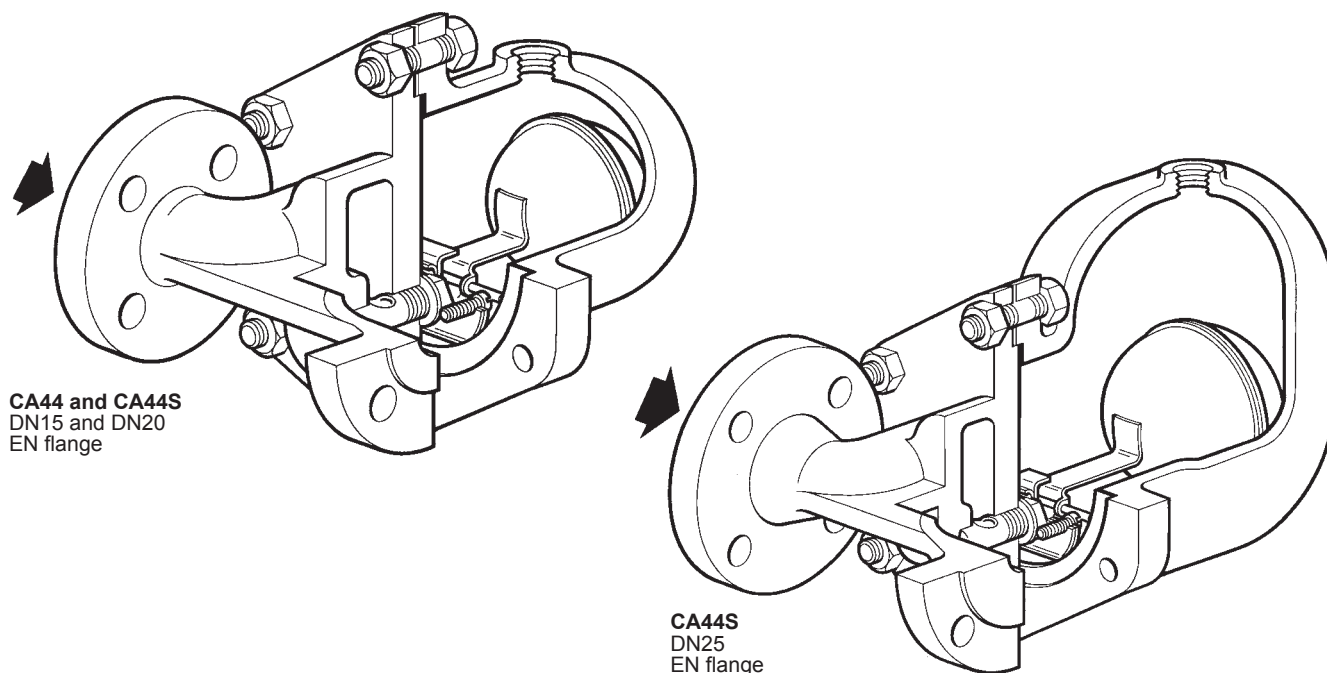




TI-P148-02
ST Issue 10

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
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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 European Pressure Equipment Directive 97/23/EC 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.

Sizes and pipe connections

CA44 DN15 and DN20

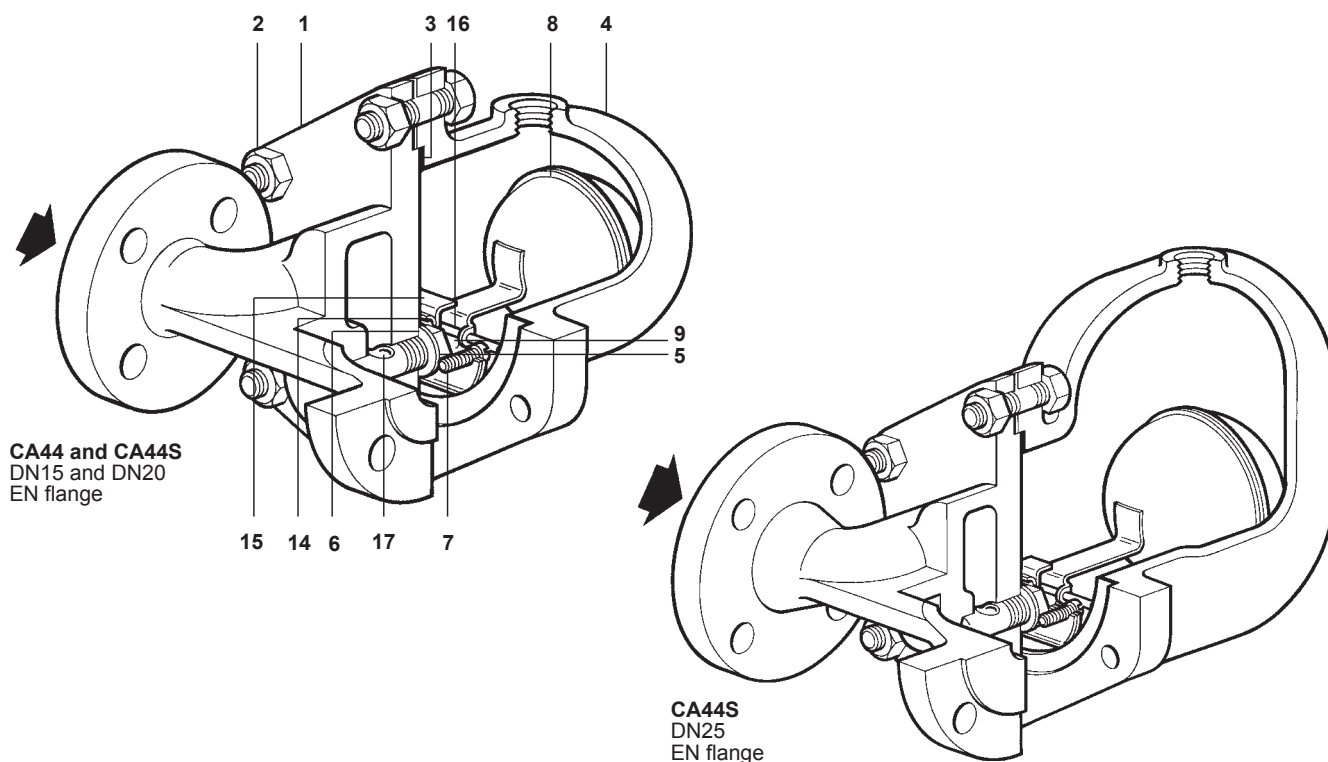
CA44S DN15, DN20 and DN25

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.

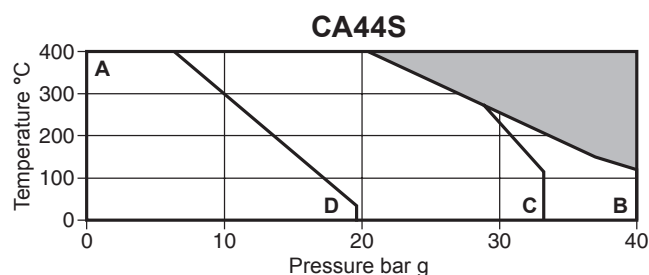
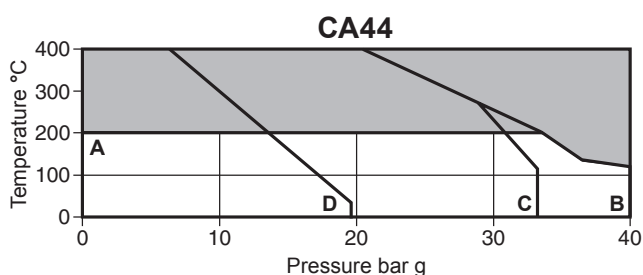
ASME / JIS / KS flanges are supplied with tapped holes to receive flange bolts. ASME flanges have UNC threads and JIS/KS have metric threads.



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
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



 This 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

Note: For lower operating temperatures consult Spirax Sarco

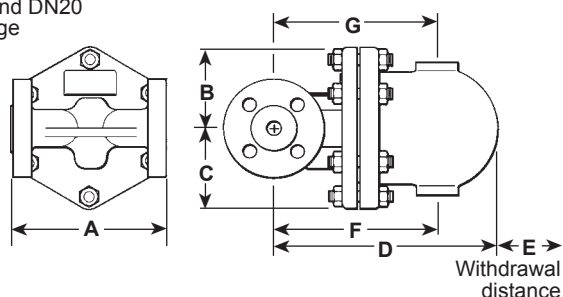
		Specific gravity				
		Trap	1.0	0.9	0.8	0.7
		Maximum differential pressure bar				
ΔPMX Maximum differential pressure Depending on the specific gravity of the liquid being drained.	CA44-32	32.0	32.0	29.0	20.0	12.0
	CA44S-4.5	4.5	4.5	4.5	3.4	2.0
	CA44S-10	10.0	9.5	6.8	5.5	3.4
	CA44S-14	14.0	14.0	11.0	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

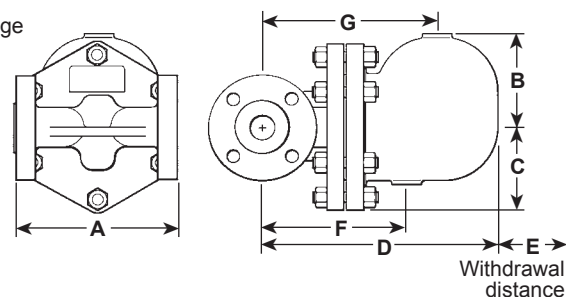
Dimensions / weights (approximate) in mm and kg

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

CA44 and CA44S
DN15 and DN20
EN flange

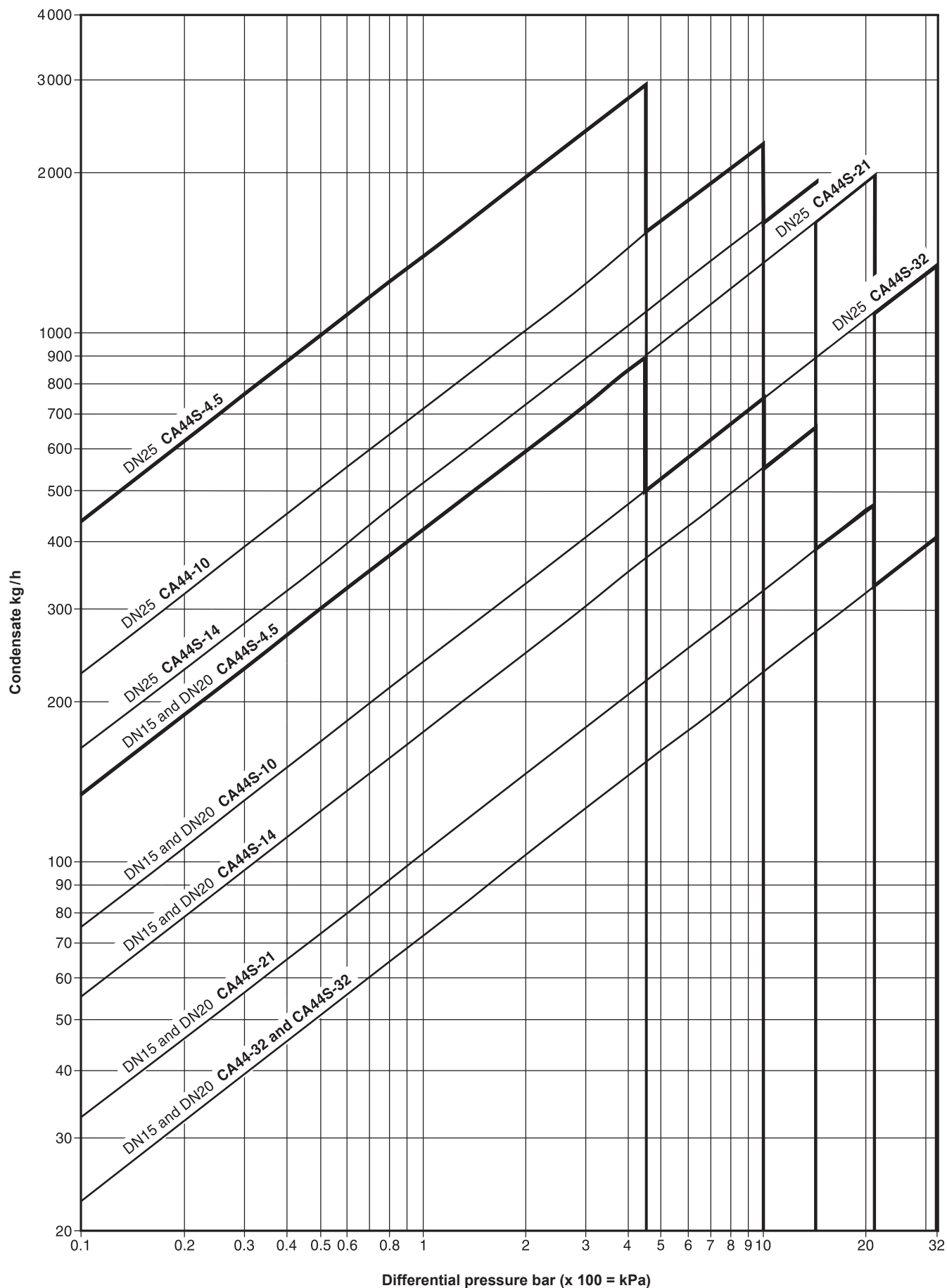


CA44S
DN25
EN flange



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 broken line are not supplied as spares.

Available spares

Soft valve cone CA44	(packet of 3)	9
	CA44	5, 6, 7, 8, 9, 14, 15, 16
* Main valve assembly with float	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

