



3C.352-E
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IP37 and IP37/BS Sight Glasses

Description

The IP37 is a cast iron double window sight glass with flanged connections. Used for the controlling the functioning of steam traps and for non-aggressive liquid circuits in general.

Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC and carries the CE mark when so required.

Certifications

The IP37 sight glasses are available on request with standard material certificate EN 10204 2.2 for body and cover.

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

Versions

- **IP37** execution with tempered calcium sodium glass
- **IP37/BS** execution with borosilicate glass

Connection layout: in line horizontal/vertical

Connections

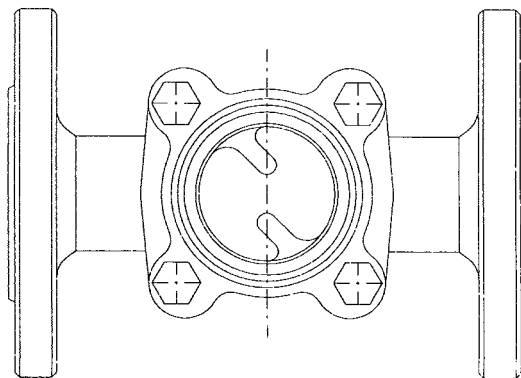
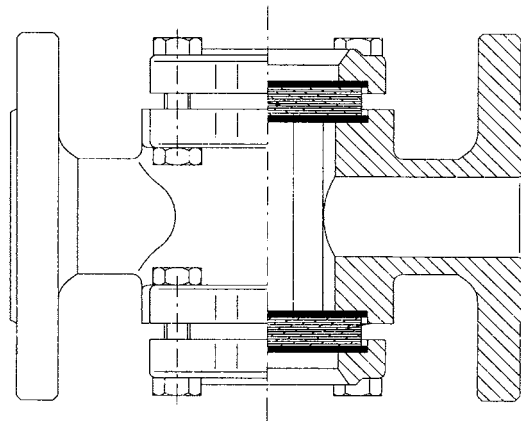
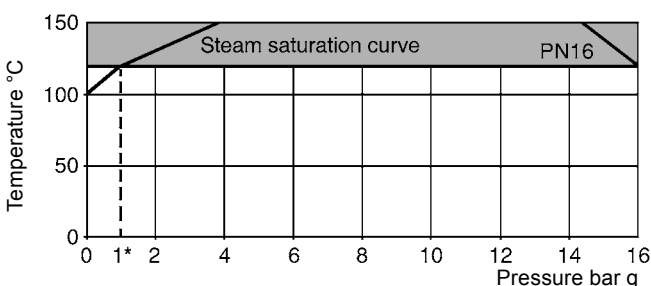
Flanged EN 1092 PN16
 DN15, 20, 25, 32, 40, 50, 65, 80 and 100

Pressure/temperature limits

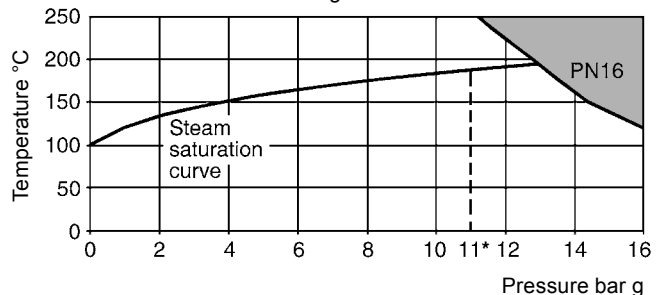
Body design conditions		PN16	
PMA - Maximum allowable pressure	Calcium sodium glass @ 120°C	16 bar g	
	Borosilicate glass @ 250°C	11.2 bar g	
TMA - Maximum allowable temperature	Calcium sodium glass 16 bar g @ 120°C		
	Borosilicate glass 11.2 bar g @ 250°C		
Minimum allowable temperature		0°C	
PMO - Maximum operating pressure	Calcium sodium glass @ 120°C	16 bar g	
	Borosilicate glass @ 120°C	16 bar g	
PMO - Maximum operating pressure for saturated steam service	Calcium sodium glass	1 bar g	
	Borosilicate glass	11 bar g	
TMO - Maximum operating temperature	Calcium sodium glass 16 bar g @ 120°C		
	Borosilicate glass 11 bar g @ 250°C		
Minimum operating temperature, for lower temperatures contact Spirax Sarco		5°C	
Designed for maximum cold hydraulic test pressure of		24 bar g	
PTMX - Maximum test pressure (steam service)	Calcium sodium glass	1 bar g	
	Borosilicate glass	11 bar g	

Diagram of pressure - temperature

Model IP37 with calcium sodium glass



Model IP37/BS with borosilicate glass



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

* PMO Maximum operating pressure recommended for steam service, equal to the maximum back-pressure of the condensate line.

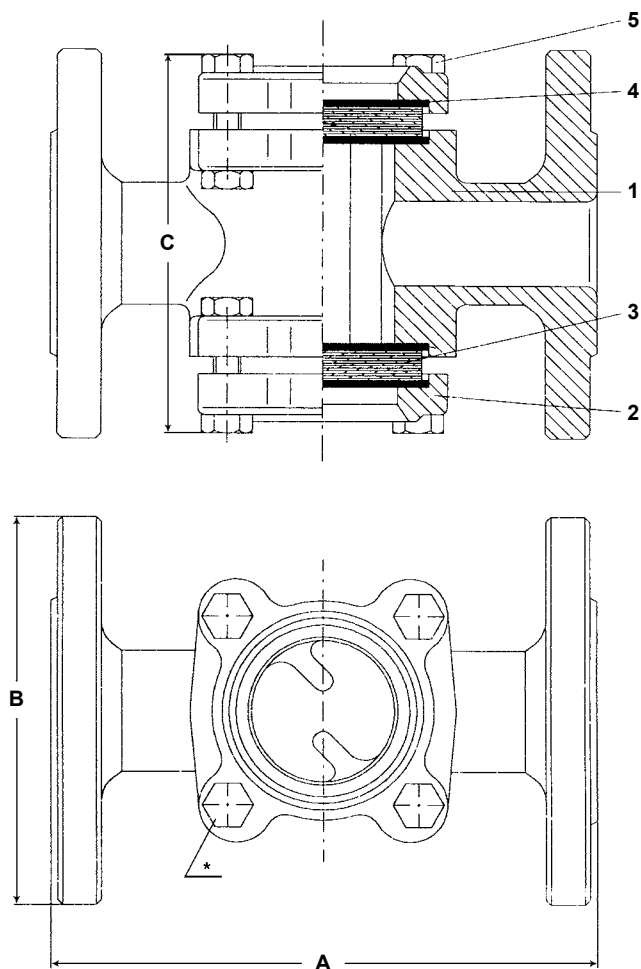
Note: in application with steam traps, the sight glass is installed downstream the traps, therefore the operating pressure and temperature that must be considered for the sizing are the ones of the condensate line and not the ones of the stream line.

Materials

No. Part	Material	
1 Body DN	15-40	Cast iron EN-GJL-250
	20-25-32-50-65-80-100	Cast iron EN-GJL-200
2 Cover DN	15-20-25-32-40-50	Cast iron EN-GJL-250
	65-80-100	Cast iron EN-GJL-200
3 Window	for IP37	Calcium sodium
	for IP37/BS	Borosilicate DIN 7080
4 Gaskets	for calcium sodium glass	Fasit 205
	for borosilicate glass	Fasit 400
5	Cover screw	C steel Class 8.8
	Cover nut	C steel Class 6.5

Dimensions / weights (approximate) in mm and kg

DN	A	B	C	Weight
15	130	95	105	3.0
20	150	105	106	3.5
25	160	115	110	4.0
32	180	140	132	6.0
40	200	150	140	6.5
50	230	165	150	9.0
65	290	185	190	17.0
80	310	200	210	18.0
100	350	220	245	23.0



Sizes DN65, 80 and 100 are made with 6 and not 4 locking bolts.

How to order

Spirax Sarco IP37 sight glasses with cast iron bodies and interchangeable calcium sodium or borosilicate (IP37/BS) window; flanged connections EN 1092 PN16 DN50.

Safety information, installation and maintenance

For full details, see the installation and maintenance instructions 3.746.5275.100 (IM-S32-04) supplied with the product.

Warning:

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

Reasonable steps should be taken during installation to protect personnel from injury in the unlikely event that the window breaks.

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 or pressure shocks.

Ensure access is available for maintenance purposes.

Maintenance:

If the glass gaskets are lost as soon as fitting is carried out, quickly and progressively tighten nuts and bolts in a cross-pattern.

Disposal:

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

Spare parts

Spare parts are available according to the groups in the table. No other item is available as a spare part.

Available spares

Packs of 6 glasses and 12 gaskets for DN15, 20, 25, 32 and 40

Packs of 4 glasses and 8 gaskets for DN50, 65 and 80



Packs of 2 glasses and 4 gaskets for DN100

How to order spares

Always order spares using the description provided in the column and state the sight glass model, the type of glass and the diameter of the connections.

Example: 1 pack of borosilicate glasses and gaskets for sight glass Spirax Sarco IP37/BS DN25.

Recommended tightening torques

Item	Quantity	DN		ϕ mm		N m
5	8	15 - 25	13	M8 x 40	5 - 7	
	8	32 - 40	17	M10 x 45	5 - 7	
5	8	50	17	M10 x 50	5 - 7	
	12	65 - 80	19	M12 x 65	10 - 12	
	12	100	19	M12 x 75	10 - 12	