CHECK VALVE

CX1

USER'S MANUAL

MIYAWAKI INC.

SAFETY

The following warnings and cautions are shown at appropriate places in this manual.

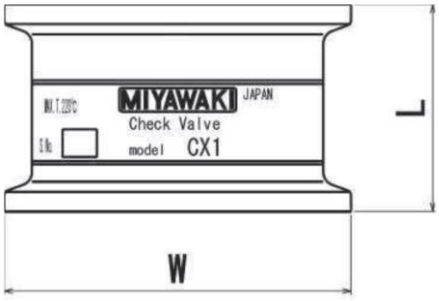
WARNING	Failure to observe this type of precaution may lead to serious injury or death.
CAUTION	Failure to follow this type of precaution can lead to injury or damage to equipment and property.

Contents

1. Purpose of use

The model CX1 is check valve which is used to prevent the backflow of a fluid. The connection uses a ferrule, making it easy for maintenance. It is an in-line type that is not restricted by the installation orientation and allows compact piping. It can be widely used in steam or water (hot water) piping and other applications.

2. Specifications



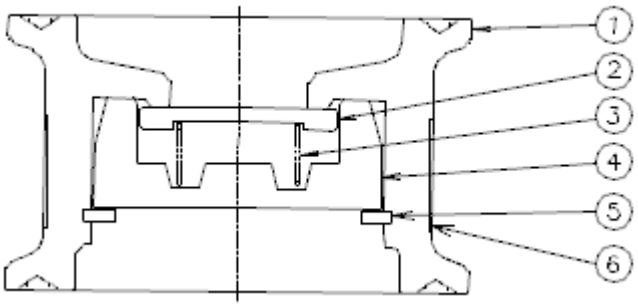
(1)Dimensions:	L = 30 mm, W = 50.5 mm
(2)Weight:	0.20 kg
(3)Body material:	Stainless steel SUS316
(4)Connection:	Ferrule (size 38 mm, ISO 2852)
(5)Maximum allowable pressure (PMA):	1.0 MPaG
(6)Maximum allowable temperature (TMA):	220 ºC
(7)Cracking pressure:	0.003 MPa or less
(8)Maximum operating differential pressure (△PMX):	0.5 MPa

The following items are indicated on the name plate. Check these indications to avoid incorrect use.

(9)Maximum operating pressure (PMO):	0.5 MPaG
(10)Maximum operating temperature (TMO):	220 ºC
(11)Flow direction:	The direction of fluid flow is indicated with an arrow.
(12)Year of manufacture:	Indicates the lower two digits of the year of manufacture in the western calendar in the leftmost two digits of the four-digit serial number.

- PMA is the maximum pressure allowed for the pressure-resistant section (body).
- TMA is the maximum temperature allowed for the allowable section (body).
- The cracking pressure is a differential pressure between the inlet and the outlet at which the check valve opens.
- △PMX is the maximum differential pressure between the inlet and the outlet at which the check valve operates properly.
- PMO is the maximum pressure at which the check valve operates properly.
- TMO is the maximum temperature at which the check valve operates properly.

3. Construction details



1. Body
2. Disc
3. Spring
4. Retainer A
5. C-ring
6. Name plate

4. Installation

⚠ **Caution**	Before installing the product, blow out any debris or dirt inside the pipeline.

1) Check the flow direction indicated on the name plate.
2) There is no restriction on the installation orientation.

5. Troubleshooting

Problem	Possible cause	Solution
Backflow	Foreign substances stuck between the disc (2) and the body (1).	Disassemble and remove the foreign substances.
	The disc (2) and the body (1) are worn.	Replace with a new one.
	The spring (3) is damaged.	Replace the spring (3) with a new one.
No fluid flow	The disc (2) and the body (1) stuck to each other.	Clean the disc and cover.
	Wrong installing direction	Reinstall the product in the correct direction.

6. Maintenance

⚠ **Warning**	When you remove or disassemble the CX1 from piping, make sure that the inside pressure is 0 MPaG (0 kgf/cm^2•g) and the body surface temperature is at room temperature before starting the work in order to ensure safety.

⚠ **Caution**	Both faces of the body are sealing surfaces. Be careful not to damage them.

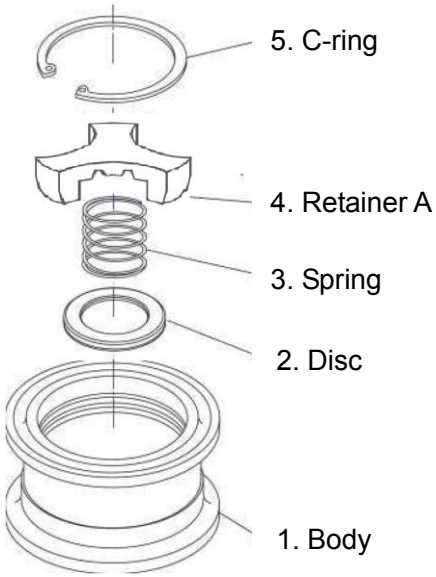
6-1. Disassembling procedure

1) When you remove the C-ring (5) from the body (1), all internal parts can be taken out in the order of the retainer A (4), the spring (3), and the disk (2).

6-2. Assembling procedure

After inspecting and cleaning the body (1) and each part, assemble them with the following procedure.

1) Place the body (1) on a stable surface with the outlet side facing upward.
2) Place the disc (2) on the center of the seat surface of the body (1) with the recessed side facing upward and set the spring (3) on the recessed section of the disc.
3) Set the retainer A (4) so that the tip contacts with the body (1). At this time, fit the top of the spring in the groove of the retainer A (4).
4) Fit the C-ring (5) in the groove inside the body to secure it.



7. Warranty

7-1 Warranty period

The warranty period shall last 12 months from the date of product delivery.

7-2 Details of the warranty

If the product stops working correctly within the warranty period, we will repair or replace the product free of charge if the cause of the trouble is not one of the following items.

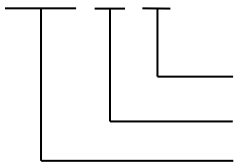
1) The precautions described in this manual were not observed
2) User's errors or mistakes such as an inappropriate installation or incorrect handling, or an excessively large impact caused by dropping
3) Problems caused by devices or equipment other than ours, or a disallowed use environment
4) When a repair or modification has been performed by anyone other than us or people who are authorized to make such repairs
5) Intrusion of salt or other substances that promote significant rust or corrosion or problems from fluids that contain the same substances
6) Consumable parts such as Gasket, O-ring, etc
7) Attachment or accumulation of foreign matter in the pipe, such as dust and scale
8) Problems from fires, natural disasters, or other force majeure which is not our responsibility

7-3 Warranty limitation

The remedy available under the warranty shall not exceed the sales price of the products delivered, for any cause whatsoever.

8. Serial number (S. No.) designation

S.No. □ □ □ □



Represents the day.
Represents the month.
Represents the year. (last two digits of the year according to the Western calendar)

Month designation system

Symbol	Month	Symbol	Month	Symbol	Month	Symbol	Month
1	1	4	4	7	7	X	10
2	2	5	5	8	8	Y	11
3	3	6	6	9	9	Z	12

Day designation system

Symbol	Day	Symbol	Day	Symbol	Day	Symbol	Day
1	1	9	9	H	17	Q	25
2	2	A	10	J	18	R	26
3	3	B	11	K	19	S	27
4	4	C	12	L	20	T	28
5	5	D	13	M	21	U	29
6	6	E	14	N	22	V	30
7	7	F	15	O	23	W	31
8	8	G	16	P	24		

Example of serial number designation
1 7 1 1 → Jan 1, 2017
2 9 X M → Oct 21, 2029

9. Guidance for reading special product name

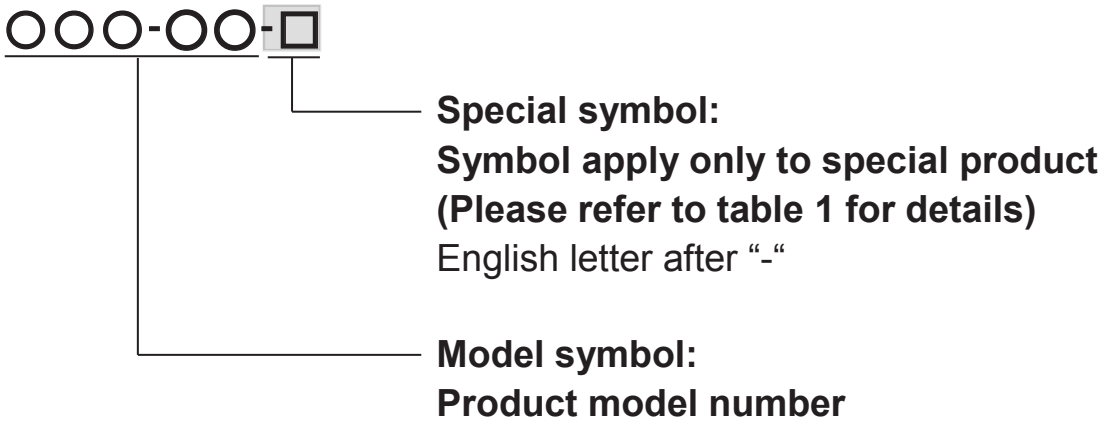


Table 1 Symbol description

Suffix	Special contents
A	Trap for high-pressure gas installed property (only for Gas Trap)
C	Blow valve attached
K	Change of gasket
L	Special face to face dimension
M	Change of parts material
P, T	Change of operating pressure, temperature, condensate capacity, etc
R	Change of screen mesh
V	Change of air vent
X	Other than mentioned above or complex of special contents above

- For any questions about the product that you purchased or about the details in this user’s manual, please contact the following.
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- Some special specifications of the product you have, may found to be different from the ones in the user's manual. If you have any question, please contact MIYAWAKI, our local authorized agent, or the place where you purchased.

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