

**OPERATING MANUAL
FOR
SIGHT CHECKER
TS1**



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.

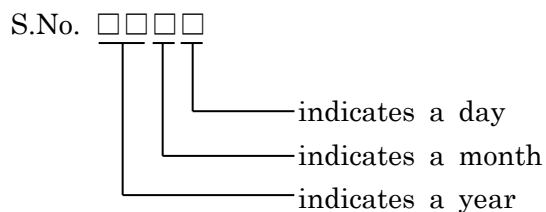


CAUTION

Failure to follow this type of precaution can lead to injury or damage to equipment and property.

S No. on the name plate of our product indicates a manufacturing date.

Indicating method of S No.



Example of indicating a year

05 → 2005 15 → 2015

Method of indicating a month

Mark	Month	Mark	Month	Mark	Month	Mark	Month
1	January	4	April	7	July	X	October
2	February	5	May	8	August	Y	November
3	March	6	June	9	September	Z	December

Method of indicating a day

Mark	Day	Mark	Day	Mark	Day	Mark	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)

In case that S.No. is 0516, the manufacturing date is January 6, 2005

In case that S.No. is 15XM, the manufacturing date is October 21, 2015

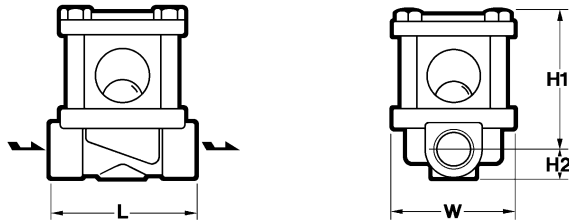
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1. INTRODUCTION

Sight Checker Model TS1 is sight glass and check valve combined for steam, water and air.

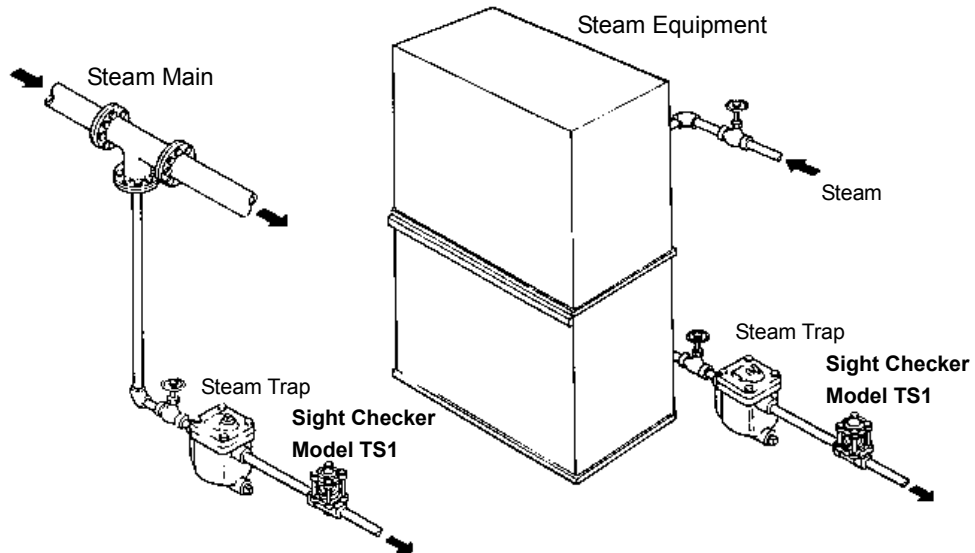
2. DIMENSIONS AND SPECIFICATIONS




Model No.	Connection	Size mm (inch)	Max Operating Pressure (MPa)	Maximum Temperature °C(°F)	Material of Body	Dimensions (mm)				Weight (kg)
						L	H1	H2	W	
TS1	Screwed	15(1/2)	Steam:0.8	Steam:180(356)	Brass	80	69	14	60	0.8
		20(3/4)	Water:1.0	Water, Air: 100(212)			71	17		0.85
		25(1)	Air:0.97				76	21		1.2

3. INSTALLATIONS

- 1) Sight Checker Model TS1 can only be installed horizontally.
- 2) Please pipe according to the arrow forged on inlet.
- 3) When use after steam trap as far from the steam trap as possible to avoid influence of the trap.
- 4) The Glass Tube is consumables. Please replace it once a year or when thickness decreases for 10%.

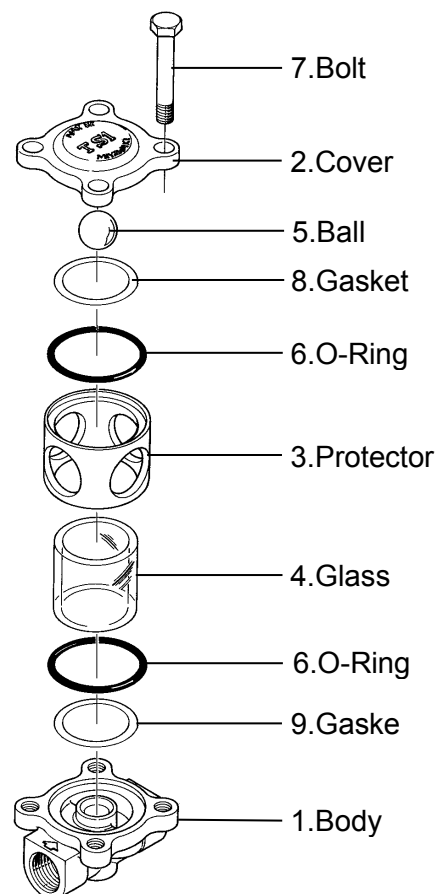



4. MAINTENANCE

 WARNING	<p>When disassembling a hot Sight Glass, be sure to release the pressure inside to atmospheric pressure, and cool the Sight Glass before the work.</p>
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A. Replace of Glass Tube and/or Teflon Ball.

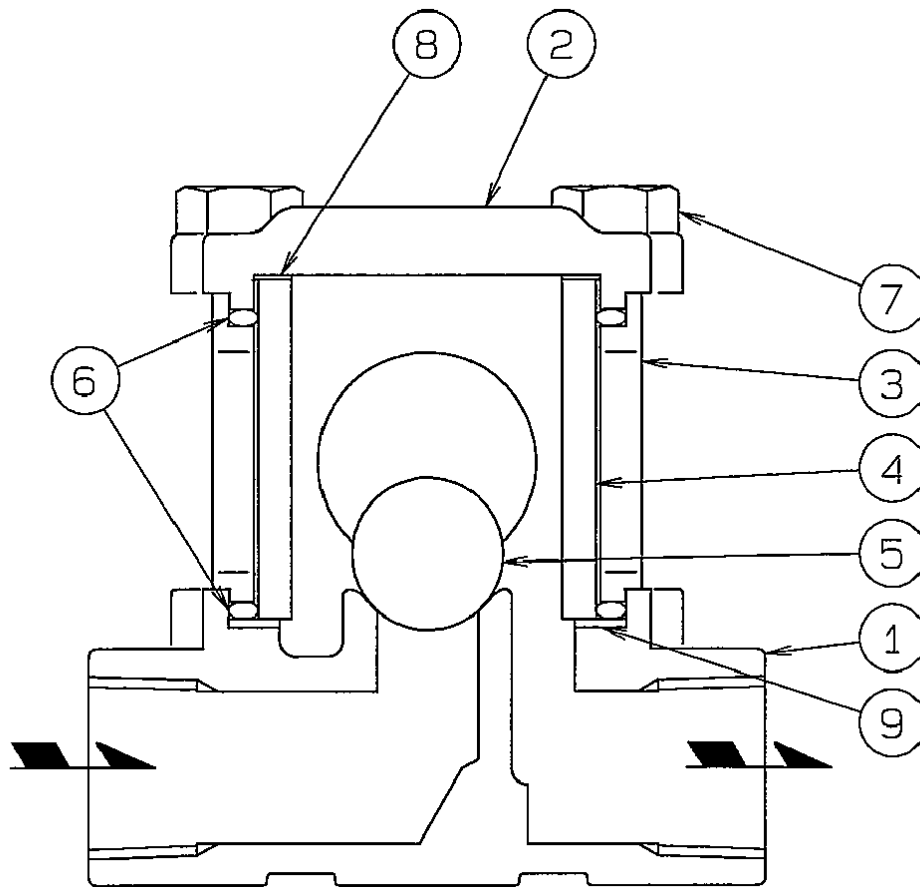
- 1) Unscrew Bolt(7), Cover(2), Protector (3), Glass Tube(4) and O-Ring(6) will come apart by hand.
- 2) Put one O-Ring(6) on Glass Tube(4), placement of the O-Ring(6) should be about 10mm from the rim of Glass Tube(4).
- 3) Place Glass Tube(4) on the Body(1), the O-Ring(6) on the bottom, put Protector(3) over the Glass Tube(4), push Protector(3) until it fits to the Body(1).
- 4) Put other O-Ring(6) on top part of the Glass Tube(4), confirm if the Gasket(8) is just for the cushion.
- 5) Place the Teflon Ball(5) in the Glass Tube(4).
- 6) Assemble the Cover(2), screw in the Bolt(7).



 CAUTIONS	<ul style="list-style-type: none"> ● When reassembling always replace the Gaskets(8), O-Ring(6) to new ones. ● Also Bolt(7) should be tightened evenly.
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No.	Parts	Size	Shape	Clamp Torque	Tools
7	Bolt	13mm	Hexagon	12N·m (120kgf·cm)	Wrench

5. CONSTRUCTION



- 1.Body
- 2.Cover
- 3.Protector
- 4.Glass Tube
- 5.Ball Sight Glass
- 6.O-Ring
- 7.Bolt
- 8.Gasket
- 9.Gasket

6. WARRANTY

6.1 Warranty period

The warranty period is 18 months after shipment or 12 months after installation, whichever occurs first.

6.2 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 Packing, Gasket, O-ring, Diaphragm, 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

6.3 Warranty limitation

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

★ Guidance for reading special product name

○○○-○○-□

Special symbol: symbol apply only to special product
(Please refer to table 1 for details)

1 suffix English letter after “-”.

Model symbol: Product model number

Table 1 Symbol description

Suffix	Special contents
A	Approved high-pressure gas trap
C	Blow valve attached & countermeasure against scale
K	Change of gasket
L	Special face to face dimension
M	Change of parts material
P	Change of operating pressure
R	Change of screen mesh or countermeasure against scale
T	Parts are standards, and the specification (operating temp, press. etc.) is changed
V	Change of air vent
X	Other than mentioned above or complex of special contents above

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- 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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