

CX-1500 Series

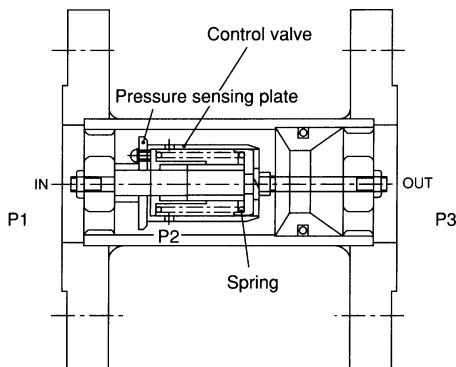
FLOW SET VALVE FOR GAS APPLICATION

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
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")
CONNECTION RATING	Z	Others, Special
	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 object : Air, Nitrogen, and other gases
- Max. Op. Press : 1.2 MPa
Don't give the differential pressure beyond 0.05 MPa or more rapidly.
- Max. Op. Temp : 80 °C
- Available Size
 - Screw connection : 15, 20, 25, 32, 40, and 50 mm
 - Flange connection : 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, and 150 mm
- Process connection : Rc Thread, NPT Thread, JIS 10K flange, others
- Possible setting range

Size	Possible setting range m³/h (nor)
15 mm	5 to 13
20 mm	5 to 13
25 mm	10 to 15
32 mm	12 to 25
40 mm	20 to 40
50 mm	35 to 90
65 mm	45 to 150
80 mm	60 to 250
100 mm	100 to 500
125 mm	400 to 900
150 mm	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.

$$Q_N = Q_{No} \times \sqrt{\frac{\gamma_{No}}{1.293}} \cdot \sqrt{\frac{150.3}{P_o}} \cdot \sqrt{\frac{T_o}{293}}$$

Q_N : Air converted flow rate [m³/h (nor)]

Q_{No} : Flow rate of actual gas [m³/h (nor)]

γ_{No} : Density of gas to be measured [kg/m³ (nor)]

P_o : Operating Press. [101.3+Op.press(Gauge)] [kPa abs]

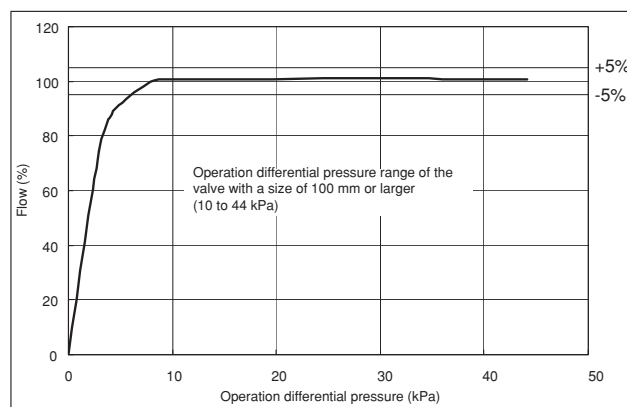
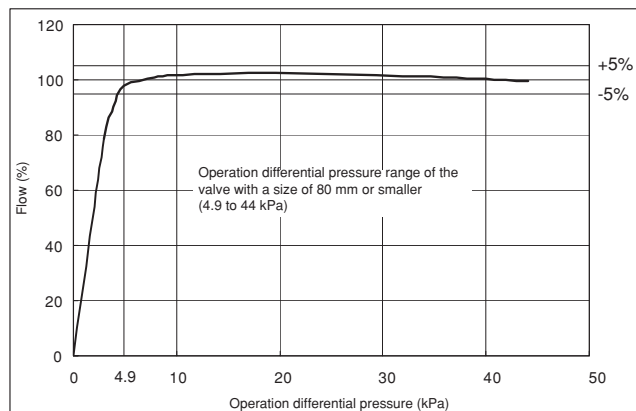
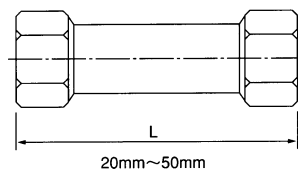
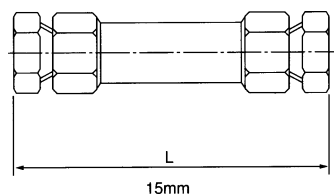
T_o : Operating temp. [273+Op.temp(°C)] [°K]

2) Setting is factory set and not field adjustable

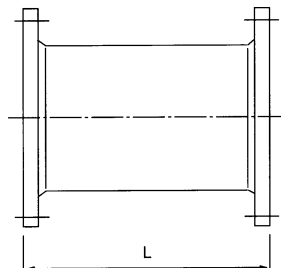
- Operation differential pressure range :

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)

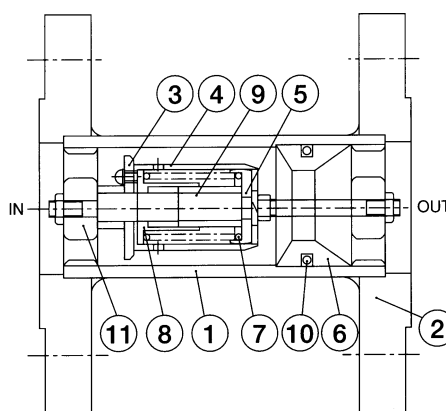
● Flow characteristics

MODEL CODE
□ Screw connection type


Size	L (mm)	MASS (kg)
15 mm	150	0.9
20 mm	110	0.6
25 mm	140	1.0
32 mm	150	1.3
40 mm	170	1.6
50 mm	200	3

□ Flange connection type


15mm~150mm

Size	L (mm)	MASS (kg)	Size	L (mm)	MASS (kg)
15 mm	80	1.3	65 mm	200	8
20 mm	80	1.6	80 mm	230	10
25 mm	110	3	100 mm	270	14
32 mm	110	3.5	125 mm	330	20
40 mm	130	4	150 mm	350	26
50 mm	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	C3604B/PTFE	SUS304/PTFE	SUS316/PTFE
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	EPT	EPT	FPM
11	Shaft guide	SCS13 (Less than 80A) SCS14 (More than 100A)	SCS13 (Less than 80A) SCS14 (More than 100A)	SCS14

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

* Specification is subject to change without notice.

TOKYO KEISO CO., LTD.

Head Office : Shiba Toho Building, 1-7-24 Shibakoen, Minato-ku, Tokyo 105-8558

Tel : +81-3-3431-1625 (KEY) ; Fax : +81-3-3433-4922

e-mail : overseas.sales@tokyokeiso.co.jp ; URL : <http://www.tokyokeiso.co.jp>

