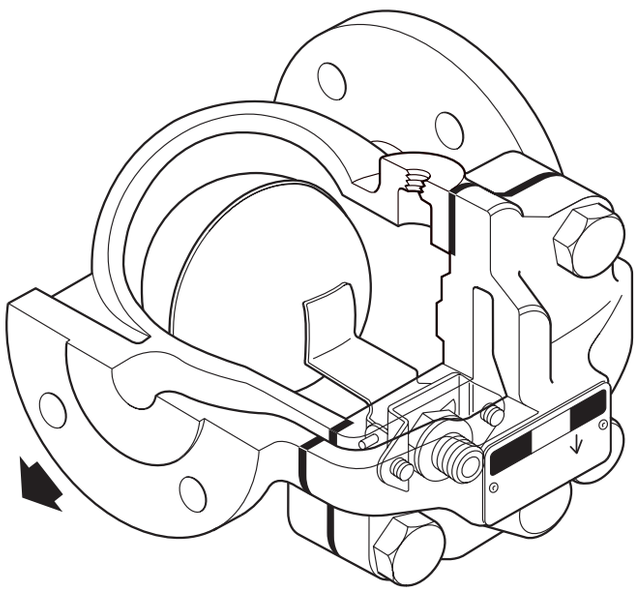
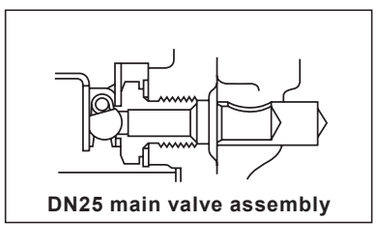
TI-P148-36
CMGT Issue 6

CA14
SG Iron
Air and Gas Trap DN15 to DN25 (Flanged)

CA14 (R-L)
DN15 and DN20 shown





DN25 main valve assembly

Description
The CA14 is a range of float type automatic liquid drainers for air and gas systems. The body and cover are of SG iron and the complete unit is readily maintainable. The cover will be drilled and tapped ½" BSP or NPT for the purpose of fitting a balance line. The standard version with a Viton valve cone is designated CA14 (DN15 and DN20 only). A stainless steel valve cone version is designated CA14S. Both are available with horizontal flanged connections with flow from right to left CA14 (R-L) or from left to right CA14 (L-R).

Operating Media
The CA14 is designed for use on air or gases within PED group 2.
Note: The CA14 is not suitable for use on PED group 1 liquids or gases.

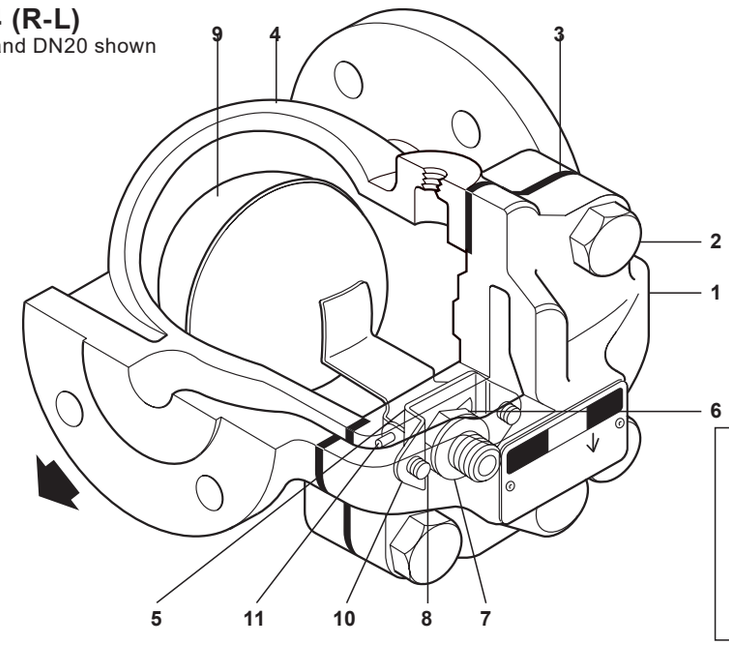
Standards
The product fully complies with the requirements of the Pressure Equipment Directive (PED).

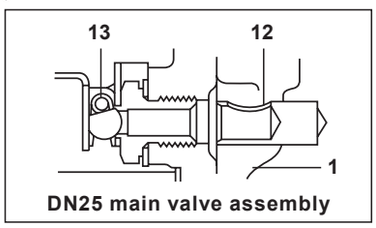
Certification
The product is available with a manufacturer's Typical Test Report.
Note: All certification / inspection requirements must be stated at the time of order placement.

Sizes and pipe connections
DN15, DN20 and DN25.
Flanged EN 1092 PN16, ASME 150 and JIS/KS 10K.

Materials

CA14 (R-L)
DN15 and DN20 shown



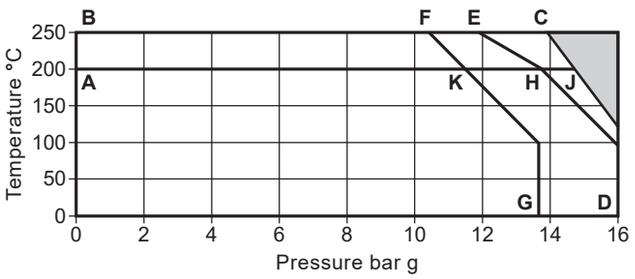


DN25 main valve assembly

No.	Part		Material	
1 *	Body		SG iron	EN-GJS-400-15, EN 1563, EN JS1030 (GGG 40.3)
2	Cover bolts		Steel	BS 3692 Gr. 8.8
3	Cover gasket		Reinforced exfoliated graphite	
4	Cover		SG iron	EN-GJS-400-15, EN 1563, EN JS1030 (GGG 40.3)
5	Main valve cone	**CA14**	Synthetic rubber	Viton
		CA14S	Stainless steel	AISI 440B
6	Main valve seat		Stainless steel	BS 970 431 S29
7	Main valve seat gasket		Stainless steel	BS 1449 304 S11
8	Main valve assembly screws		Stainless steel	BS 6105 Cl A2-70
9	Ball float and lever		Stainless steel	BS 1449 304 S16
10	Pivot frame		Stainless steel	BS 1449 304 S16
11	Pivot pin		Stainless steel	
12 *	Erosion deflector	(DN25 only)	Stainless steel	BS 970 431 S29
13 *	Valve spring	(DN25 only)	Stainless steel	BS 2056 302 S26

Note: Item **12** is pressed into item **1** (DN25 only).

Pressure/temperature limits



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

A-J-D CA14 flanged PN16

A-K-G CA14 flanged JIS/KS 10K

A-H-D CA14 flanged ASME 150

B-C-D CA14S flanged PN16

B-F-G CA14S flanged JIS/KS 10K

B-E-D CA14S flanged ASME 150

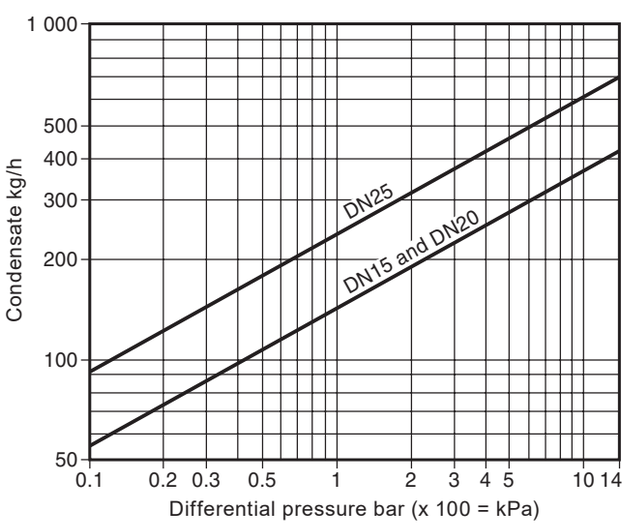
Body design conditions			PN16
PMA	Maximum allowable pressure		16 bar g @ 120 °C
TMA	Maximum allowable temperature		250 °C @ 14 bar g
Minimum allowable temperature			0 °C
PMO	Maximum operating pressure		16 bar g @ 120 °C
TMO	Maximum operating temperature	**CA14**	200 °C @ 14.7 bar g
		CA14S	250 °C @ 13.9 bar g
Minimum operating temperature			0 °C

ΔPMX Maximum differential pressure bar, depending on the specific gravity of the liquid being drained:

Specific gravity	**1.0**	**0.9**	**0.8**	**0.7**	**Min. 0.6**
ΔPMX bar	14.0	14.0	14.0	9.0	5.0

ΔPMX	Minimum differential pressure	0.1 bar
Designed for a maximum cold hydraulic test pressure of		24 bar g

Capacities



Safety information, installation and maintenance

For full details see the Installation and Maintanence Instructions (IM-P148-13) supplied with the product.

Installation note:
The CA14 must be installed with the direction of flow as indicated on the body, and with the float arm in a horizontal plain so that it rises and falls vertically.

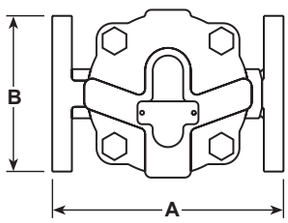
Disposal
If a product which contains a Viton component has been subjected to a temperature approaching 315 °C or higher, then it may have decomposed and formed hydrofluoric acid. Avoid skin contact and inhalation of any fumes as the acid will cause deep skin burns and damage to the respiratory system. Viton must be disposed of in a recognised manner as stated in the Installation and Maintenance Instructions. No other ecological hazard is anticipated with the disposal of this product providing due care is taken.

How to order

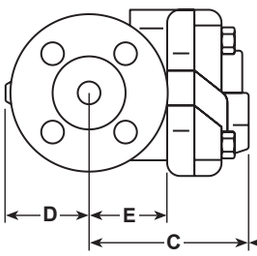
Example: 1 off Spirax Sarco DN15 CA14 with SG iron body with cover flanged to EN 1092 PN16. **Note:** Unless specified at the time of ordering, a right to left flow will be supplied e.g. CA14 (R-L).

Dimensions/weights (approximate) in mm and kg

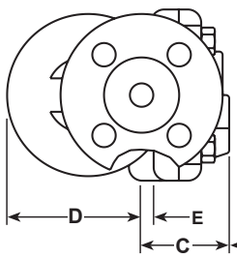
Size	DIN/ASME A	JIS/KS A	B	C	D	E	F	G	Weight
DN15	150	150	107	101	51	47	26.5	115	4.5
DN20	150	150	107	101	55	47	26.5	115	5.0
DN25	160	170	117	70	100	10	21.0	120	6.5



DN15 and DN20



DN25



Spare parts

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

Available spares

Maintenance kit	**CA14**	**3**, **5+9**, **6**, **7**, **8** (2 off), **10**, **11**
	CA14S	**3**, **5+9**, **6**, **7**, **8** (2 off), **10**, **11**, **13** (DN25 only)
Seal kit	**CA14**	**3**, **5**

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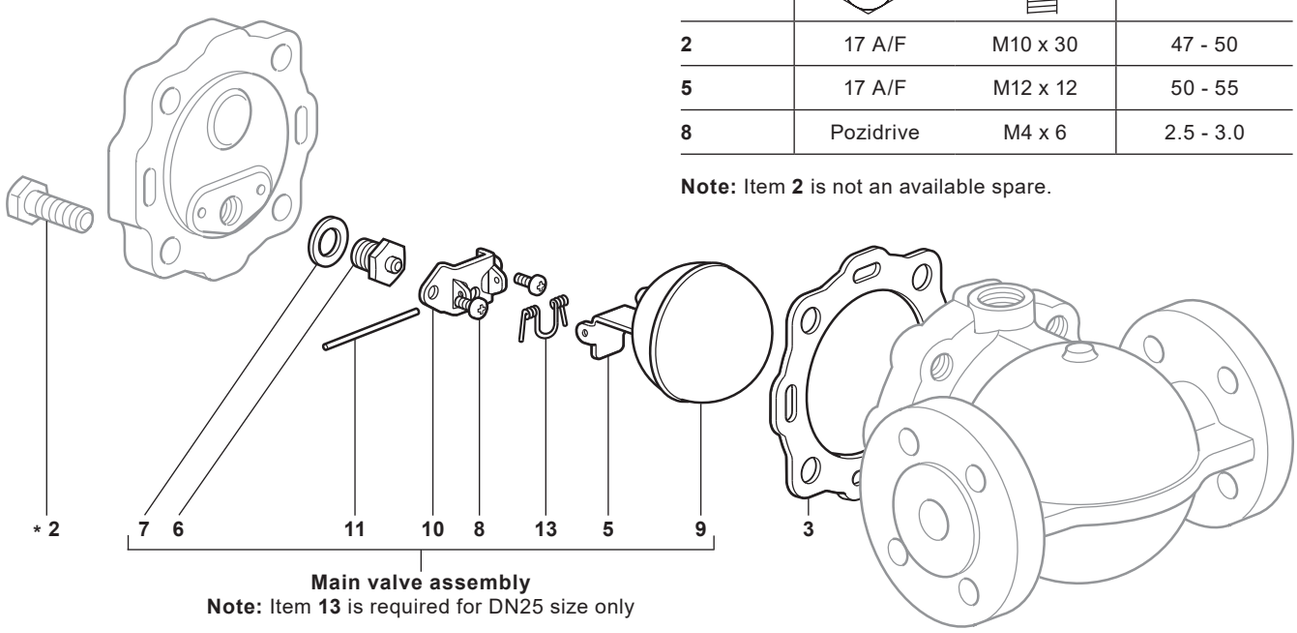
How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of trap.
Example: 1 off Maintenance kit for a Spirax Sarco DN15 CA14 air and gas trap.

Recommended tightening torques

Item	or mm		N m
2	17 A/F	M10 x 30	47 - 50
5	17 A/F	M12 x 12	50 - 55
8	Pozidrive	M4 x 6	2.5 - 3.0

Note: Item **2** is not an available spare.

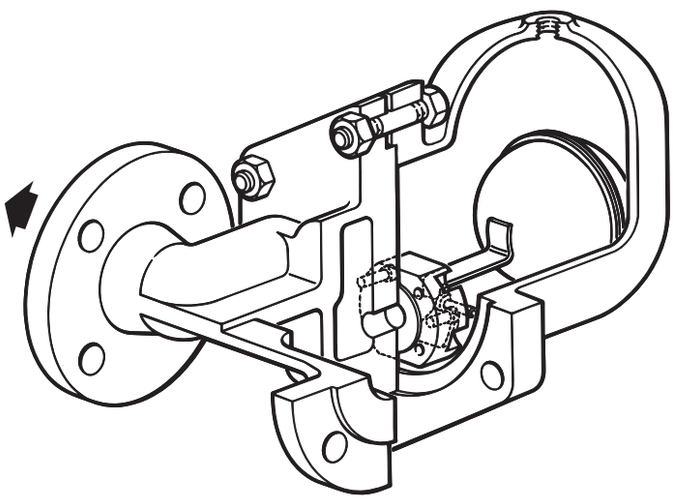


Main valve assembly
Note: Item **13** is required for DN25 size only

TI-P148-35
CMGT Issue 4

CA14S
Air and Gas Trap
DN40 and DN50 (Flanged)

Description
The CA14S is a cast iron ball float air and gas trap. It is available with a metal valve cone given designation CA14S having horizontal flanged connections. The cover will be drilled and tapped ½" BSP or NPT for the purpose of fitting a balance line.



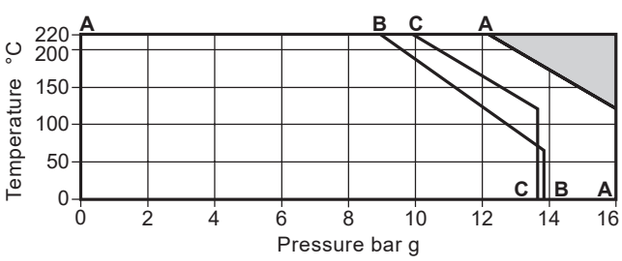
Operating Media
The CA14 is designed for use on air or gases within PED group 2.
Note: The CA14 is not suitable for use on PED group 1 liquids or gases.

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
CA14S DN40 and DN50
Standard flanges are BS 4504 PN16.
On request ANSI B 16.1/BS 1560 class 125 and JIS/KS 10 flanges with drilled and tapped bolt holes can be provided.
PN flanges will be provided with BSP balance line and ANSI, JIS/KS with NPT balance line.

Pressure/temperature limits



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

A-A-A Flanged BS 4504 PN16.

A-B-B Flanged ANSI B 16.1/BS 1560 class 125 having flat faces.

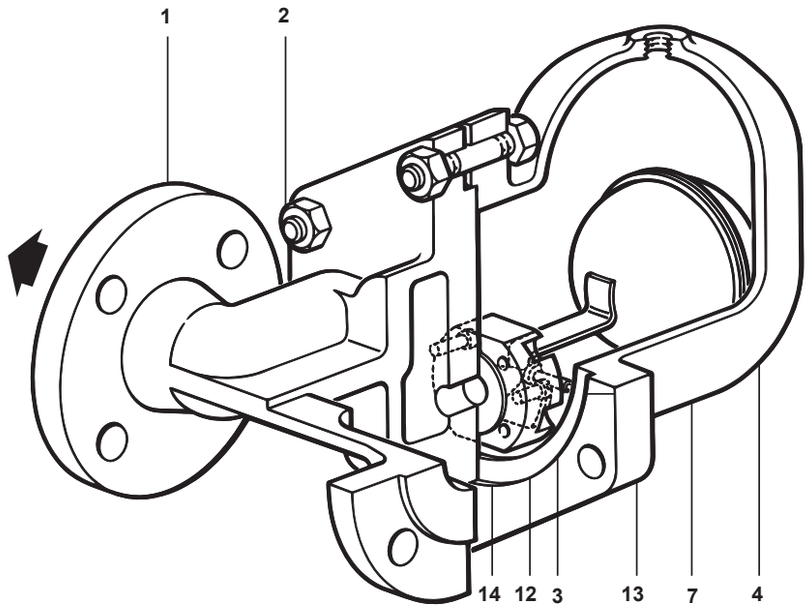
A-C-C Flanged JIS/KS 10.

Body design conditions	PN16
PMA Maximum allowable pressure	16 bar g
TMA Maximum allowable temperature	220 °C
Minimum operating temperature	0 °C
Designed for a maximum cold hydraulic test pressure of	24 bar g

Where the trap is to handle a liquid having a specific gravity of less than 1, the following maximum differential pressures will apply.

Trap	Specific gravity				
	1.0	0.9	0.8	0.7	0.6
	Maximum differential pressure bar				
CA14S-4.5	4.5	4.5	4.5	3.4	2.0
CA14S-10	10.0	9.5	6.8	5.5	3.4
CA14S-14	14.0	14.0	11.0	8.0	5.0

Materials

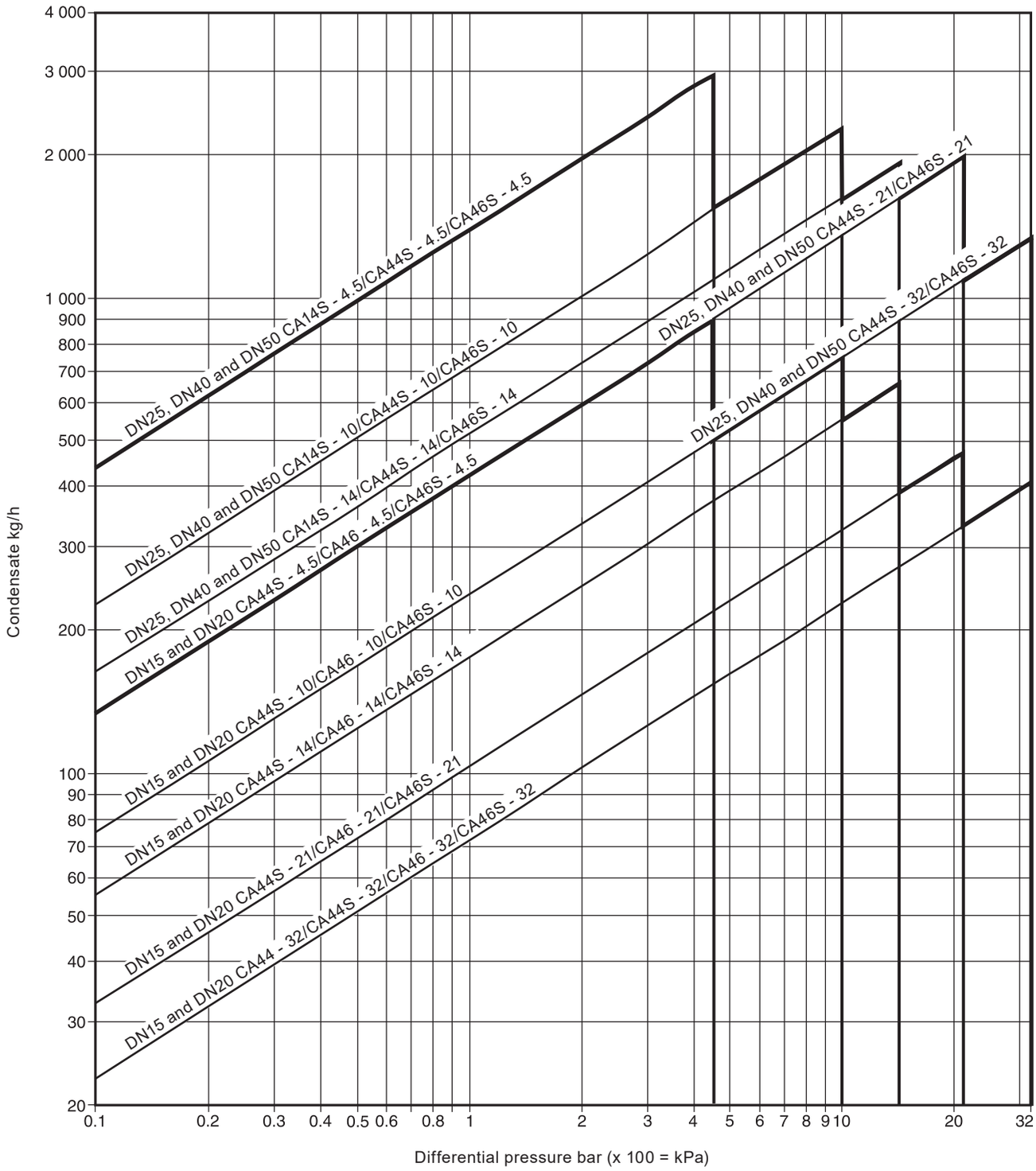


No.	Part	Material	
1	Body	Cast iron	DIN 1691 GG 25
2	Cover studs and nuts	Carbon steel	BS 3692 Gr. 8.8
3	Cover gasket	Reinforced exfoliated graphite	
4	Cover	Cast iron	DIN 1691 GG 25
5 *	Valve seat	Stainless steel	BS 970 431 S29
6 *	Pivot frame assembly bolts	Stainless steel	BS 4183 18/8
7	Ball and float lever	Stainless steel	BS 1449 304 S16
8 *	Valve cone	Stainless steel	AISI 440B
9 *	Pivot frame	Stainless steel	BS 1449 304 S16
10 *	Support frame	Stainless steel	BS 1449 304 S16
11 *	Pivot	Stainless steel	
12	Mounting plate	Stainless steel	BS 1449 316L S29
13	Mounting plate fastening bolts	Carbon steel	BS 3692 Gr. 8.8
14	Main valve assembly gasket	Reinforced exfoliated graphite	

Note: Items **5**, **6**, **8**, **9**, **10** and **11** are shown more clearly in spare parts.

Capacities

Note: The capacities provided here are calculated using water at ambient temperature.
The discharge capacity is affected with a change in specific gravity, for further information contact Spirax Sarco.

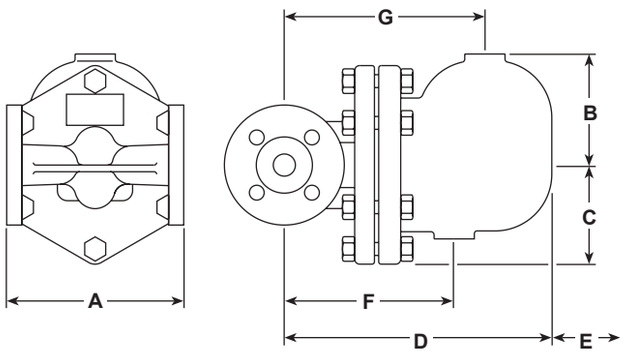


Compressed air products

Isolation valves, drain traps and ancillaries

Dimensions/weights (approximate) in mm and kg

Size	PN16 A	ANSI 125 A	JIS/ KS 10 A	Flange bolt hole tappings ANSI 125	B	C	D	E	F	G	Weight
DN40	230	221	228	½" - 13 UNC-2B	128	110	312	200	187	230	21.5
DN50	230	220	228	⅝" - 11 UNC-2B	140	126	324	200	219	239	30.5



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P148-13) supplied with the product.

Disposal

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

How to order

Example: 1 off Spirax Sarco DN40 CA14S-14 air and gas trap flanged to BS 4504 PN16 with cast iron body and cover.

Spare parts

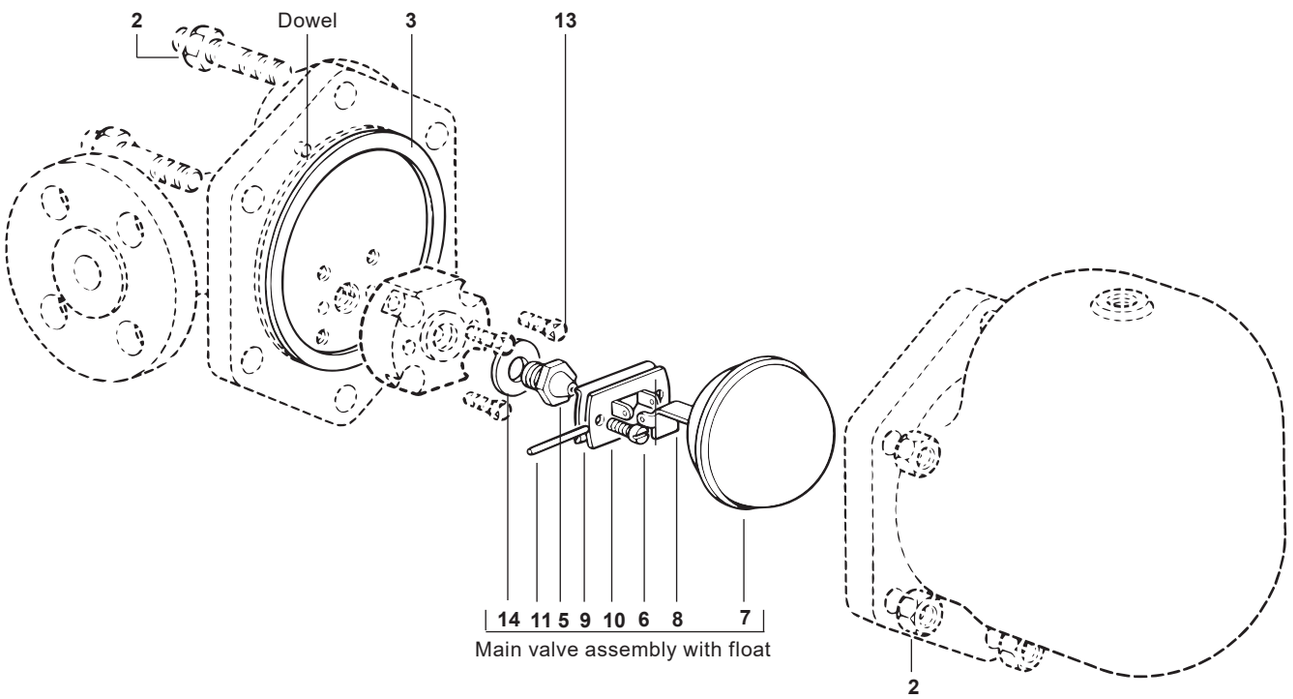
The spare parts available are shown in heavy outline.
Parts drawn in broken line are not supplied as spares.

Available spares

Main valve assembly with float	**5**, **6**, **7+8**, **9**, **10**, **11**, **14**
Complete set of gaskets (packet of 3 sets)	**3**, **14**

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 trap.
Example: 1 - Main valve assembly for a Spirax Sarco DN40 CA14S -14 air and gas trap.



Main valve assembly with float

Recommended tightening torques

Item	Part	Qty	or mm		N m
2	DN40	6	19	M12	60 - 66
	DN50	6	24	M16	80 - 88
5	DN40, DN50	1	17	M12	50 - 55
6	DN40,DN50	2	Cheesehead	M5 x 20	2.5 - 2.8
13	DN40	4	10	M6	10 - 12
	DN50	4	13	M8	20 - 24

TI-P148-02
CMGT Issue 13

CA44 and CA44S
Carbon Steel
Air and Gas Traps Flanged DN15 to DN25

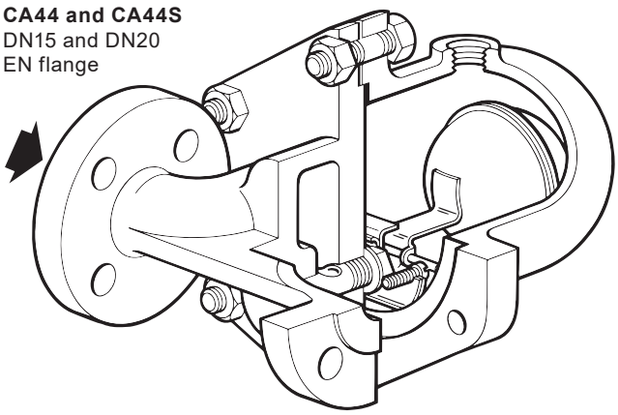
Description

The CA44 is a carbon steel bodied ball float air and gas trap having stainless steel working internals. It is available with a soft valve cone given designation CA44 or with a metal valve cone given designation CA44S both having horizontal flanged connections. The cover is drilled and tapped ½" BSP as standard for the purpose of fitting a balance line, alternatively it can be drilled ½" NPT on request and must be specified when placing your order. The body and cover castings are produced by a TÜV approved foundry. The trap is supplied with integrally flanged connections and can be maintained without disturbing the pipework.

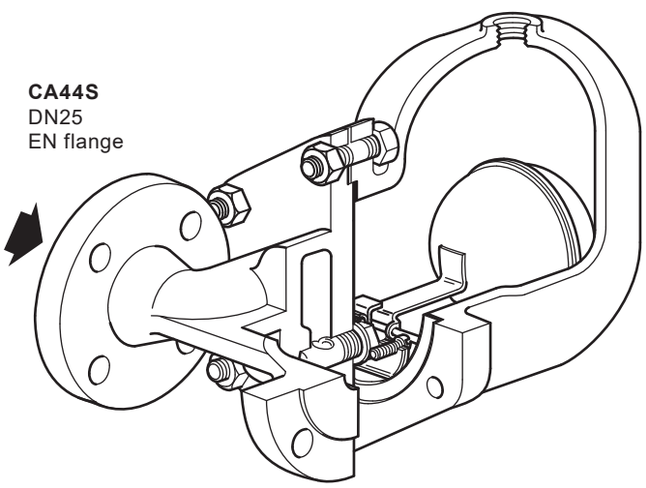
Available options:

CA44 - Having a soft valve cone
CA44S - Having a metal valve cone

CA44 and CA44S
DN15 and DN20
EN flange



CA44S
DN25
EN flange



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Operating media

The CA44 and CA44S are designed for use on air or gases within PED group 2.
Note: The CA44 and CA44S are not suitable for use on PED group 1 liquids or gases.

Optional extras

The **bottom of the cover can be drilled and tapped ½" BSP or NPT** for the purpose of fitting a drain cock if requested at the point of order.

Standards

This product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations and carries the CE mark when so required.

Certification

This product is available with a manufacturer's Typical Test Report and certification to EN 10204 3.1.
Note: All certification/inspection requirements must be stated at the time of order placement.

Polígono Industrial O Rebullón s/n. 36416 - Mos - España - rodavigo@rodavigo.com

Sizes and pipe connections

CA44 DN15 and DN20
CA44S DN15, DN20 and DN25

Standard flanges are EN 1092 PN40 with face-to-face dimensions in accordance with EN 26554 (Series 1), ASME B 16.5 Class 150, ASME B 16.5 Class 300 and JIS/KS 20 are also available with face-to-face dimensions in accordance with EN 26554 (Series 1).

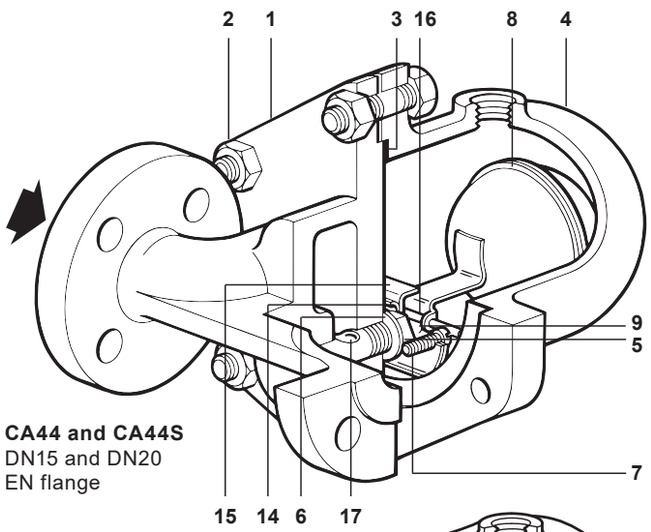
On request ASME B 16.5 Class 150, ASME B 16.5 Class 300 flanges with drilled and tapped bolt holes with face-to-face dimensions in accordance with EN 26554 (Series 1).

PN and JIS/KS flanges will be provided with BSP balance line and ASME flanges with an NPT balance line.

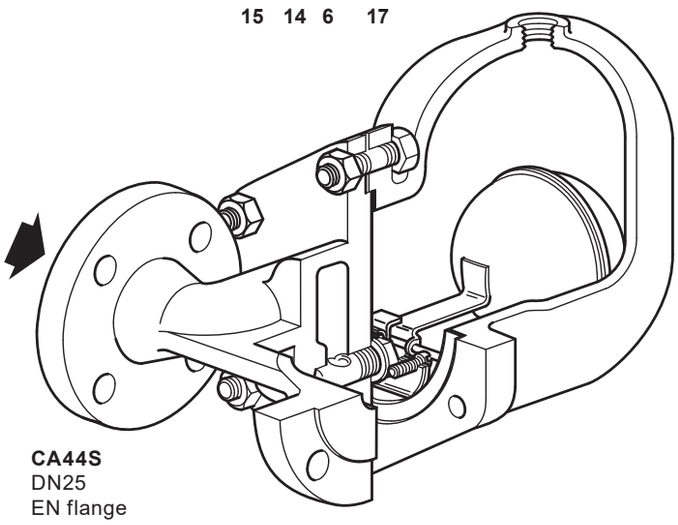
ASME/JIS/KS flanges are supplied with tapped holes to receive flange bolts. ASME flanges have UNC threads and JIS/KS have metric threads.

Materials

No.	Part		Material	
1	Body	DN15 to DN20	Carbon steel	1.0619+N/WCB
		DN25	Carbon steel	1.0619+N/WCB
2	Cover studs		Steel	DN 17240 21 Cr Mo V57
	Cover nuts		Steel	EN 10269 25 Cr Mo 4
3	Cover gasket		Reinforced exfoliated graphite	
4	Cover	DN15 to DN20	Carbon steel	1.0619+N/WCB
		DN25	Carbon steel	1.0619+N/WCB
5	Valve seat		Stainless steel	BS 970 431 S29
6	Valve seat gasket		Stainless steel	BS 1449 304 S11
7	Pivot frame assembly and set screws		Stainless steel	BS 4183 18/8
8	Ball float and lever		Stainless steel	BS 1449 304 S16



CA44 and CA44S
DN15 and DN20
EN flange

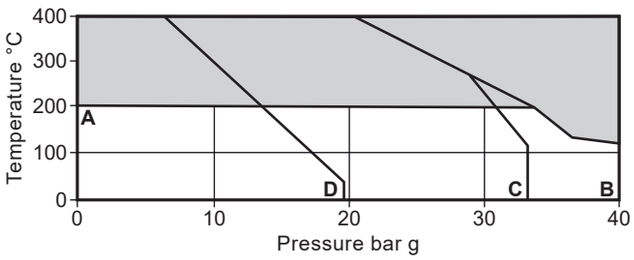


CA44S
DN25
EN flange

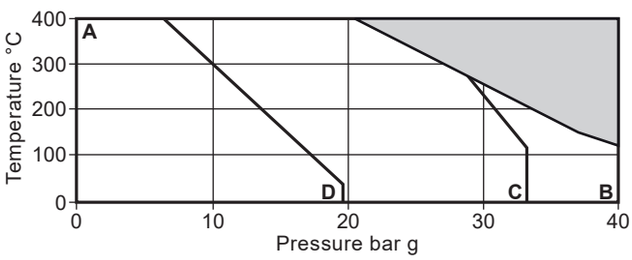
No.	Part		Material	
9	Valve cone	CA44	Synthetic rubber	Viton
		CA44S (permanently attached to the ball float and lever)	Stainless steel	
14	Support frame		Stainless steel	BS 1449 304 S16
15	Pivot frame		Stainless steel	BS 1449 304 S16
16	Pivot		Stainless steel	
17	Erosion deflector		Stainless steel	BS 970 431 S29

Pressure/temperature limits

CA44



CA44S



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

A - B Flanged EN 1092 PN40 and ASME 300

A - C Flanged JIS/KS 20

A - D Flanged ASME 150

Body design conditions			PN40
PMA	Maximum allowable pressure		40 bar g @ 120 °C
TMA	Maximum allowable temperature		400 °C @ 20.6 bar g
Minimum allowable temperature			-10 °C
PMO	Maximum operating pressure		40 bar g
TMO	Maximum operating temperature	**CA44**	200 °C
		CA44S	400 °C
Minimum operating temperature			0 °C

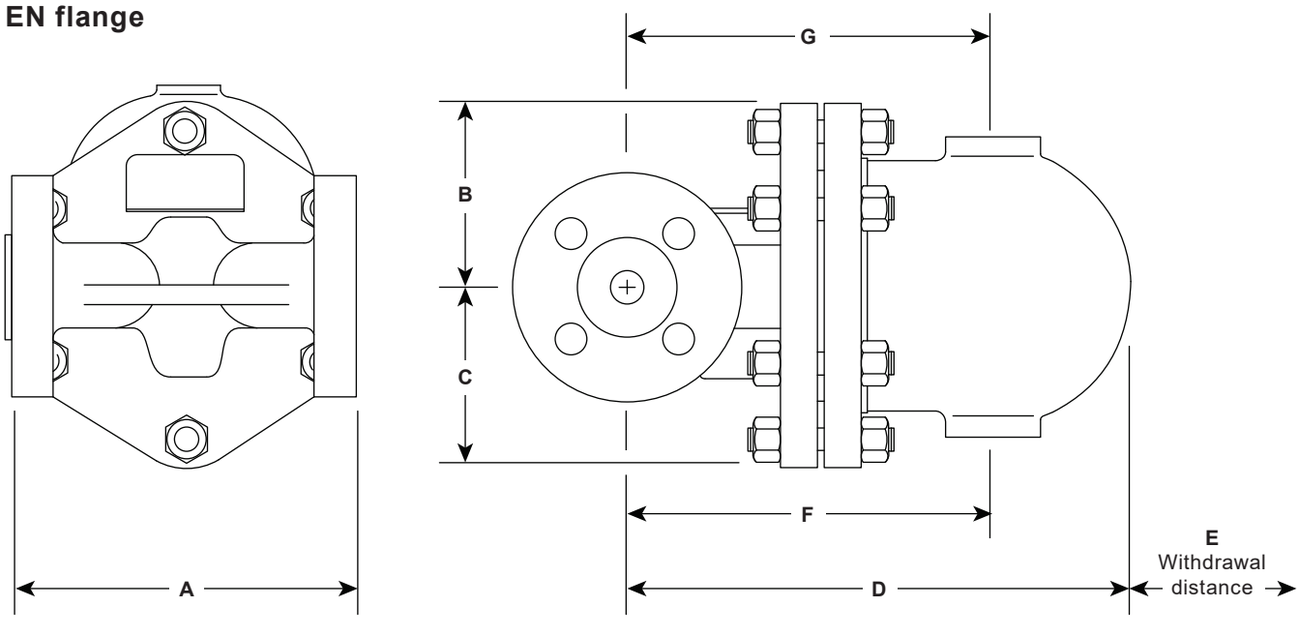
		Specific gravity				
	Trap	**1.0**	**0.9**	**0.8**	**0.7**	**0.6**
		Maximum differential pressure bar				
ΔPMX Maximum differential pressure Depending on the specific gravity of the liquid being drained.	**CA44-32**	32.0	32.0	29.0	20.0	12.0
	CA44S-4.5	4.5	4.5	4.5	3.4	2.0
	CA44S-10	10.0	9.5	6.8	5.5	3.4
	CA44S-14	14.0	14.0	11.0	8.0	5.0
	CA44S-21	21.0	19.0	15.0	10.0	6.5
	CA44S-32	32.0	30.0	23.0	16.5	10.0

Designed for a maximum cold hydraulic test pressure of:	PN40	60 bar g
	ASME 300	60 bar g
	ASME 150	30 bar g
	JIS/KS 20	49 bar g

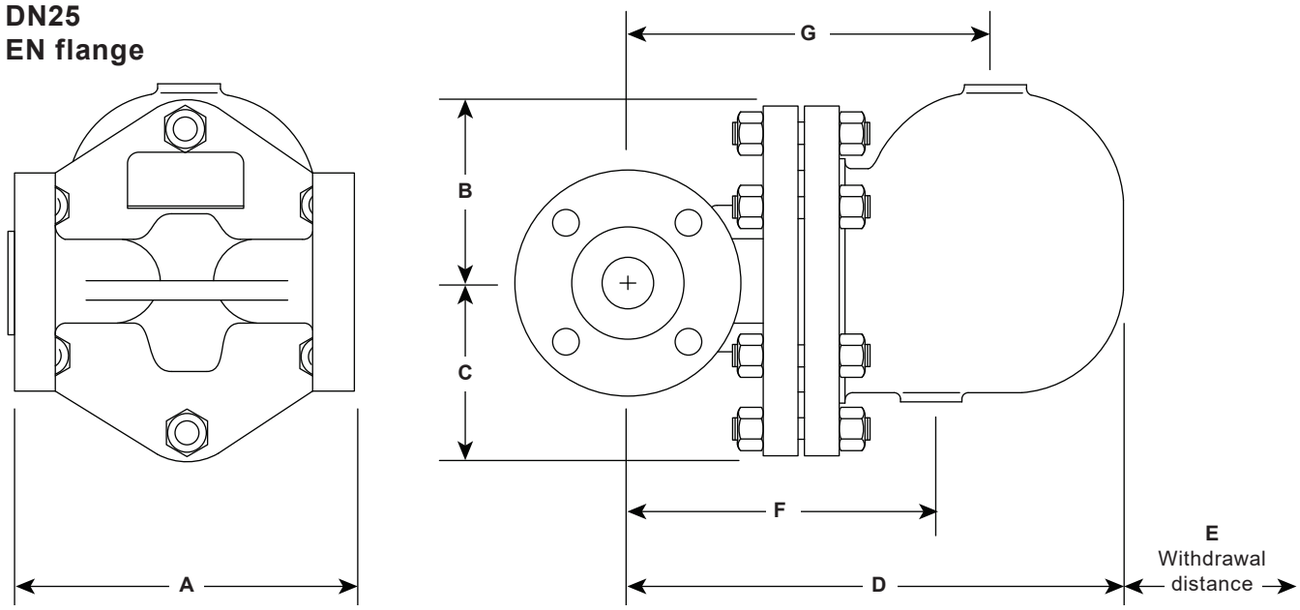
Note: With internals fitted, test pressure must not exceed ΔPMX

Dimensions/weights (approximate) in mm and kg

CA44 and CA44S
DN15 and DN20
EN flange



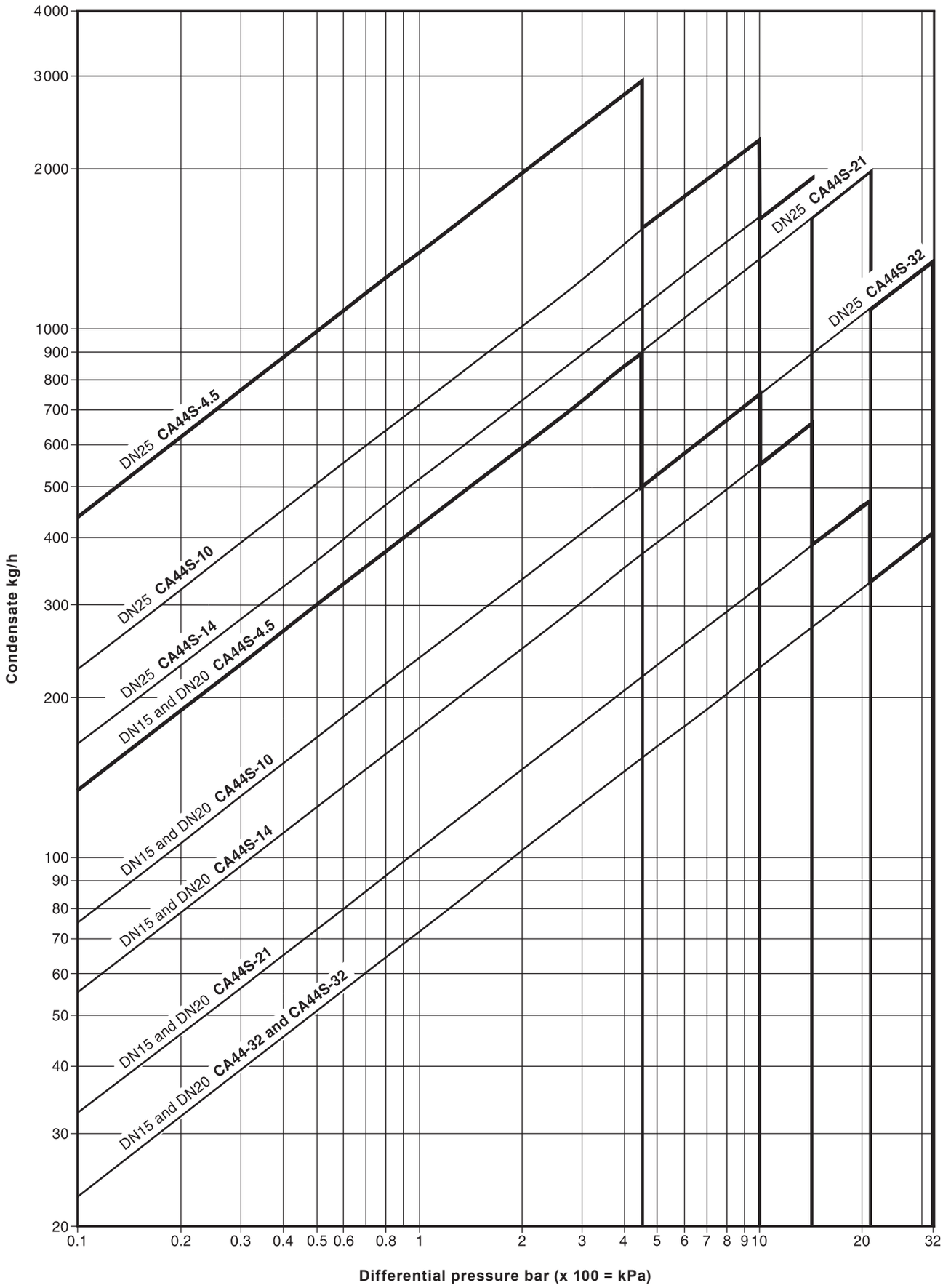
CA44S
DN25
EN flange



Size	A				B	C	D		E	F		G		Weight
	PN40	ASME 300	ASME 150	JIS/ KS 20			PN40	ASME 300 ASME 150 JIS/KS 20		PN40	ASME 300 ASME 150 JIS/KS 20	PN40	ASME 300 ASME 150 JIS/KS 20	
DN15	150	209	203	206	80	80	215	163	120	155	100	155	100	10.8
DN20	150	209	205	210	80	80	225	163	120	165	100	165	100	10.8
DN25	160	212	208	210	115	85	282	209	170	195	125	215	145	15.0

Capacities

Note: The capacities provided here are calculated using water at ambient temperature.
The discharge capacity is affected with a change in specific gravity, for further information contact Spirax Sarco.



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P148-37) supplied with the product.

Installation note:
The trap should be fitted in the horizontal plane below what it is draining, with the direction of flow as indicated on the body so that the float mechanism is free to rise and fall in a vertical plane.
One of the advantages of the float trap for draining air and gas systems is that no bleed is required for satisfactory operation. However, because the trap has no bleed a separate balance line is needed to prevent it becoming air or gas locked.
Make sure that the balance line is piped back to the upstream side.
A balance line is essential for the correct operation of this product.
For convenience of maintenance it is recommended that a union is fitted in the balance line near to the trap cover.

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

How to order

Example: 1 off Spirax Sarco DN25 CA44S-32 air and gas trap flanged to EN 1092 PN40 with carbon steel body and cover.

Spare parts

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

Available spares		
Soft valve cone CA44	(packet of 3)	**9**
Main valve assembly with float *	CA44	**5, 6, 7, 8, 9, 14, 15, 16**
	CA44S	**5, 6, 7, 8+9, 14, 15, 16**
Complete set of gaskets	(packet of 3 sets)	**3, 6**

*** Note:** The erosion deflector is pressed into the body during manufacture and not available as a spare.

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 trap.
Example: 1 - Main valve assembly for a Spirax Sarco DN25 CA44S-32 air and gas trap.

Recommended tightening torques

Item	or mm		N m
2	17 A/F	M10 x 60	19 - 21
5	17 A/F	M12 x 8	50 - 55
7	Cheesehead	M5 x 20	2.5 - 2.8