



TI-P022-05
CMGT Issue 5

Single Window and Double Window Sight Glasses

Description

A range of single and double window sight glasses available in either brass or bronze depending on size with screwed connections.

Standards

This product fully complies with the requirements of the Pressure Equipment Directive (PED).

Certification

These products are available with certification to EN 10204 2.2.

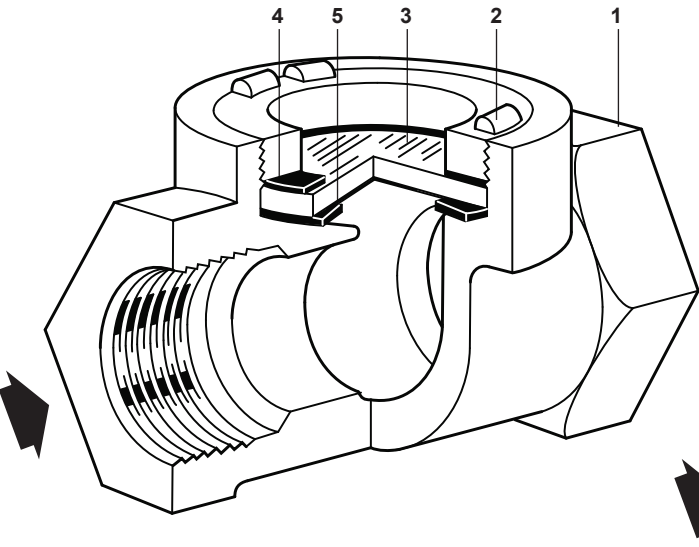
Note: All certification/inspection requirements must be stated at the time of order placement.

Sizes and pipe connections

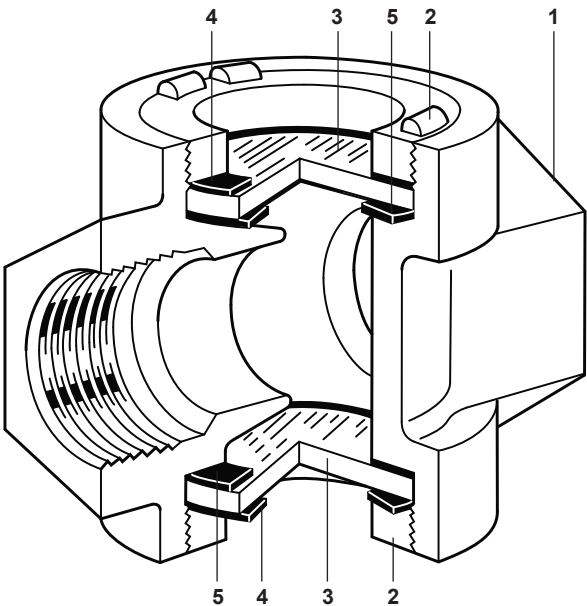
Single window 3/8", 1/2", 3/4" and 1" screwed BSP or NPT.

Double window 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2" screwed BSP or NPT.

Single window



Double window

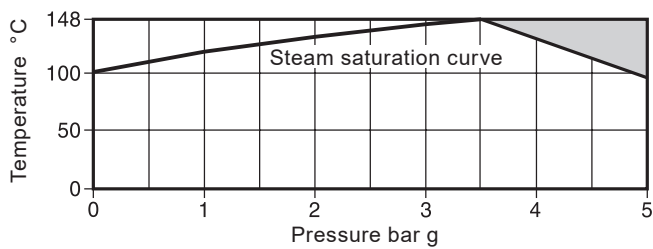


Material

No.	Part	Material		
1	Body	1/2" to 1"	Brass	EN 12165 CW617N
		1 1/4" to 2"	Bronze	BS EN CC491K
2	Bezel	Brass		EN 12165 CW617N
3	Window	Toughened soda lime glass		BS 3463
4	Top gasket	Reinforced exfoliated graphite		
5	Bottom gasket	Reinforced exfoliated graphite		

Pipeline ancillaries
Sight glasses

Pressure/temperature limits



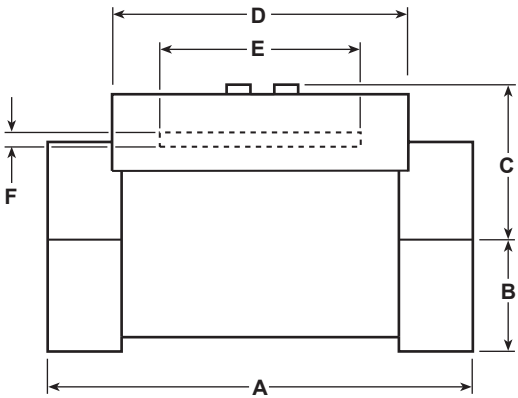
The product **must not** be used in this region.

Body design conditions		PN5
PMA	Maximum allowable pressure @ 90 °C	5 bar g
TMA	Maximum allowable temperature @ 3.5 bar g	148 °C
Minimum allowable temperature		-29 °C
PMO	Maximum operating pressure for saturated steam service	3.5 bar g
TMO	Maximum operating temperature	148 °C
Minimum operating temperature. Note: For lower temperatures consult Spirax Sarco.		0 °C
Designed for a maximum cold hydraulic test pressure of:		7 bar g
PTMX	Maximum test pressure (steam service)	3.5 bar g

Dimensions/weights (approximate) in mm and kg

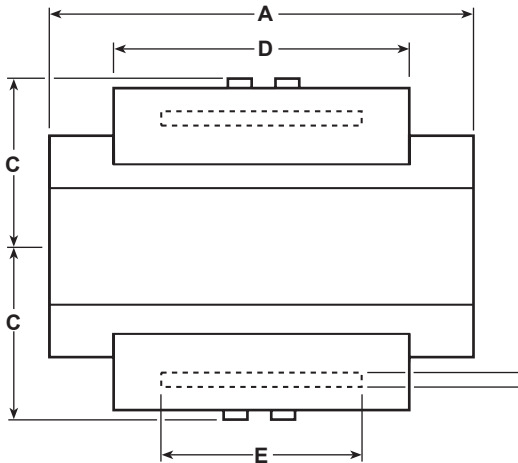
Single window

Size	A	B	C	D	E	F	Weight
3/8"	89	16	32	64	50	4.8	0.6
1/2"	89	16	32	64	50	4.8	0.6
3/4"	89	19	35	64	50	4.8	0.7
1"	87.5	24	38	64	50	4.8	0.9



Double window

Size	A	B	C	D	E	F	Weight
1/2"	89	-	32	64	50	4.8	0.9
3/4"	89	-	32	64	50	4.8	0.9
1"	89	-	35	64	50	4.8	1.2
1 1/4"	108	-	51	73	50	4.8	1.9
1 1/2"	108	-	51	73	50	4.8	1.8
2"	114	-	57	76	50	4.8	2.5



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-S32-04) supplied with the product.

Warning:

Under certain conditions corrosive elements in condensate can affect the inside face of the window(s), particularly where caustic alkali and hydrofluoric acid are present. It is recommended that the sight glass is periodically checked for thinning of the window(s). If there is evidence of thinning or erosion damage then the window(s) should be replaced immediately. Always wear eye protection when viewing the contents of the sight glass.

Installation and maintenance note:

Sight glasses should have stop valves fitted on both the inlet and outlet. It is imperative that the upstream stop valve is closed first in order to prevent overpressurisation.
Sight glasses can be fitted in either a horizontal or vertical line on the outlet side of a steam trap. Where the trap is a blast discharge type e.g. thermodynamic, the sight glass must be fitted at least 1 m from the trap. This is to ensure that the glass is not subjected to thermal shock or pressure. Reasonable steps should be taken to protect personnel from injury in the unlikely event that the glass breaks. Ensure access is available for maintenance purposes.

Disposal

The product is recyclable. No ecological hazard is anticipated with disposal of this product providing due care is taken.

How to order

Example: 1 off Spirax Sarco 1" BSP double window sight glass with brass body and removable toughened soda lime glass.

Spare parts

The spare parts available are shown in heavy outline. Parts drawn in a grey line are not supplied as spares.

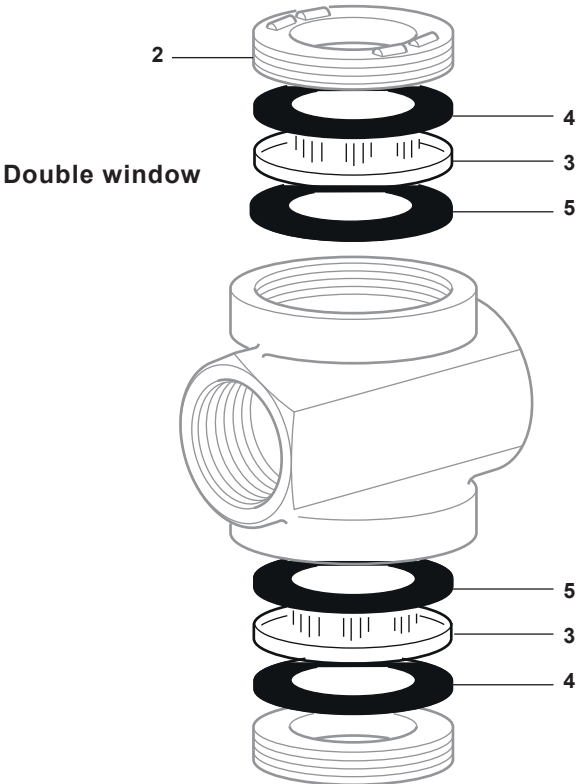
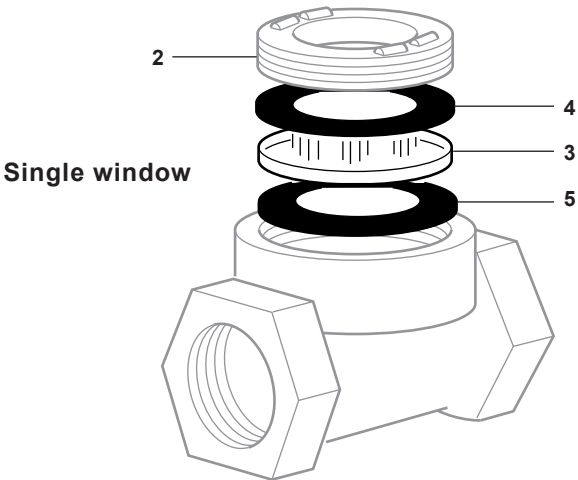
Available spares

Set of windows and gaskets	3, 4, 5	Set of gaskets	4, 5
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How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of sight glass.

Example: 1 off Set of windows and gaskets for a 1" Spirax Sarco double window sight glass.



Recommended tightening torques

Item	Part	 or  mm	N m
2	Bezel		60 - 65

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Pipeline ancillaries
Sight glasses

10.8

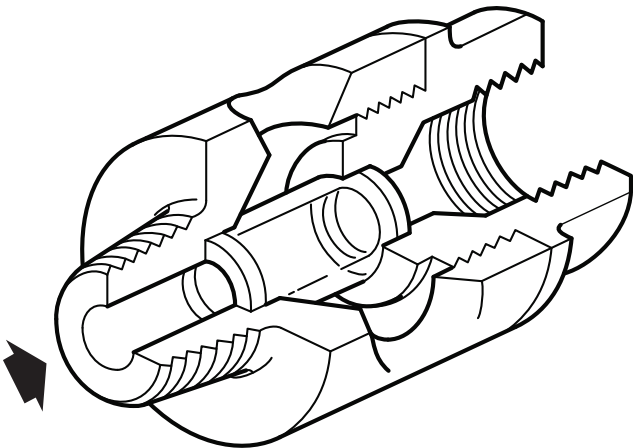
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spirax

sarco

SG13
Brass
Sight Glass

TI-P130-11
CMGT Issue 6

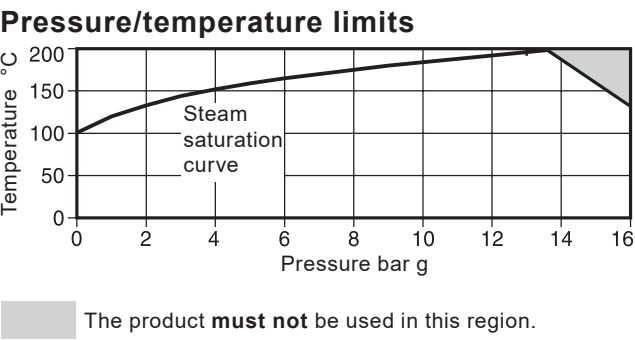


Description
The SG13 is a maintainable brass multi-window sight glass with a cylindrical viewing window and screwed connections. The sight glass monitors the discharge downstream of steam traps in pressurised condensate return lines. It is screwed directly into the steam trap providing a modular monitoring system, thus eliminating the need for a connecting nipple, minimising joints and potential leak paths. The sight glass can also be installed in process lines to provide a visual indication of flow.

Standards
This product fully complies with the requirements of the Pressure Equipment Directive (PED).

Certification
This product is available with certification to EN 10204 2.2.
Note: All certification/inspection requirements must be stated at the time of order placement.

Sizes and pipe connections
½", ¾" and 1" screwed BSP male taper/female parallel to BS 21 or screwed NPT male/female to ANSI B 1.20.1.



Body design conditions		PN16
PMA	Maximum allowable pressure @ 130 °C	16 bar g
TMA	Maximum allowable temperature @ 13.5 bar g	200 °C
Minimum allowable temperature		-20 °C
PMO	Maximum operating pressure for saturated steam service	13 bar g
TMO	Maximum operating temperature	200 °C
Minimum operating temperature		0 °C
Note: For lower temperatures consult Spirax Sarco.		
Designed for a maximum cold hydraulic test pressure of 24 bar g		
PTMX	Maximum test pressure (steam service)	13 bar g

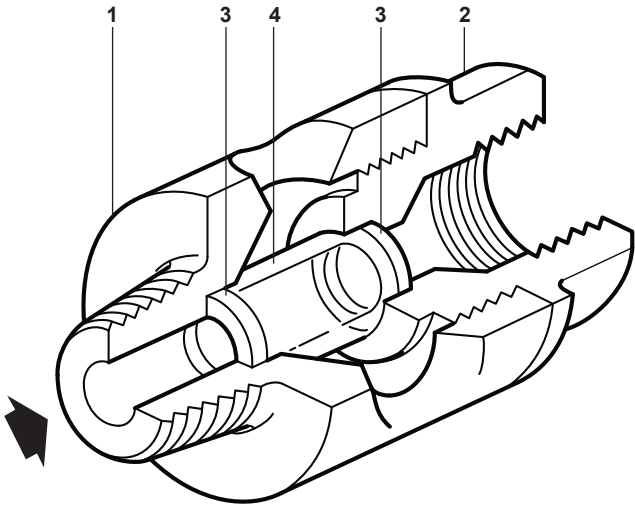
Pipeline ancillaries
Sight glasses

K_v value

Size	1/2"	3/4"	1"	For conversion: C _v (UK) = K _v x 0.963 C _v (US) = K _v x 1.156
K _v	2.5	2.5	2.5	

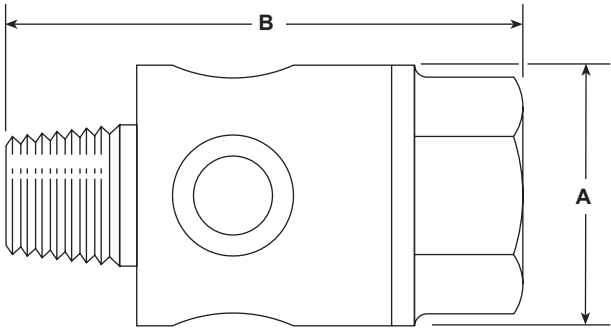
Materials

No.	Part	Material
1	Body	Brass BS 2874 CZ 121
2	End connection	Brass EN 12165 CW617N
3	Sight tube gasket	Virgin PTFE/flurocarbon
4	Sight glass tube	Borosilicate glass



Dimensions/weights (approximate) in mm and kg

Size	A	B	Weight
1/2"	41	78.0	0.42
3/4"	41	89.5	0.53
1"	41	98.0	0.75



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-S32-04) supplied with the product.

Warning:

Under certain conditions corrosive elements in condensate can affect the inside face of the sight tube, particularly where caustic alkali and hydrofluoric acid are present. It is recommended that the sight glass is periodically checked for thinning of the sight tube. If there is evidence of thinning or erosion damage then the sight tube should be replaced immediately. Always wear eye protection when viewing the contents of the sight glass.
Reasonable steps should be taken to protect personnel from injury in the unlikely event that the sight tube breaks.

Installation note:

The tapered thread of the sight glass is screwed directly into the discharge side of the steam trap. Although the sight glass can be fitted in any plane, installation and flow direction will be dictated by the design and operation of the steam trap.

Disposal

The product is recyclable. No ecological hazard is anticipated with disposal of this product providing due care is taken. However if the recycling process involves a temperature approaching 315 °C caution is advised regarding decomposition of the virgin PTFE/flurocarbon sight tube gasket.

How to order

Example: 1 off Spirax Sarco ½" SG13 sight glass having screwed BSP connections.

Spare parts

The spare parts available are shown in heavy outline. Parts drawn in broken line are not supplied as spares.

Available spares

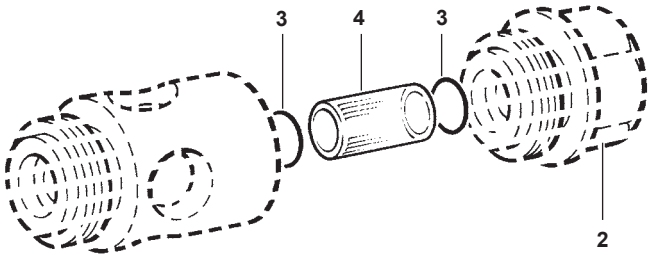
Sight glass assembly	3 (2 off), 4
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How to order spares


Always order spares by using the description given in the column headed 'Available spares'. Since the sight glass assembly is the same for all three sizes, it will always be:-

Example:

1 off Sight glass assembly for a Spirax Sarco SG13 sight glass.



Recommended tightening torques

Item	Part		N m
2	½" - DN15	32 A/F	35 - 40
	¾" - DN20	36 A/F	35 - 40
	1" - DN25	46 A/F	35 - 40

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Pipeline ancillaries
Sight glasses

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