3A.111-E
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GKC
Ball Float Steam Trap

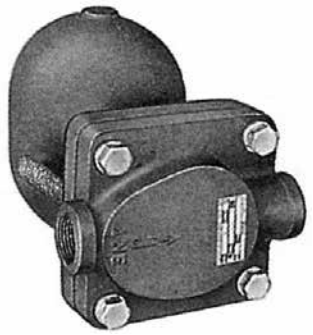
Description

The GKC series float steam traps are manufactured with nodular iron body; internal components are made from stainless steel. They are suitable for use with saturated and superheated steam on process equipments and on medium consumption applications. Working is fully automatic also regarding air venting (bimetallic thermo element) while the condensate discharge has modulating characteristics. These traps are ideal for all process drainage applications as condensate is always removed efficiently and quickly over a wide range of fluctuating pressures and load conditions; they meet all the needs and demands of process automatic control systems.
Vertical pipe connections are available on request and must be stated at the time of order placement.
For more demanding applications, higher pressure and temperature, see the similar GHC series manufactured with carbon or stainless steel body.

Standards
This product fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU and carries the CE mark when so required.

Certification
This product is available with material certification to EN 10204 2.2 or EN 10204 3.1.

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



Sizes and pipe connections

1" and 1½" screwed UNI-ISO 7/1 Rp (gas)

Pressure/temperature limits

PMA - Maximum allowable pressure		25 bar g	@ 300°C
TMA - Maximum allowable temperature			300°C
Minimum allowable temperature			-10°C
PMO - Maximum operating pressure	GKC 4.5 - 10 - 14	14 bar g	@ 300°C
	GKC 21	21 bar g	@ 300°C
TMO - Maximum operating temperature			300°C
Minimum operating temperature, danger of freezing considered			0°C
ΔPMX - Maximum differential pressure	GKC 4.5		4,5 bar g
	GKC 10		10 bar g
	GKC 14		14 bar g
	GKC 21		21 bar g
Designed for a maximum cold hydraulic test pressure of			37.5 bar g

Materials

N°	Part	Material	
1	Body	SG iron	GJS400 18 LT UNI 1563
2	Cover	SG iron	GJS400 18 LT UNI 1563
3	Cover gasket	Asbestos-free synthetic fibre	
4	Air vent assembly	Stainless steel	
5	Bracket assembly	Stainless steel	AISI 304
6	Bracket screw	Stainless steel	AISI 304
7	Valve seat	Stainless steel	Series 400C
8	Valve plug	Stainless steel	Series 400C
9	Float arm	Stainless steel	AISI 304
10	Ball float	Stainless steel	AISI 304
11	Cover screws	Carbon steel	UNI-ISO 8992 Cl. 8.8

Capacities (kg/h)

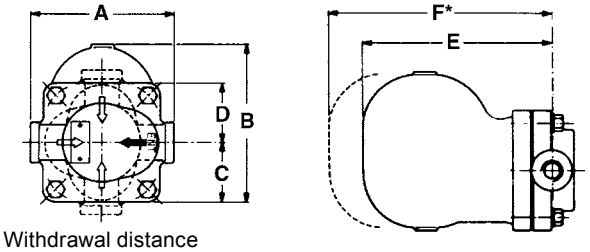
The condensate discharge capacities shown below are based on condensate at saturation temperature.

Differential pressure (bar g)	Trap type			
	GKC 4.5	GKC 10	GKC 14	GKC 21
0.1	530	340	220	160
0.2	700	440	280	210
0.3	820	510	340	240
0.5	1000	620	420	290
0.7	1150	710	470	340
1	1350	820	530	380
1.5	1510	970	620	450
2	1700	1100	700	500
3	2000	1300	820	590
4.5	2300	1480	960	690
7	--	1750	1150	820
8	--	1850	1250	860
10	--	2000	1350	940
12	--	--	1400	1000
14	--	--	1500	1100
18	--	--	--	1200
21	--	--	--	1300

The choice of trap should be based on the following data:
a) Hourly amount of condensate to be discharged,
b) Effective differential pressure,
c) Safety factor: 1.25 to 1.5 for continuous use; 2 to 3 for intermittent use.

Dimensions/weights (approximate) in mm and kg

DN	A	B	C	D	E	F*	Weight
1"	164	180	67.5	67.5	216	335	10.5
1½"	215	180	67.5	67.5	216	335	11.0



* Withdrawal distance

Connections:
Black arrow: standard supply configuration (right to left);
White arrows: optional installation configurations obtainable on site for horizontal flow and on request to be stated at the time of order placement for vertical flow.

How to order

Example: N° 1 off ball float steam trap Spirax Sarco GKC 21, with SG iron body and stainless steel internal components. Maximum operating and differential pressure 21 bar. Female screwed connections according to UNI-ISO 7/1 Rp (gas) DN 1½".

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions 3.341.5275.255 supplied with the product.

Installation note
The traps must be installed below the draining point and, with low operating pressures or when in presence of automatic temperature control, assure an hydrostatic head of about 1 metre between the drainage outlet and the trap.
Make the connections so that the trap is positioned with the arrow on the body pointed vertically downwards.
The use of an upstream protection strainers is always recommended to prevent possible damage to the internal components and to assure regular working operation.
To permit a safe inspection for cleaning or maintenance purpose install suitable shut-off valves.
If the trap is to discharge to atmosphere ensure it is to a safe place, the discharging fluid may be at a temperature of 100°C.

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

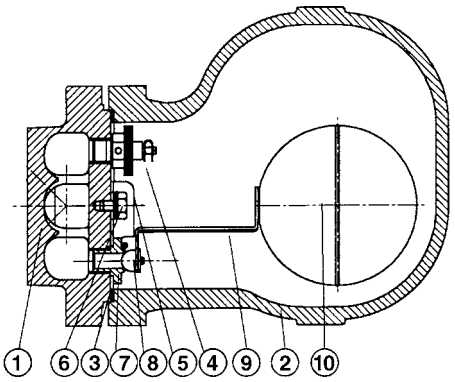
Spare parts

The spare parts are shown in the drawing below and are available in groupings as indicated in the table. Other parts are not available as spares.

Available spares	
Main valve assembly	**5, 6, 7, 8, 9, 10**
Ball float and valve plug assembly	**8, 9, 10**
Air vent assembly (2 off)	**4**
Cover gasket set (3 off)	**3**

How to order spares
Always order spare parts by using the description given in the table and state the size and type of trap, including pressure range and type of the connections.

Example: N° 1 main valve assembly for a ball float steam trap Spirax Sarco GKC 14, DN 1½".



1 - Body
2 - Cover
3 - Cover gasket
4 - Air vent assembly
5 - Bracket assembly
6 - Bracket screw
7 - Valve seat
8 - Valve plug
9 - Float arm
10 - Ball float

Recommended tightening torques

Item	Size	or mm		N m
Cover screws	1"	22 A/F	M 14 x 45	80
	1½"	22 A/F	M 14 x 45	80
Bracket screw	1"		M 8 x 15	18.2
	1½"		M 8 x 15	18.2

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