Replaceable bellows

Customer can replace bellows.

SMC Corporation

1-16-4 Shimbashi, Minato-ku, Tokyo 105-8659 JAPAN
Tel: 03-3502-2740 Fax: 03-3508-2480
URL <http://www.smcworld.com>
© 2005 SMC Corporation All Rights Reserved

Specifications are subject to change without prior notice and any obligation on the part of the manufacturer.

D-KS

1st printing JT printing JT 120KS Printed in Japan.

This leaflet is printed on recycled paper with concern for the global environment.