

## CX-1500 Series

FLOW SET VALVE FOR GAS APPLICATION

### OUTLINE

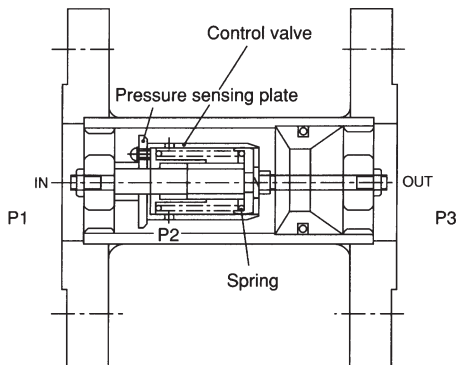
CX-1500 FLOW SET VALVE is a constant flow valve for gases. Outlet pressure of process changes, CX-1500 maintains constant flow of gases.

CX-1500 is suitable for stable and continuous air purging at water treatment facilities.

### OPERATION PRINCIPLE

Gas flow is introduced from inlet with pressure of P1. The Inlet pressure P1 actuates the pressure sensing plate. The pressure sensing plate is connected to valve needle. A spring is assembled onto this valve needle unit.

The assembled spring acts so as to keep the differential pressure P2 constant and to keep constant flow even when outlet pressure P3 changes.



### MODEL CODE

MODEL CODE		DESCRIPTION
CX-1502-		
MATERIAL CONSTRUCTION	0	MATERIAL CLASS 0 *1
	1	MATERIAL CLASS 1
	2	MATERIAL CLASS 2
	Z	Others, Special
CONNECTION SIZE	0	15 mm (1/2")
	1	20 mm (3/4")
	2	25 mm (1")
	3	32 mm (1 1/4")
	4	40 mm (1 1/2")
	5	50 mm (2")
	6	65 mm (2 1/2")
	7	80 mm (3")
	8	100 mm (4")
	9	125 mm (5")
A	150 mm (6")	
Z	Others, Special	
CONNECTION RATING	1	Rc Screw *2
	2	NPT Screw *2
	3	JIS 10K Flange
	Z	Others, Special

\*1: Material class 1 (SUS304) or Material class 2 (SUS316) are available for screw connection versions.

\*2: Screw connection is available only for 15 mm~50 mm. All sizes are available for flange version.



### STANDARD SPECIFICATION

- Measuring fluid : Air, Nitrogen, and other gases  
Fluid Press. : Max. 1.2 MPa  
Note: Avoid a sudden change of pressure.
- Fluid Temp. : Max. 100°C
- Available Size  
Screw connection : 15, 20, 25, 32, 40, and 50  
Flange connection : 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, and 150
- Process connection : Rc Thread, NPT Thread, JIS 10K flange, others
- Possible setting range

Meter size	Flow range (Air) m <sup>3</sup> /h(nor)
15	5 to 13
20	5 to 13
25	10 to 15
32	12 to 25
40	20 to 40
50	35 to 90
65	45 to 150
80	60 to 250
100	100 to 500
125	400 to 900
150	600 to 1000

Note 1) Calibration condition Air, 20 °C, 49 kPa  
In case the actual operating condition differs from them, the following compensation calculation is required to obtain flow rate in such condition and then, tables are referred for size selection.

$$Q_N = Q_{No} \times \sqrt{\frac{Y_{No}}{1.293}} \times \sqrt{\frac{150.3}{101.3 + P_o}} \times \sqrt{\frac{273 + T_o}{293}}$$

$Q_N$  : Air converted flow rate [m<sup>3</sup>/h (nor)]

$Q_{No}$  : Flow rate of actual gas [m<sup>3</sup>/h (nor)]

$Y_{No}$  : Density of gas to be measured [kg/m<sup>3</sup> (nor)]

$P_o$  : Operating Press. [kPa]

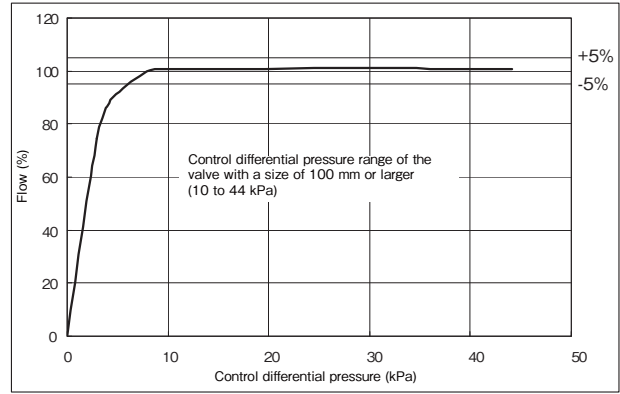
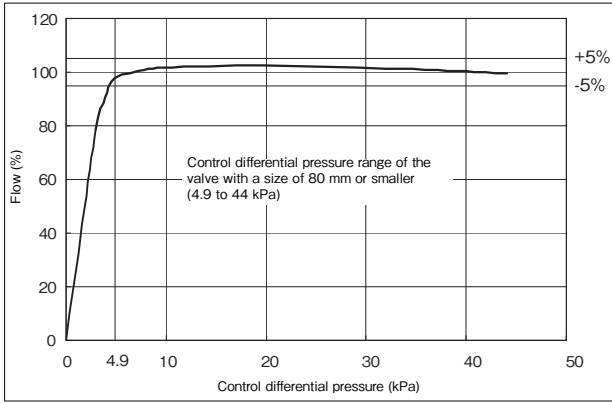
$T_o$  : Operating temp. [°C]

2) Setting is factory set and not field adjustable  
Control differential pressure range :

15 to 80A	100A or more
4.9 to 44 kPa	10 to 44 kPa

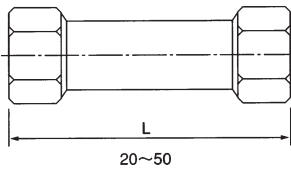
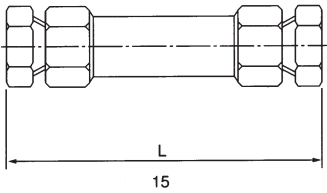
- Control accuracy : ±5% (Against set value)
- Painting : Munsell 7.5 BG 4/1.5  
(Body made of SUS not painted)

● Control characteristics



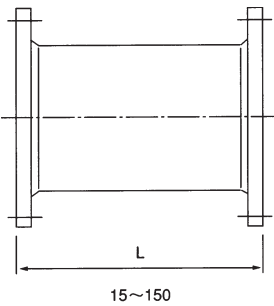
EXTERNAL DIMENSIONS

□ Screw connection type



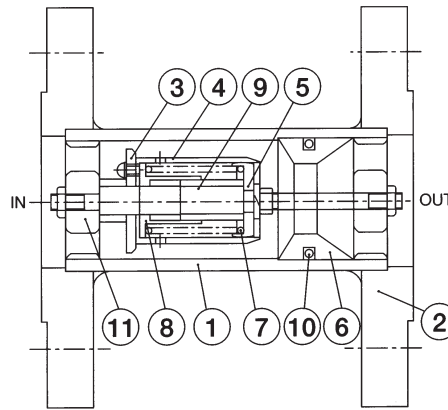
Meter size	L (mm)	Mass (Approx.)
15	150	0.9
20	110	0.6
25	140	1.0
32	150	1.3
40	170	1.6
50	200	3

□ Flange connection type



Meter size	L (mm)	Mass (Approx.)	Meter size	L (mm)	Mass (Approx.)
15	80	1.3	65	200	8
20	80	1.6	80	230	10
25	110	3	100	270	14
32	110	3.5	125	330	20
40	130	4	150	350	26
50	160	5.5	-	-	-

MATERIAL CONSTRUCTION



NO.	Part Name	Material Class 0*	Material Class 1	Material Class 2
1	Body	SUS304	SUS304	SUS316
2	Flange	SS400	SUS304	SUS316
3	Press. sensing plate	SUS304	SUS304	SUS316
4	Valve	SUS304	SUS304	SUS316
5	Valve guide	SUS304	SUS304	SUS316
6	Valve sheet	SUS304	SUS304	SUS316
7	Spring	SUS304	SUS304	SUS316
8	Damper	SUS304	SUS304	SUS316
9	Guide rod	SUS304	SUS304	SUS316
10	O ring	EPDM	EPDM	FPM
11	Shaft guide	SCS13 (80 or smaller) SCS14 (100 or larger)	SCS13 (80 or smaller) SCS14 (100 or larger)	SCS14

\* Screw connection type is the material class 1 (SUS304) or class 2 (SUS316).

\* Specification is subject to change without notice.

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