



Hygienic
**Single Seal
Valves**

High reliable
products derived
from advanced
technologies



Material

SUS-304 (or equivalent)

SUS-316L (or equivalent)

Production standard

Surface finish	Internal: #320 to #400 buff polishing finish External: Beads shot blast
Dimensional tolerance	Face to face dimension: $\pm 1.5\text{mm}$ Angular tolerance: $\pm 0.5^\circ$
Main body max pressure	1MPa (water pressure, normal temperature)
Valve seat max pressure	As shown in selection table on page 16 (water pressure, normal temperature)
Operating air pressure	As shown in selection table on page 16 (water pressure, normal temperature)
Operating air connection hole	Rc 1/4
Heat resistance	120°C

* When welding the tank spud, use extra caution to prevent it from being deformed due to heat.
(If the tank spud is distorted, the sealing of the tank cannot be maintained, which may result in liquid leakage and corrosion.)

► Valve selection and ordering

Please use valves according to respective valve specifications.
If an application exceeds the range of specifications, high safety design is required. We would be pleased to offer consultation if you provide us with information.

► Ordering

- If there is any request of surface finish, please specify both internal and external surface.
- For further details, refer to the single-seal SQ valve type details on pages 17 and 18.

Single-seal SQ valve

SHtype

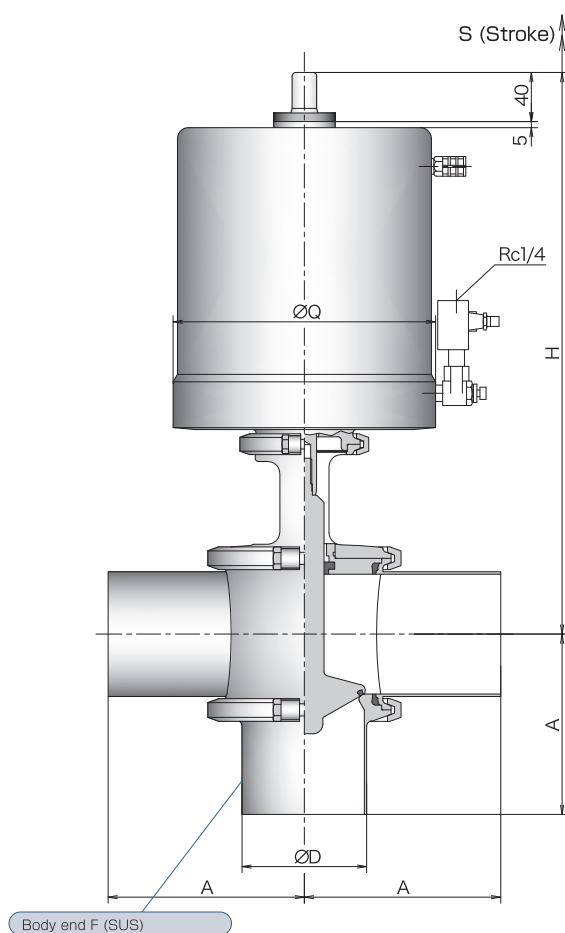
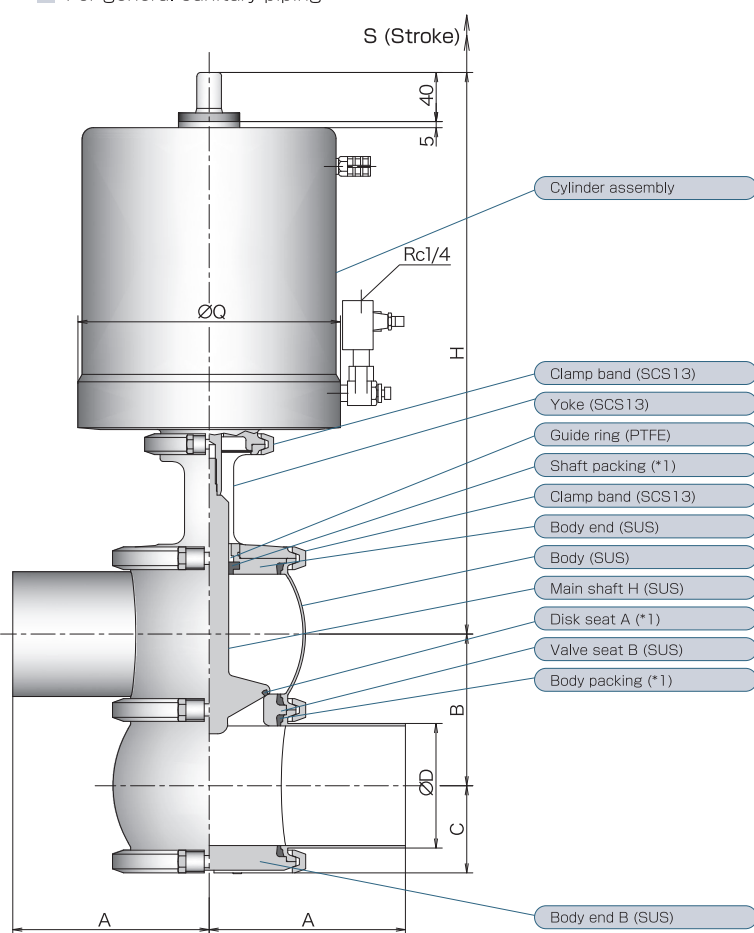
● On-off valve



SH type is a model equivalent to conventional angle valves and are all single-seal type.

There are a wide variety of sizes, options, etc., and all provide excellent sanitairiness.

For general sanitary piping

**2T type****2A type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	B	C	H	Q	S
1 1/2	38.1	100	61.7	39.4	346.9	110.8	25
2	50.8	120	73.8	45.4	352.9	110.8	30
2 1/2	63.5	125	85.5	51.5	396.3	135.5	35
3	76.3	140	98.3	58.4	445.2	160.5	35
4	101.6	160	123.6	71.1	457.8	214.0	40
5	139.8	200	169.8	97.7	507.9	263.5	45
6	165.2	220	195.2	110.4	520.6	263.5	45

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 6S)

● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.

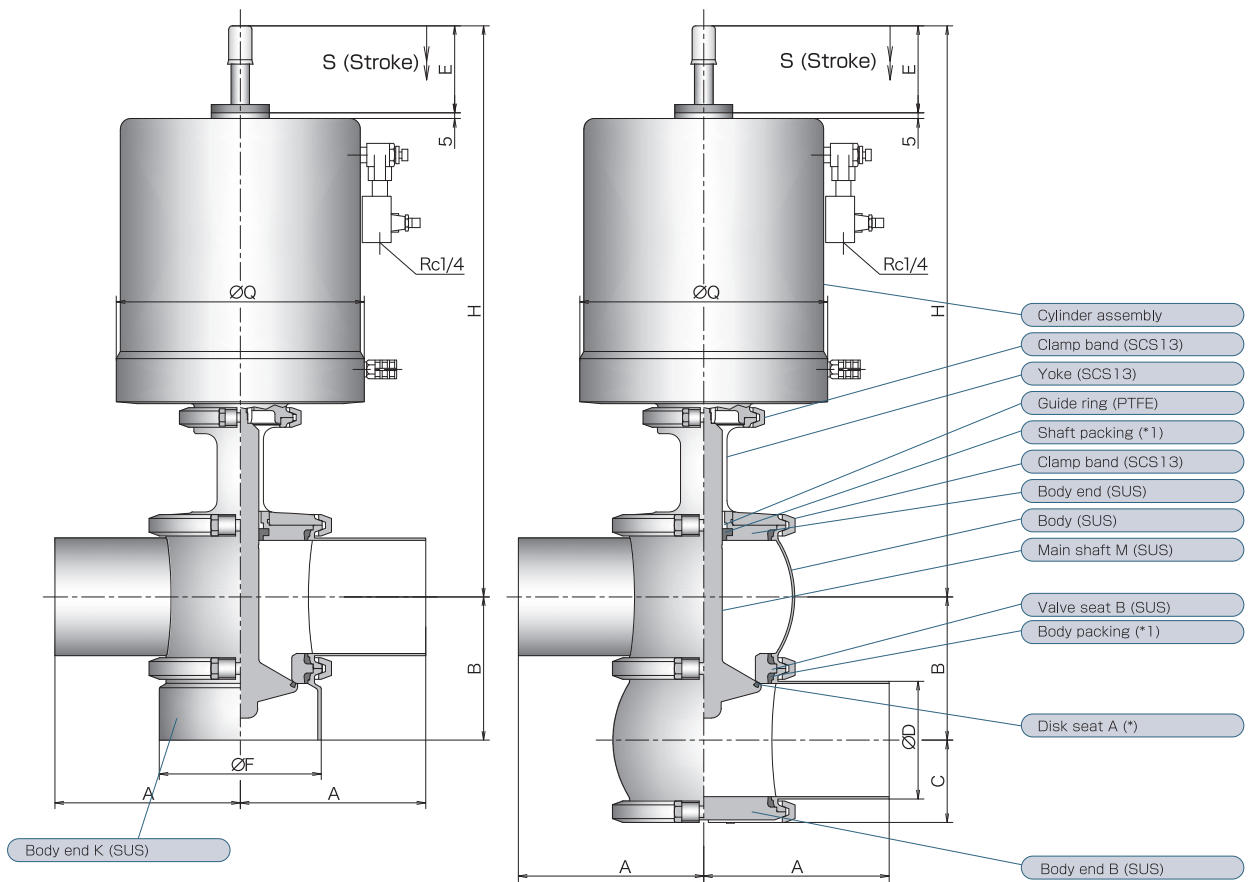
Single-seal SQ valve

SM type

● On-off valve



SM type is a top-down type and operates in the opposite way from SH type.
For general sanitary piping

**2T type****2A type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	B	C	φF	H	Q	E	S
1 1/2	38.1	100	61.7	39.4	76.3	366.9	110.8	60	20
2	50.8	120	73.8	45.4	76.3	372.9	110.8	60	20
2 1/2	63.5	125	85.5	51.5	89.1	421.3	135.5	65	25
3	76.3	140	98.3	58.4	101.6	475.2	160.5	70	30
4	101.6	160	123.6	71.1	139.8	492.8	214.0	75	35
5	139.8	200	169.8	97.7	216.3	547.9	263.5	80	40
6	165.2	220	195.2	110.4	216.3	560.6	263.5	80	40

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 6S)
● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.

Single-seal SQ valve

SK type

● Switching valve



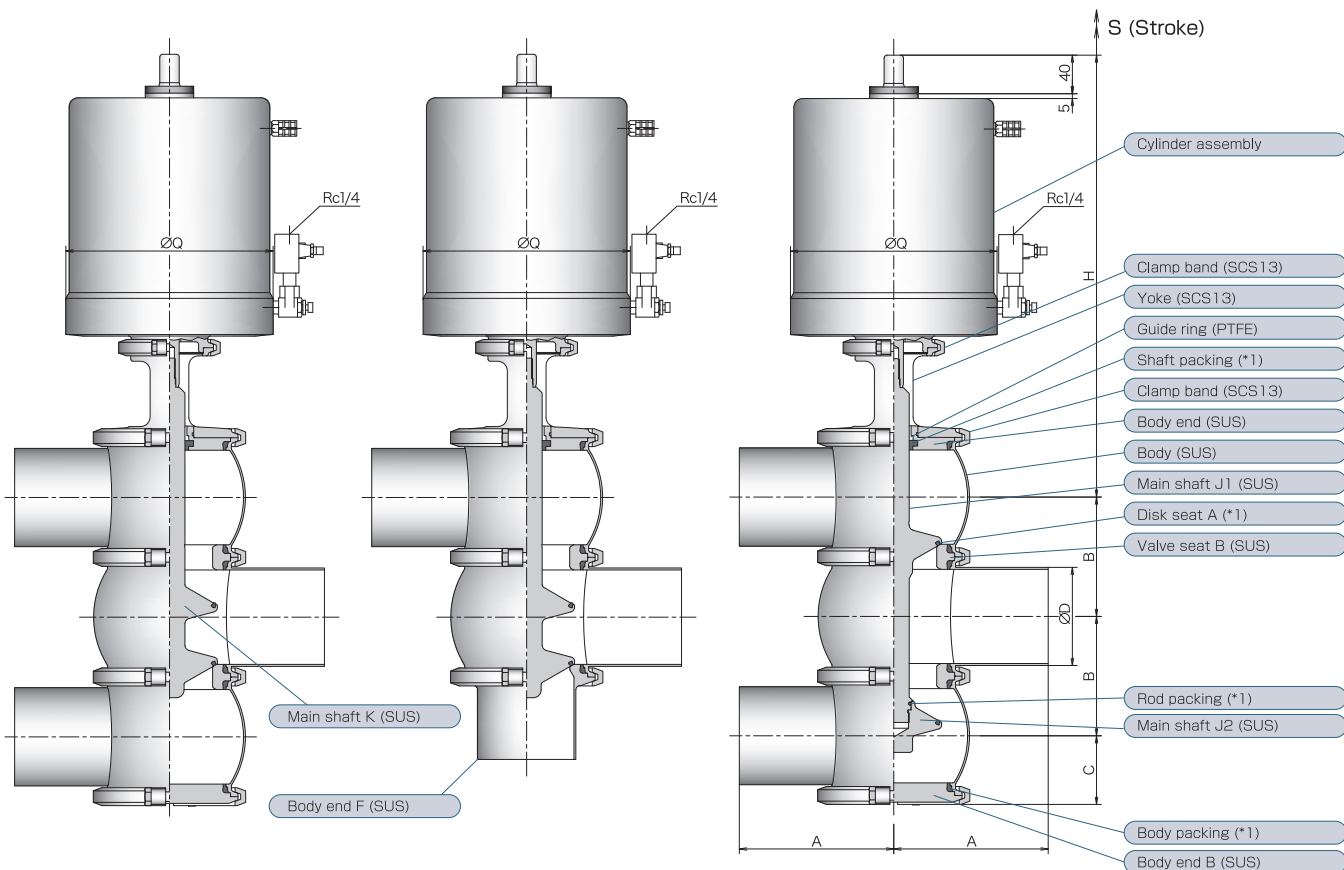
Single-seal SQ valve

SJ type

● Branch valve



SK and SJ types can perform switching and branching without dead corners.

**3A type****3J type****3A type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	B	C	H	Q	S (SK type)	S (SJ type)
1 1/2	38.1	100	61.7	39.4	346.9	110.8	21	16
2	50.8	120	73.8	45.4	352.9	110.8	21	16
2 1/2	63.5	125	85.5	51.5	396.3	135.5	27	27
3	76.3	140	98.3	58.4	445.2	160.5	32	29
4	101.6	160	123.6	71.1	457.8	214.0	35	35
5	139.8	200	169.8	97.7	507.9	263.5	41	39
6	165.2	220	195.2	110.4	520.6	263.5	41	39

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 6S)

● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.

Single-seal SQ valve

KH type

● Tank valve



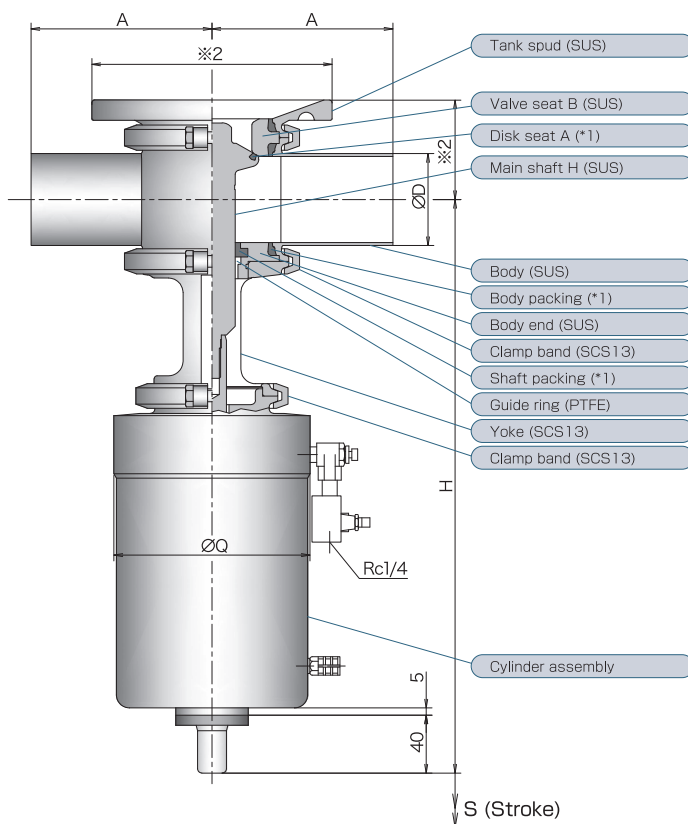
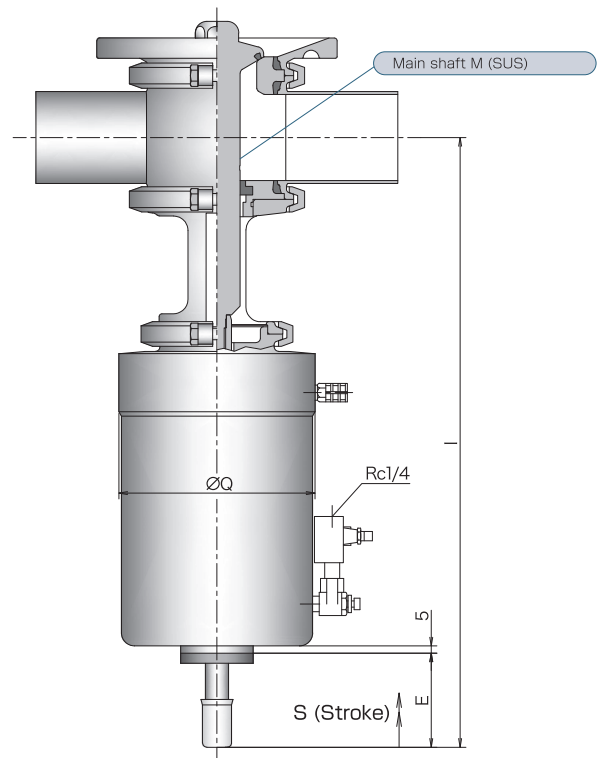
Single-seal SQ valve

KM type

● Tank valve



KH and KM types are designed to be used as tank valves and use the shaft packing as the shaft seal and the body packing as the main body seal. For this reason, these types are better in cleaning performance than O-ring types and are structured to make pitting corrosion, crevice corrosion, etc. less likely to occur.

**2T type****2T type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	H	I	E	S (KH type)	S (KM type)
1 1/2	38.1	100	358.1	366.9	60	25	20
2	50.8	120	370.4	372.9	60	30	20
2 1/2	63.5	125	419.8	421.3	65	35	25
3	76.3	140	475.2	475.2	70	35	30
4	101.6	160	500.8	492.8	75	40	35
5	139.8	200	569.9	547.9	80	45	40
6	165.2	220	595.6	560.6	80	45	40

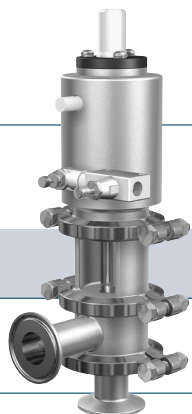
Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 6S)
 ● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.
 ● *2 varies depending on tank dimensions and shape.

* When welding the tank spud, use extra caution to prevent it from being deformed due to heat.
 (If the tank spud is distorted, the sealing of the tank cannot be maintained, which may result in liquid leakage and corrosion.)

Single-seal valve

SH type

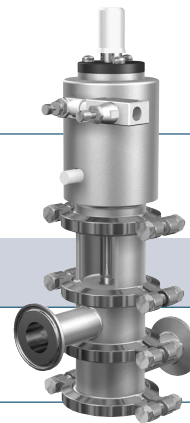
- On-off valve
- Bottom-up type



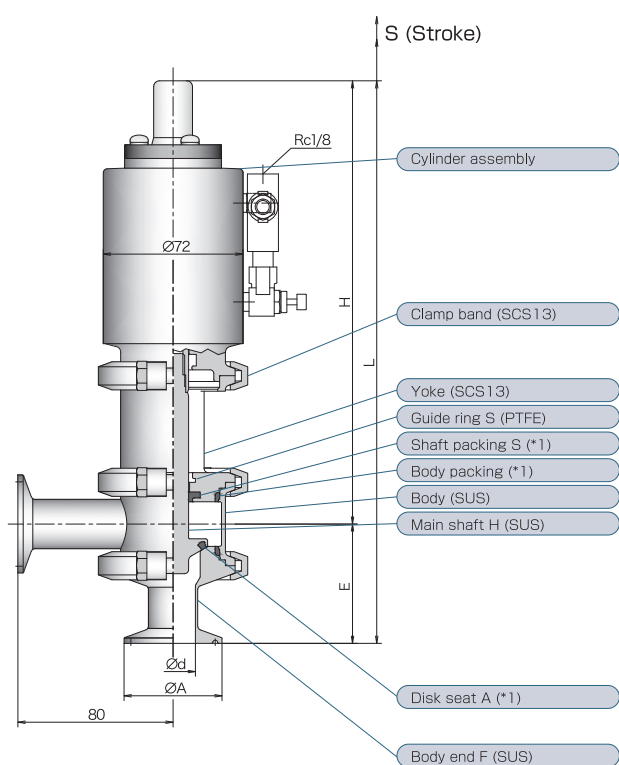
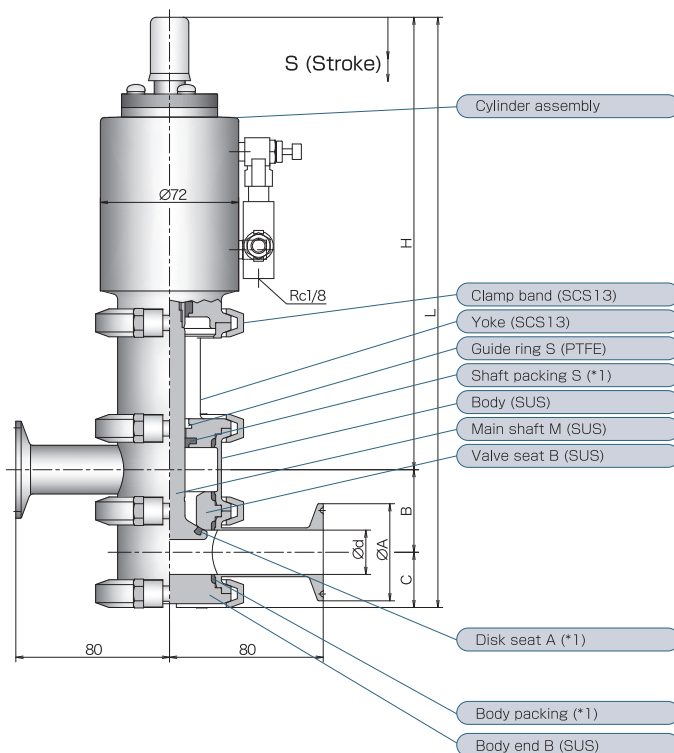
Single-seal valve

SM type

- On-off valve
- Top-down type



These valves have a wide variety of models as a single-seal valve and can be used as an on-off valve for general sanitary piping. Two types: Bottom-up type (SH type) and top-down type (SM type) are available.

**2L type****2A type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	L	H	E	A	d	S
10A	264	207	57	34	14.0	4
15A	268.4	209.2	59.2	34	18.4	7
1S	273	211.5	61.5	50.5	23.0	7

(mm)

SIZE	L	H	B	C	A	d	S ^{Note)}
10A	270.3	212	34	24.3	34	14.0	7
15A	279.1	214.2	38.4	26.5	34	18.4	10
1S	288.3	216.5	43	28.8	50.5	23.0	10 (7)

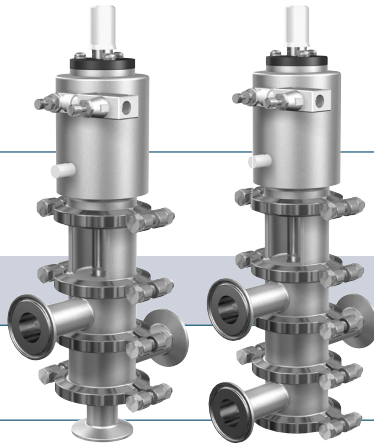
(mm)

Note: The values in parentheses are for when the main body type is 2L or 2T.

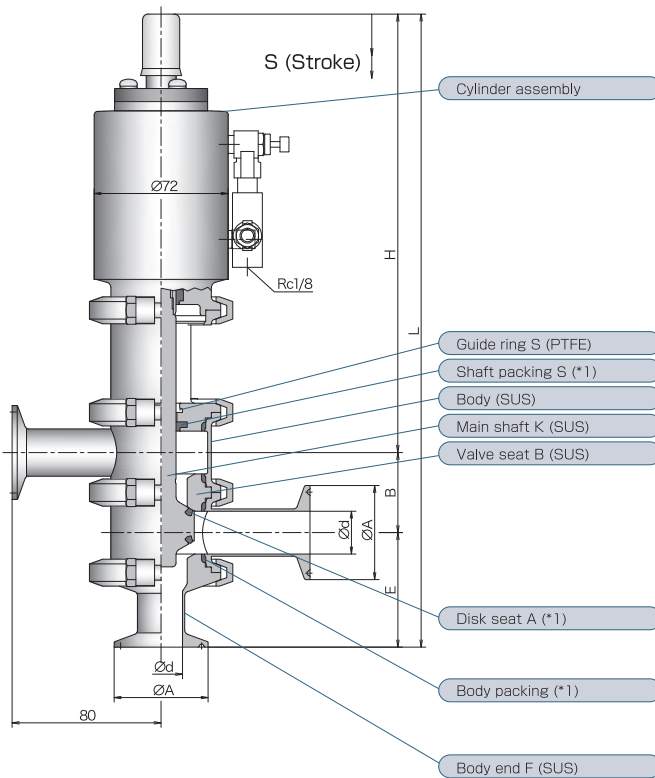
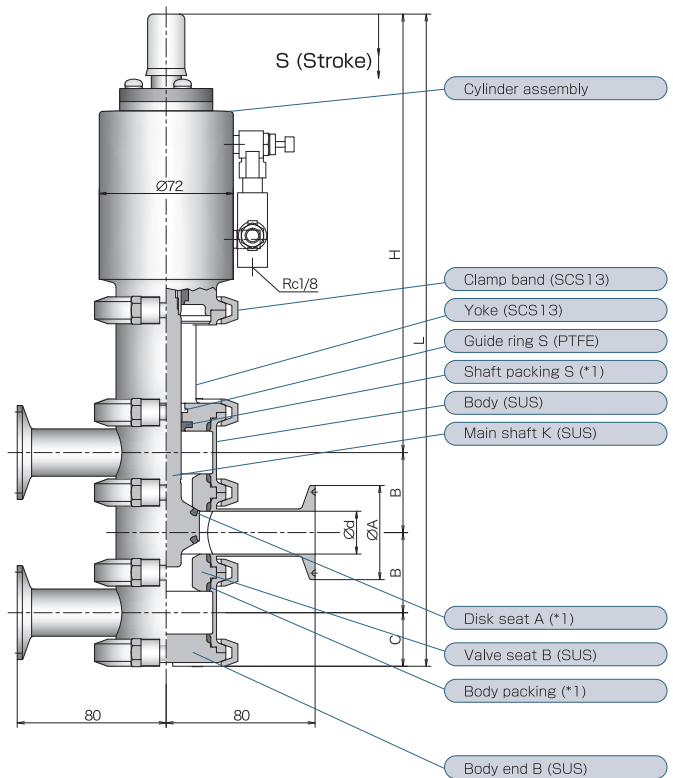
Single-seal valve

SK type

● Switching valve



This valve is used as a switching valve. In addition, this valve can perform switching without dead corners.

**3J type****3A type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	L	H	B	E	A	d	S
10A	303	212	34	57	34	14.0	5
15A	311.8	214.2	38.4	59.2	34	18.4	6
1S	321	216.5	43	61.5	50.5	23.0	6

(mm)

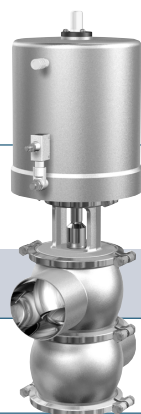
SIZE	L	H	B	C	A	d	S
10A	304.3	212	34	24.3	34	14.0	5
15A	317.5	214.2	38.4	26.5	34	18.4	6
1S	331.3	216.5	43	28.8	50.5	23.0	6

(mm)

Single-seal valve

MH type

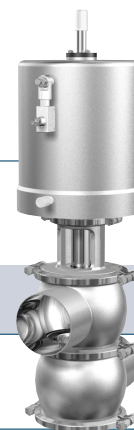
- Diaphragm type ON/OFF valve
- Bottom-up type



Single-seal valve

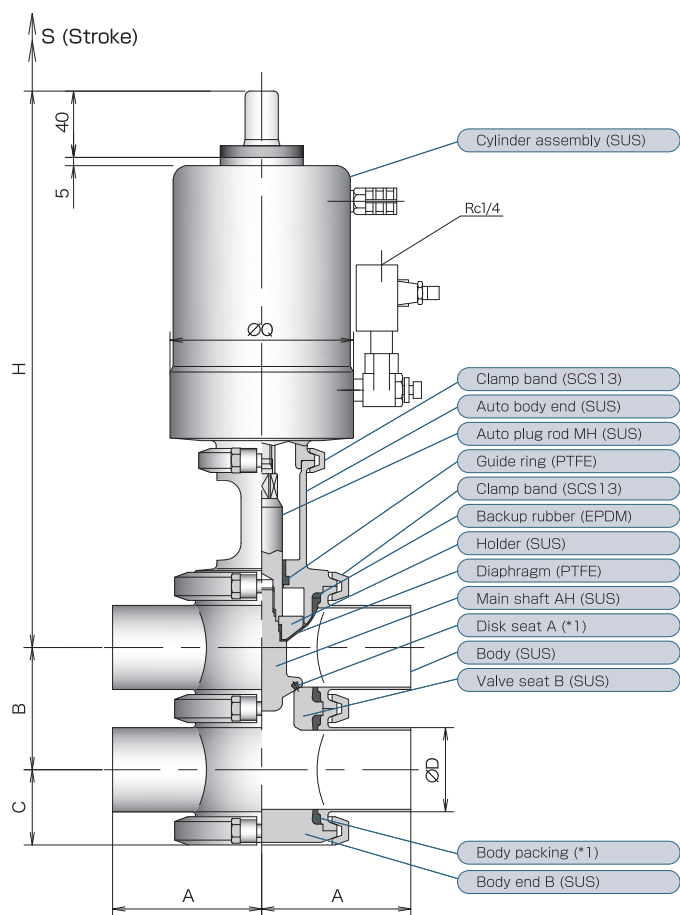
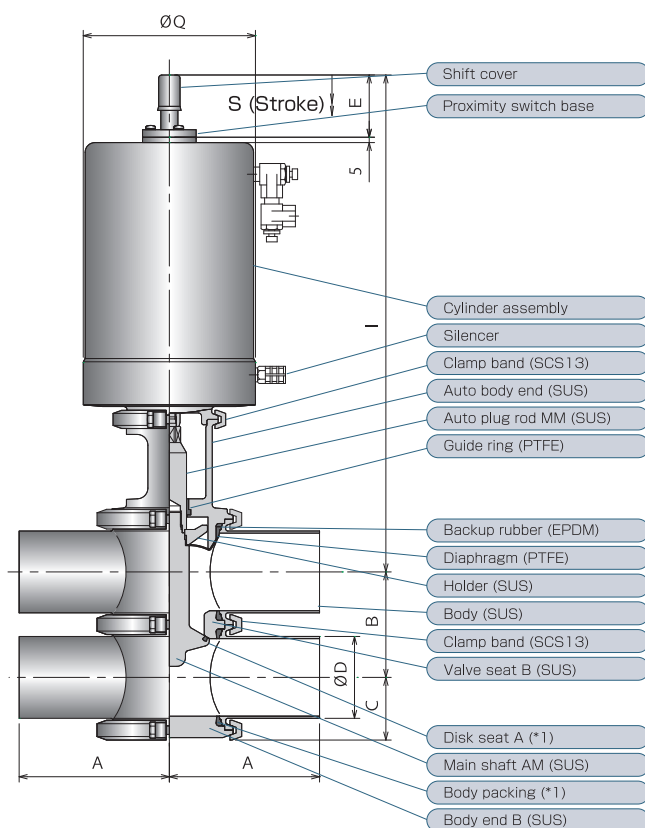
MM type

- Diaphragm type ON/OFF valve
- Top-down type



MH type and MM type are valves whose shafts are sealed with a PTFE diaphragm, which prevents the inside from becoming contaminated during operation of the valve.

Rubber-based (EPDM, FKM) materials and fluororesin linings can be selected for the disk seat.

**2Dtype****2Dtype**

*1 Refer to "Characteristics of packings, etc." on Page 16.

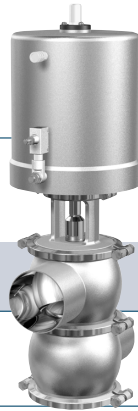
SIZE	φD	A	B	C	H	I	φQ	E	S
1	25.4	80	43.0	28.8	228.4	234.4	72.0	46	6
1½	38.1	100	61.7	39.4	329.9	341.9	110.8	52	12
2	50.8	120	73.8	45.4	335.9	347.9	110.8	52	12
2½	63.5	125	85.5	51.5	396.3	411.3	135.5	55	15
3	76.3	140	98.3	58.4	445.1	463.1	160.5	58	18
4	101.6	160	123.6	71.1	457.8	482.8	214.0	65	25
5	139.8	200	169.8	97.6	507.9	547.9	263.5	80	40
6	165.2	220	195.2	110.3	520.6	560.6	263.5	80	40

(mm)

Disk-seat-less single-seal valve

NH type

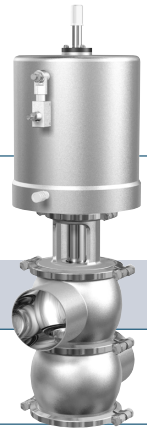
- Disk-seat-less diaphragm on-off valve
- Bottom-Up type



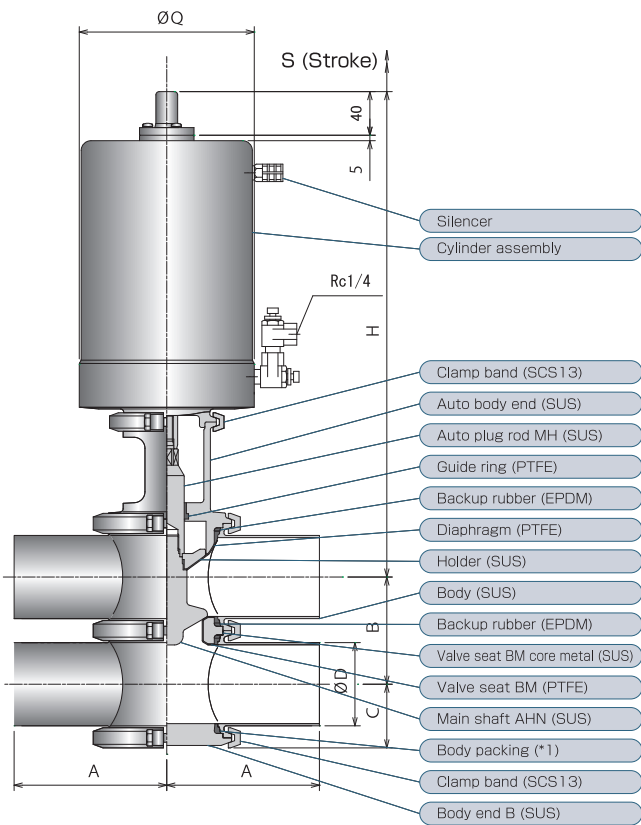
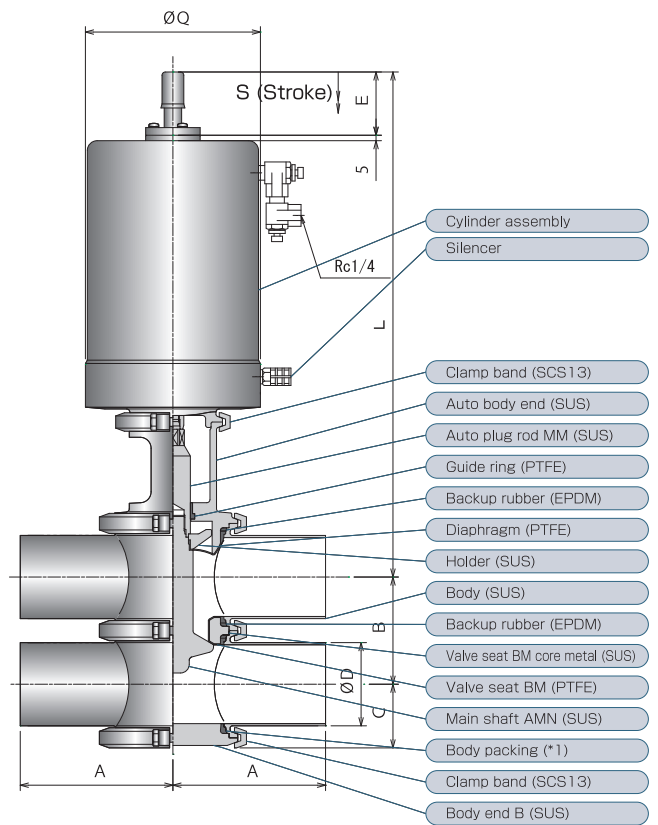
Disk-seat-less single-seal valve

NM type

- Disk-seat-less diaphragm on-off valve
- Top-down type



- By omitting the disc seat groove, there is no seeping behind and this NH type, NM type valve does not need disc seat installing work. These types make possible to perform maintenance easily and to extend maintenance interval significantly. Furthermore, shafts are sealed with PTFE diaphragm to prevent the inside from being contaminated even during operation of valves.
- * This valve cannot be used for liquids containing hard solids.

**2D type****2D type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

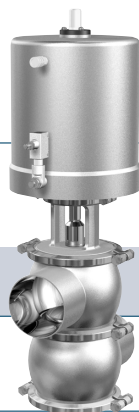
SIZE	φD	A (Note)	B	C	H	L	E	φQ	S
1 1/2	38.1	100	61.7	39.4	329.9	341.9	52	110.8	12
2	50.8	120	73.8	45.4	335.9	347.9	52	110.8	12
2 1/2	63.5	125	85.5	51.5	396.3	411.3	55	135.5	15
3	76.3	140	98.3	58.4	445.1	463.1	58	160.5	18
4	101.6	160	123.6	71.1	457.8	482.8	65	214.0	25

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 4S)
 ● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.
 ● For NH, NM type, only same diameter sizes of 1 1/2 to 4S are available.

Disk-seat-less single-seal valve

LH type

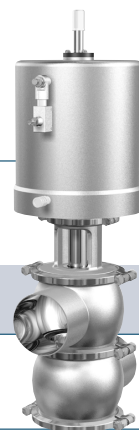
- Diaphragm type ON/OFF valve
- Top-down type



Disk-seat-less single-seal valve

LM type

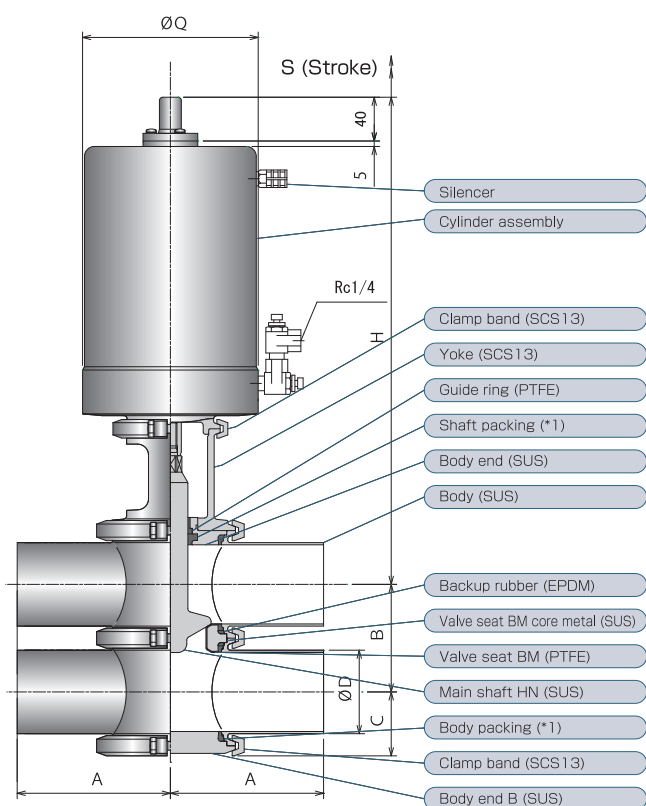
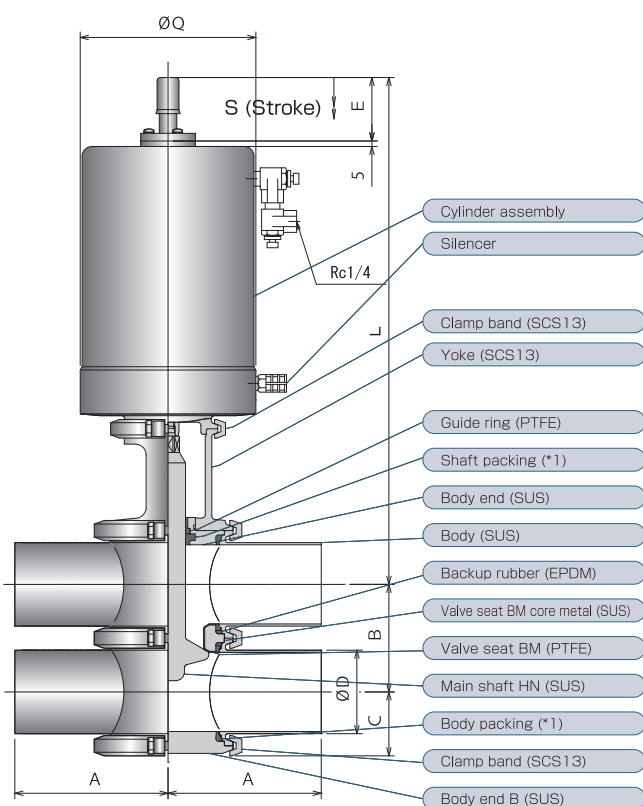
- Diaphragm type ON/OFF valve
- Top-down type



- By omitting the disc seat groove, there is no seeping behind and this LH type, LM type valve does not need disc seat installing work.

These types make possible to perform maintenance easily and to extend maintenance interval significantly.

* This valve cannot be used for liquids containing hard solids.

**2D type****2D type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	B	C	H	L	E	φQ	S(LH)	S(LM)
1 1/2	38.1	100	61.7	39.4	346.9	366.9	60	110.8	25	20
2	50.8	120	73.8	45.4	352.9	372.9	60	110.8	30	20
2 1/2	63.5	125	85.5	51.5	396.3	421.3	65	135.5	35	25
3	76.3	140	98.3	58.4	445.2	475.2	70	160.5	35	30
4	101.6	160	123.6	71.1	457.8	492.8	75	214.0	40	35

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 6S)
 ● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.
 ● For LH, LM type, only same diameter sizes of 1 1/2 to 4S are available.

Disk-seat-less single-seal valve

TH type

- Disc-seat-less diaphragm type ON/OFF valve
- Bottom-type
- Tank valve



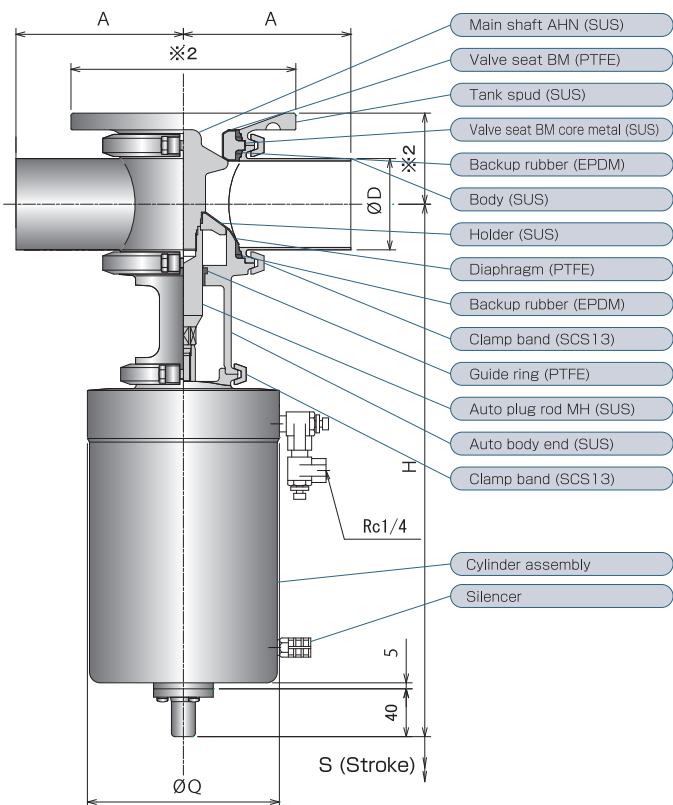
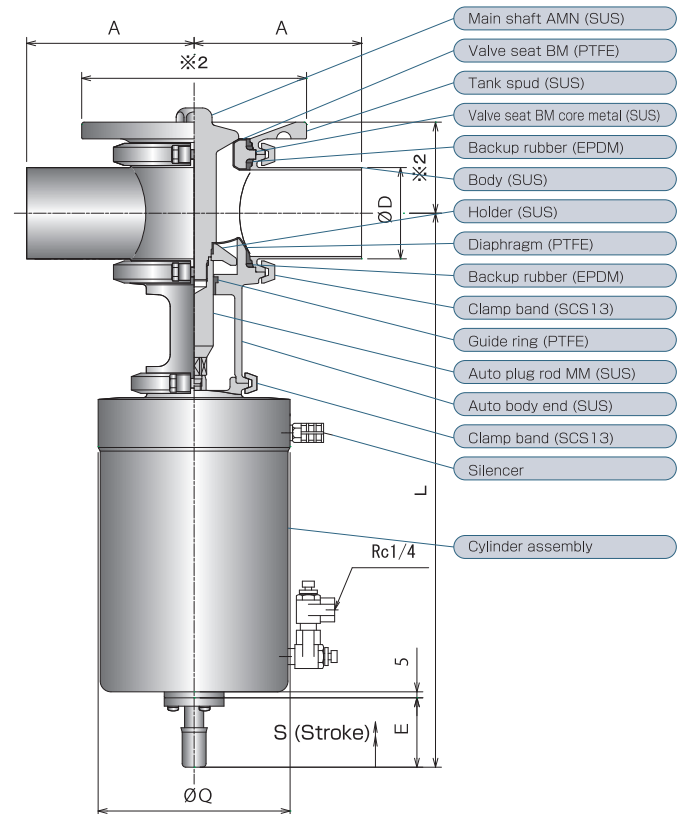
Disk-seat-less single-seal valve

TM type

- Disc-seat-less diaphragm type ON/OFF valve
- Top-down type
- Tank valve



- By omitting the disc seat groove, there is no seeping behind and this TH type, TM type valve does not need disc seat installing work.
- These types make possible to perform maintenance easily and to extend maintenance interval significantly.
- Furthermore, shafts are sealed with PTFE diaphragm to prevent the inside from being contaminated even during operation of valves.
- * This valve cannot be used for liquids containing hard solids.

**2T type****2T type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	B	C	H	L	E	φQ	S
1 1/2	38.1	100	61.7	39.4	329.9	341.9	52	110.8	12
2	50.8	120	73.8	45.4	335.9	347.9	52	110.8	12
2 1/2	63.5	125	85.5	51.5	396.3	411.3	55	135.5	15
3	76.3	140	98.3	58.4	445.1	463.1	58	160.5	18
4	101.6	160	123.6	71.1	457.8	482.8	65	214.0	25

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 4S)

● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.

● *2 varies depending on tank dimensions and shape.

● For TH, TM type, only same diameter sizes of 1 1/2 to 4S are available.

* When welding the tank spud, use extra caution to prevent it from being deformed due to heat.

(If the tank spud is distorted, the sealing of the tank cannot be maintained, which may result in liquid leakage and corrosion.)

Disk-seat-less single-seal valve

BH type

- Disc-seat-less diaphragm type ON/OFF valve
- Bottom-up type
- Tank valve



Disk-seat-less single-seal valve

BM type

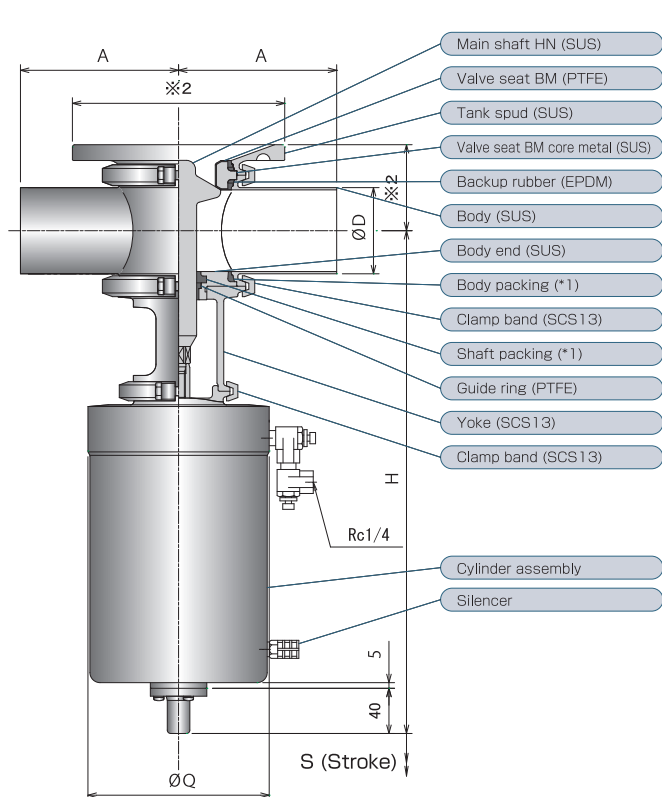
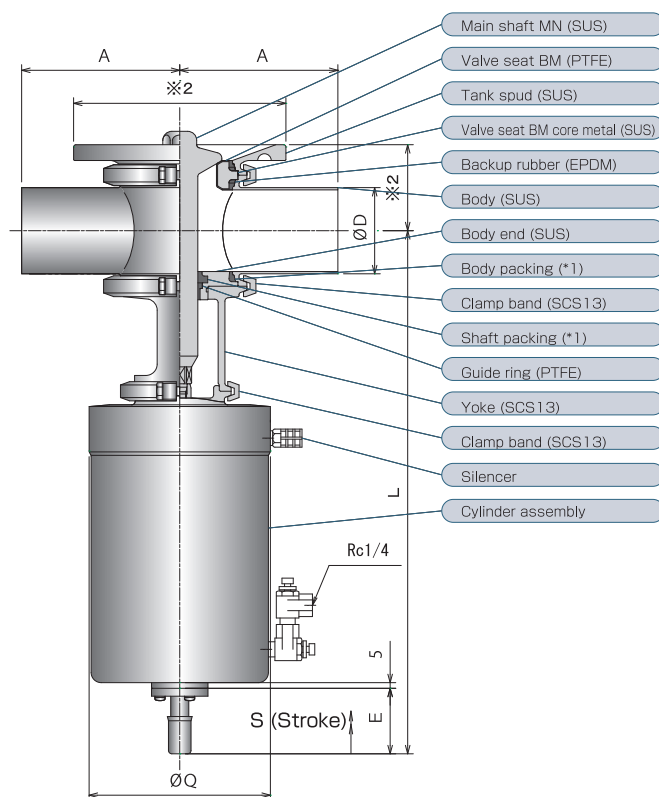
- Disc-seat-less diaphragm type ON/OFF valve
- Top-down type
- Tank valve



- By omitting the disc seat groove, there is no seeping behind and this BH type, BM type valve does not need disc seat installing work.

These types make possible to perform maintenance easily and to extend maintenance interval significantly.

* This valve cannot be used for liquids containing hard solids.

**2T type****2T type**

*1 Refer to "Characteristics of packings, etc." on Page 16.

SIZE	φD	A ^{Note)}	H	L	E	φQ	S (BH)	S (BM)
1 1/2	38.1	100	346.9	366.9	60	110.8	25	20
2	50.8	120	352.9	372.9	60	110.8	30	20
2 1/2	63.5	125	396.3	421.3	65	135.5	35	25
3	76.3	140	445.2	475.2	70	160.5	35	30
4	101.6	160	457.8	492.8	75	214.0	40	35

Note) ● When tube end is male, nut, clamp (1 1/2 to 4S), and sanitary flange (1 1/2 to 4S)

● Q and H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.

● *2 varies depending on tank dimensions and shape.

● For BH, BM type, only same diameter sizes of 1 1/2 to 4S are available.

● When welding the tank spud, use extra caution to prevent it from being deformed due to heat.

(If the tank spud is distorted, the sealing of the tank cannot be maintained, which may result in liquid leakage and corrosion.)

Option

2-position cylinder

● Option symbol

W

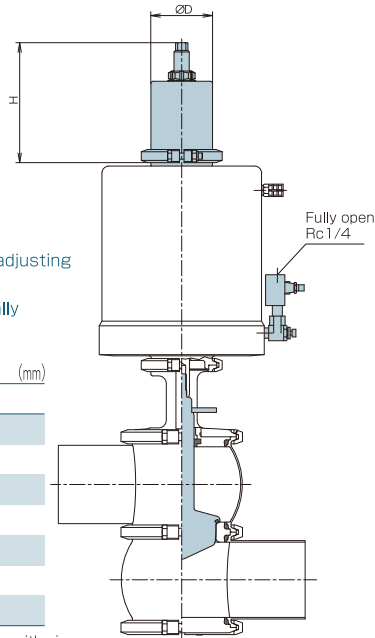
Attaching this unit enables control at 2 positions: Fully closed or fully open, and an arbitrary intermediate position.
For example, it is possible to perform 2-stage flow-rate control during filling, such as CIP liquid to gas and CIP liquid to product.
(Fully open – Half open or fully closed – Half open)

NOTE

The intermediate position is set by adjusting the upper adjustment bolt.
(Although this figure shows a normally closed type, a normally open type is also available.)

SIZE	φD	H
1 1/2	56	196
2		201
2 1/2		206
3		206
4		211
5		216
6		216

● H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.



Shaft quenching

● Option symbol

C

When valve surrounding condition is contaminated, cleaning the shaft before and after valve operation prevents contaminated materials.

Clamp band (SCS13)

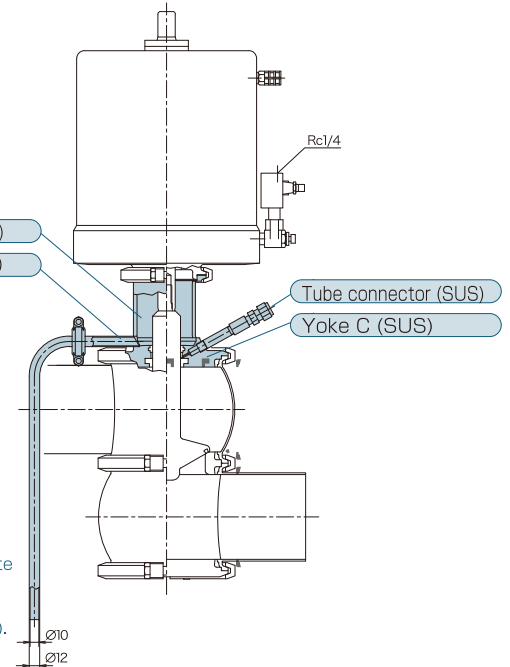
Drain pipe (SUS304)

Tube connector (SUS)

Yoke C (SUS)

NOTE

Quenching should be supplied by a separate line from valve CIP (water and hot water).
Set a pressure to around 0.05MPa.



3-position cylinder

● Option symbol

T

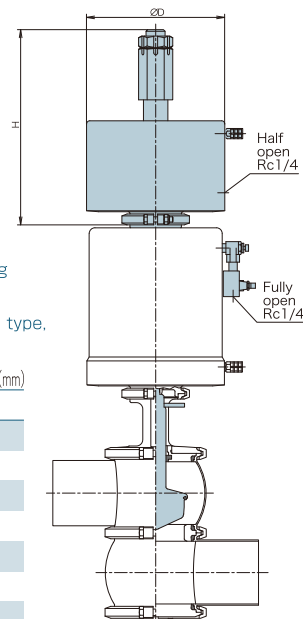
Attaching this unit enables control at 3 positions: fully closed, fully open, and arbitrary intermediate position.
For example, it is possible to perform 3-stage flow rate control by flowing product liquid with the valve fully closed and half-open and flowing CIP liquid with the valve fully open.
(Fully open – Half open – Fully closed)

NOTE

The intermediate position is set by adjusting the upper adjustment bolt.
(Although this figure shows a normally open type, a normally closed type is also available.)

SIZE	φD	H
1 1/2	108.5	220
2	108.5	220
2 1/2	162	235
3	162	235
4	215	250
5	215	250
6	215	250

● H dimensions are when a standard cylinder with air pressure of 0.4MPa is used.



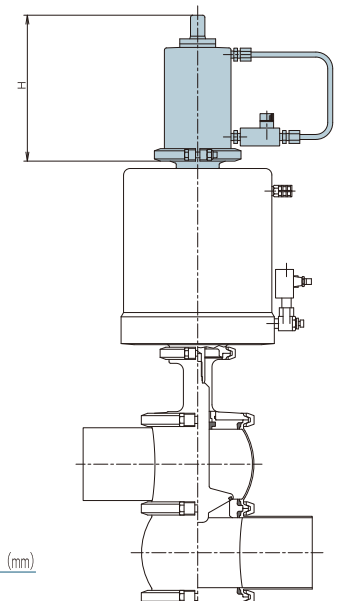
Oil damper

● Option symbol

D

If the flow direction flows backward, water hammer may occur. Attaching this oil damper enables valves to be opened and closed smoothly and prevents occurrence of water hammer.

SIZE	H
1 1/2~4	169
5~6	184

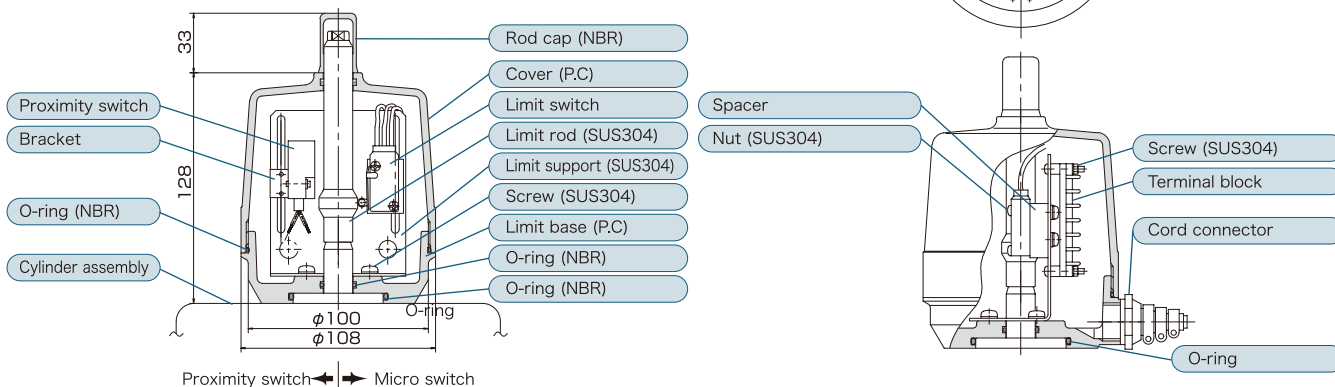


Option and maintenance jigs

► Switch assembly with cover (proximity and micro switches)

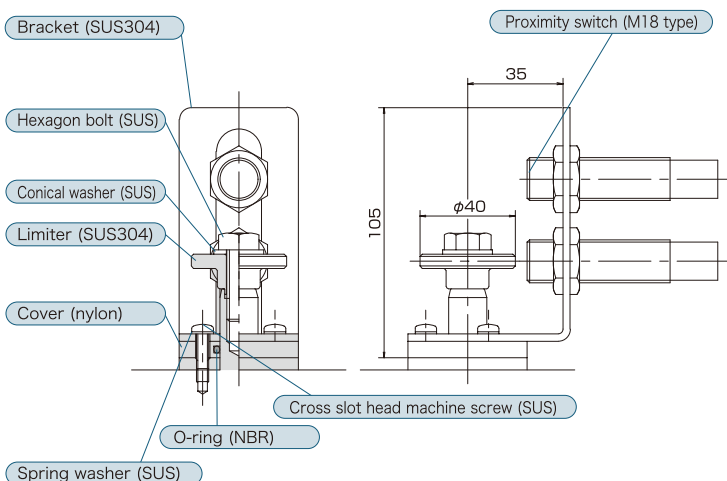
A polycarbonate-resin-based limit base made by injection molding and a watertight micro switch are incorporated in the cover, which enhances the insulation withstand characteristics. Furthermore, in order to simplify instrumentation, a terminal block is provided. Perform adjustment by loosening the limit switch attachment screw and moving it up and down.

- Proximity switch
2-wire DC24V 100mA
- Limit switch
NC, No. 250V 4A
- Cord connector PF1/2
- Terminal block 6P



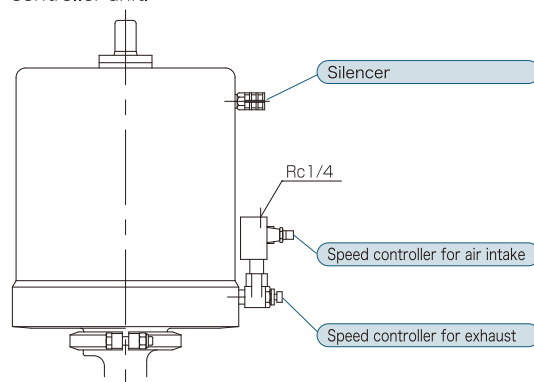
○ CF/AF type with compact cover is also available as an option. For further details, refer to the catalog of No. 18 valve control head.

► Proximity switch assembly (Stay attachment type)



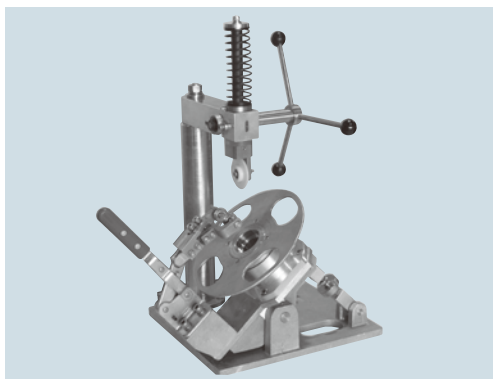
► Speed controller

- The valve speed from opening to closing and from closing to opening can be controlled with the speed controller unit.

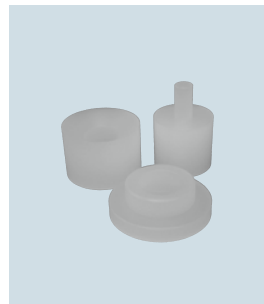


► Maintenance jig (optional)

Disc seat press-in machine main body



Disc seat press-in jig



- These jigs are used when mounting a disc seat to a shaft.

Technical material

► Cylinder selection table

When using cylinders at higher pressure than the values shown below, contact our company.

Operation air pressure MPa	Fluid pressure MPa	SIZE					
		10A-1S	1 1/2~2	2 1/2	3	4	5~6
0.4	0.3	60M	100M	100M	150M	200M	200M
	0.4	60M	100M	125M	150M	200M	250M
	0.5	60M	100M	125M	150M	200M	250M
	0.6	—*2	125M	150M	200M	250M	—
	0.7	—*2	125M	150M	200M	250M	—
	0.8	—*2	125M	150M	200M	250M	—
0.7	0.3	60H	80H	80H	125H	150H	150H
	0.4	60H	80H	100H	125H	150H	200H
	0.5	60H	80H	100H	125H	150H*1	200H
	0.6	60H	100H	100H	150H	200H	250H
	0.7	60H	100H	125H	150H	200H	250H
	0.8	—*2	100H	125H	150H	200H	250H

*1 200M for SHO and SKO

*2 If the fluid pressure is higher than 0.5/0.7MPa, consult our company separately.

Fluororesin lining packing type

- 1) Use for preventing smell from adhering.
- 2) From the standpoints of mounting mechanism of shaft packing, the body end part is separate as a special part.

Lubricant application specifications

Application specifications	Application range	Note
Standard specifications	Sliding seal part	—
Wetted surface lubrication prohibited area	No application	Be sure to make the sliding packing area smooth with fresh water, etc.
Lubricant	NOK Kluber PARALIQ GTE 703*1 (NSF category H1)	

*1 Conforming to the Food Sanitation Law

► Cylinder volume

Bore diameter (mm)	60	80	100	125	150	200	250
Volume (L)	0.09	0.24~0.31	0.38~0.50	0.60~0.77	0.95~1.21	1.56~2.02	2.51~3.24

► Characteristics of packings

Item		Standard					Option
Packing material		EPDM (Ethylene propylene rubber)	FKM (Fluororubber)	UC rubber (High-function fluororubber)	VMQ (Silicon rubber)	HNBR (Hydrogenated nitrile rubber)	PTFE lining (Fluororesin lining)
Material code		E81	F8	F802	SE72	Z85	TL□
Color		Black	Black	Black	Gray	Black	White
Resistance to liquid	Steam	◎	△	○	△	○	○
	Caustic soda	◎	△	○	△	◎	◎
	Nitric acid	○	◎	◎	△	△	◎
	Acetic acid	○	○	◎	△	△	◎
	Sodium hypochlorite	○	○	◎	○	○	◎
	Peroxyacetic acid	△	×	○	○	×	◎
	Fragrance (limonene, etc.)	×	○	○	×	△	◎
	Animal and vegetable oil	×	○	◎	○	○	◎
General characteristics	Resistance to heat	130℃	120℃	130℃	120℃	120℃	130℃
	Elasticity	○	○	○	○	○	△
	Intensity	○	△	○	△	◎	○
Applicable size		1 1/2~6S	1 1/2~6S	1 1/2~6S	1 1/2~6S	1 1/2~6S	1 1/2~3S
Remarks	Part name	Disc seat	Disc seat	Disc seat	—	Disc seat	Disc seat
		Body packing	Body packing	Body packing	Body packing	—	Body packing
		Shaft packing	Shaft packing	Shaft packing	Shaft packing	—	Shaft packing
	Note	—	—	—	Combination where no packing material is designated as valve product symbol		•A special part is required. (Yoke, body end) •Material code and core rubber material: TLX: VMQ (Silicone) TLE: EPDM (Ethylene propylene rubber) TLZ: HNBR (Nitrile rubber)

The Food Sanitation Law conformity test

Acceptable

◎ Very good, ○ Good, △ Possible, × Impossible

► List for consumable parts

Size	Code	Disc seat A SQPA	Shaft packing *1	Body packing SQBP	Guide ring *1	Guide ring (for quenching) SQPGR
10A~1S		03—10	03—10	03—10	03—10 SQPGR	03—10
1 1/2		15—20	15—20	15—20	15—20 SQPGR	15—20
2		15—20	15—20	15—20	15—20 SQPGR	15—20
2 1/2		25	25—40	25	25—40 SQPGR	25—40
3		30	25—40	30	25—40 SQPGR	25—40
4		40	25—40	40	25—40 SQPGR	25—40
5		50—60	50—60	50—60	50—60 SQPGR	50—60
6		50—60	50—60	50—60	50—60 SQPGR	50—60

*1 Product name symbols for shaft packing and guide ring vary depending on material and size.

Single-seal SQ valve type symbol table

Name	JIS material classification	Finish classification	Pipe end classification	Size classification	Product name/type
Symbol		(N M)	× ×	× ×	
	①	② ③	④	⑤	⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬
	Standard				

① Material classification (main body)

Category	Symbol	Material				Applicable size
		Metal part	Body packing	Disc seat	Shaft packing	
Standard	304	SUS 304 (or equivalent)	SE72 silicone rubber	Z85 HNBR	Z85 HNBR	10A~6S
	304-E9	SUS 304 (or equivalent)	E81 EPDM	E81 EPDM	E81 EPDM	
	304-FU	SUS 304 (or equivalent)	UC rubber (High-function fluororubber)	UC rubber (High-function fluororubber)	UC rubber (High-function fluororubber)	
	304-F	SUS 304 (or equivalent)	F8 fluororubber	F8 fluororubber	F8 fluororubber	
Option	316L	SUS 316L (or equivalent)	SE72 silicone rubber	Z85 HNBR	SE72 sillconerabber	10A~6S
	316L-E9	SUS 316L (or equivalent)	E81 EPDM	E81 EPDM	E81 EPDM	10A~6S
	316L-FU	SUS 316L (or equivalent)	UC rubber (High-function fluororubber)	UC rubber (High-function fluororubber)	UC rubber (High-function fluororubber)	
	316L-F	SUS 316L (or equivalent)	F8 fluororubber	F8 fluororubber	F8 fluororubber	
	304-TL	SUS 316L (or equivalent)	VMQ + PTFE lining	VMQ + PTFE lining	HNBR + PTFE lining	1 1/2S~3S
	316L-TL	SUS 316L (or equivalent)	VMQ + PTFE lining	VMQ + PTFE lining	HNBR + PTFE lining	

② Finish classification (valve main body)

Category	Symbol	Finish	
		Internal finish	External finish
Standard	0P	Pickling	Pickling or beads shot blast
	1P	#320 to #400 buff polished finish	Pickling or beads shot blast
Option	EP	Electrolytic polishing finish	Pickling or beads shot blast

④ Pipe end classification

Category	Symbol	Details
Standard	M	ISO male
	C	ISO clamp
	T	Sanitary flange
	R	Sanitary flange (loose)
Option	N	ISO nut
	W	Weld
	X	Other

⑤ Size classification

Symbol	Size	Symbol	Size
03	10A	25	2 1/2S
04	15A	30	3S
10	1S	40	4S
15	1 1/2S	50	5S
20	2S	60	6S

⑥ Type Classification

Symbol	Shaft seal	Valve operation	No. of main bodies	Remarks
SH	Shaft packing type	Bottom up	2	On-off valve
SM		Top down	2	On-off valve
SJ		Bottom up	3	Branch valve
SK		Bottom up	3	Switching valve
KH		Bottom up	2	Tank valve
KM		Top down	2	Tank valve
MH	Diaphragm type	Bottom up	2	On-off valve
MM		Top down	2	On-off valve
NH		Bottom up	2	Disc-seat-less diaphragm type on-off valve
NM	Shaft packing type	Top down	2	Disc-seat-less diaphragm type on-off valve
LH		Bottom up	2	Disc-seat-less diaphragm type on-off valve
LM	Diaphragm type	Top down	2	Disc-seat-less diaphragm type tank valve
TH		Bottom up	2	Disc-seat-less diaphragm type tank valve
TM	Shaft packing type	Top down	2	Disc-seat-less diaphragm type tank valve
BH		Bottom up	2	Disc-seat-less diaphragm type tank valve
BM		Top down	2	Disc-seat-less diaphragm type tank valve

⑦ Drive classification

Category	Symbol	Details
Standard	C	Automatic normally close
	O	Automatic normally open
Option	W	Automatic double-action
	M	Manual *1
Special	X	—

*1: Manual types are available in sizes from 10A to 3S.

Technical material

⑧ Main body quantity and type

Symbol	2A	2B	2C	2D	2L	2T
Sketch						
Symbol	3A	3B	3C	3D	3E	3F
Sketch						
Symbol	3G	3H	3J	3K	3L	3M
Sketch						

Number in sketch shows number of ports.

⑨ Cylinder type (Refer to the cylinder selection table.)

Symbol	Type	Symbol	Type
06M	60M	06H	60H
08M	80M	08H	80H
10M	100M	10H	100H
13M	125M	13H	125H
15M	150M	15H	150H
20M	200M	20H	200H
25M	250M	25H	250H

⑩ Feedback switches classification

In the valve control system, different types are used for (10) and (11). Consult with our company.

Category	Symbol	Type/manufacturer	Usable power voltage range	Maximum switching current	Operation style	Type or attachment
Standard	D	No feedback switch	—	—	—	—
	C	D2VW-5L2A-1M Limit switch made by OMRON	AC/DC<250V	4A	NO,NC	Type with cover
	A	FL2R-4J6SD Proximity switch made by Azbil	DC10~30V	100mA	NO	Type with cover
	J	IGC2005-ARKG/UP Proximity switch made by Efeetor	DC10~36V	100mA	NO	Type with M18 stay
	U	FL7M-7J6HD Proximity switch made by Azbil	DC10~30V	100mA	NO	Type with M18 stay
	R	FL7M-7K6H Proximity switch made by Azbil	DC10~30V	100mA	NC	Type with M18 stay
Special	Z					Type with cover
	P	For nonstandard specifications with proximity switch supplied				Type with stay
	B	Asi: For uni-wire system with a solenoid valve: For further details, refer to the catalog of valve control head.				

Note) Above parts may be subject to substitution with equivalent parts due to change in model of switch manufacturer. Select a standard model as much as possible.

⑪ Number of switches used

Symbol	Details
0	No switch
1	One switch on closed side
2	Two switches on open and closed sides
3	One switch on open side
X	Other

⑫ Main body options

Symbol	Details
0	No option
C	With Shaft quenching
Y	Diaphragm tank valve

⑬ Cylinder option

Symbol	Details
0	Standard
W	2-position cylinder
T	3-position cylinder
D	Oil damper

Section for entry of special parts

	No.	Required ports	Size	Coupling
	①			
	②			
	③			
	④			
	⑤			
	⑥			
	⑦			

Section for entry of special notes

- If using nonstandard specifications for the lubricant application specifications on Page 12, be sure to designate them.
- If the specification is not specified, lubricant is applied.
- Safety of lubricant to be applied:
- NSF category H1
- Conforming to the Food Sanitation Law



Headquarters:

1-32, Honden 2-chome, Nishi-ku, Osaka 550-0022
TEL: +81-6-6585-0700 FAX: +81-6-6586-0708

Trade Department:

TEL: +81-6-6585-2277 FAX: +81-6-6586-0708

TOSTE VIETNAM CO.,LTD

Rental Factory 5-1, Road N3-2, Long Duc IP,
Long Duc Ward, Long Thanh district,
Dong Nai province, Vietnam
TEL: +84-251-368-1800 FAX: +84-251-368-1881

肇慶東洋新島不銹鋼工程有限公司

〒526072 肇慶市鼎湖区蓮花鎮 7 区蓮信路
TEL: +86-758-2619887
FAX: +86-758-261978