

TI-P023-12  
CMGT Issue 15




S6

Austenitic Stainless Steel  
Separator

**Description**  
The S6 is an austenitic stainless steel (316L) baffle type separator used for the removal of entrained liquids in steam, compressed air and gas systems.

**Optional extras**  
Insulation jackets are available which will increase the performance of the separator, (see TI-P138-01).

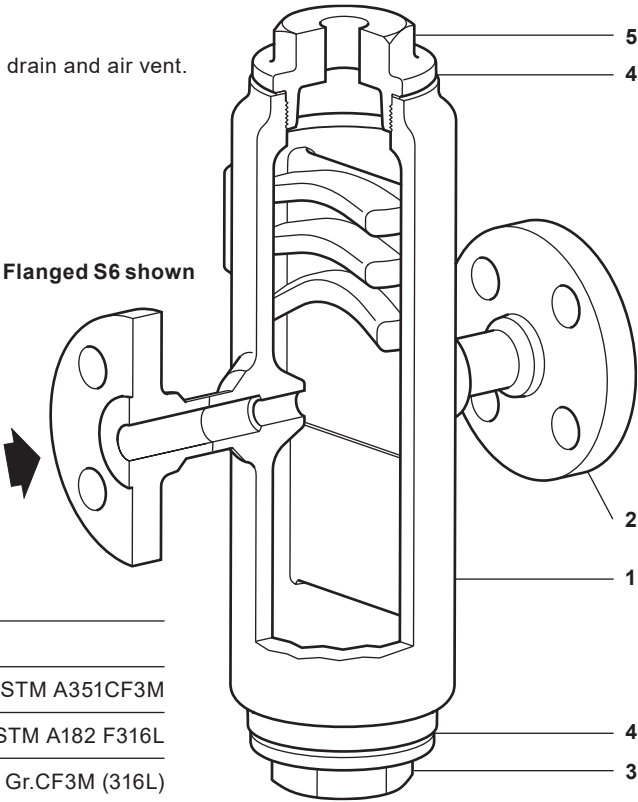
**Standards**  
This product fully complies with the requirements of the EU Pressure Equipment Directive / UK Pressure Equipment (Safety) Regulations and carries the  mark when so required.

**Certification**  
This product is available with certification to EN 10204 3.1.  
**Note:** All certification/inspection requirements must be stated at the time of order placement.

**Sizes and pipe connections**  
½", ¾", 1", 1¼", 1½" and 2"  
Screwed BSP or NPT, butt weld, socket weld.

DN15, DN20, DN25, DN32, DN40 and DN50.  
Flanged EN 1092 PN40 with screwed BSP drain and air vent.  
Flanged BS 1560 (ASME B 16.5) Class 150 or 300 with screwed NPT drain and air vent.  
Flanged JIS/KS 10K and 20K with screwed BSP drain and air vent.

**Note:** For larger sizes use an S8 separator. See TI-P138-10.

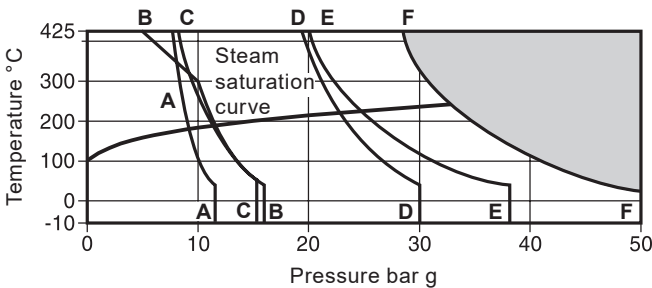


Materials

No.Part	Material	
1	Body	Austenitic stainless steel 316L 1.4409/ASTM A351CF3M
2	Flange	Austenitic stainless steel 1.4404 ASTM A182 F316L
3	Cap	Austenitic stainless steel ASTM A351 Gr.CF3M (316L)
4	Cap gasket	Reinforced exfoliated graphite
5	Cap	Austenitic stainless steel ASTM A351 Gr.CF3M (316L)

Pipeline ancillaries  
Separators and insulation jackets

Pressure/temperature limits (ISO 6552)



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

- A - A Flanged JIS/KS 10K.
- B - B Flanged ASME Class 150.
- C - C Flanged EN 1092 PN16.
- D - D Flanged JIS/KS 20K.
- E - E Flanged EN 1092 PN40.
- F - F Flanged ASME Class 150 screwed BSP, NPT, socket weld and butt weld.

Body design conditions		PN50 or ASME 300
PMA	Maximum allowable pressure	50 bar g @ 50 °C
TMA	Maximum allowable temperature	425 °C @ 28 bar g
Minimum allowable temperature		-10 °C
PMO	Maximum operating pressure for saturated steam service	JIS/KS 10K
		9.9 bar g
		PN16
		11.4 bar g
		ASME 150
		11.4 bar g
		JIS/KS 10K
		23.5 bar g
		PN40
		25.8 bar g
		ASME 300
		34.1 bar g
		Scrd/SW/BW
		34.1 bar g
TMO	Maximum operating temperature	425 °C @ 28 bar g
Minimum operating temperature		-10 °C
<b>Note:</b> For lower operating temperatures consult Spirax Sarco.		
		JIS/KS 10K
		20.6 bar g
		PN16
		24.0 bar g
		ASME 150
		30.0 bar g
Designed for a maximum cold hydraulic test pressure of:		JIS/KS 10K
		50.0 bar g
		PN40
		60.0 bar g
		ASME 300
		76.6 bar g
		Scrd/SW/BW
		76.6 bar g

**Note:** Flanged separators (S6) may be supplied with a lower pressure rating than that cast into the body. Reference should be made to the appropriate operating chart to determine the actual product limitations.


Dimensions (approximate) in mm

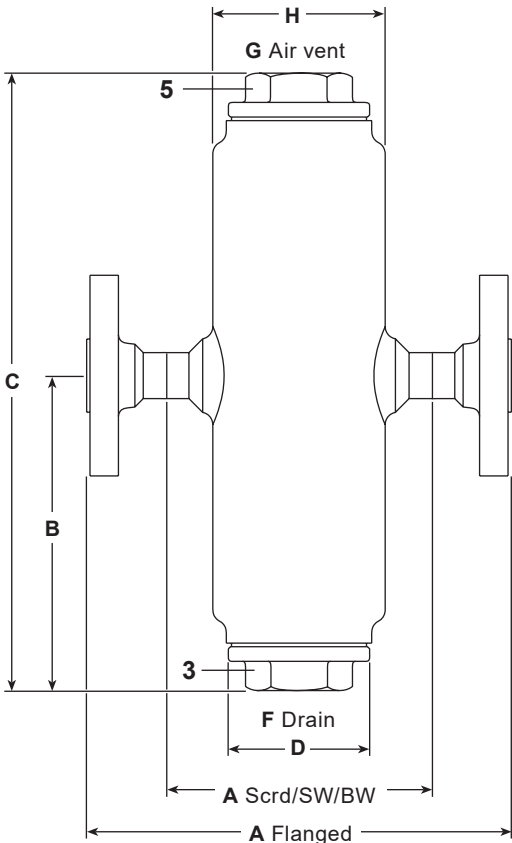
Size	Screwed SW, BW A	PN16 A	PN40 A	ASME 150 A	ASME 300 A	JIS/KS 10K & 20K A	B	C	D	F	G	H
DN15 - ½"	130	-	204	204	204	204	150	294	68	1"	½"	83
DN20 - ¾"	130	-	212	212	212	212	146	347	68	1"	½"	83
DN25 - 1"	178	-	260	260	260	260	170.5	386	68	1"	½"	130
DN32 - 1¼"	190	-	277	277	277	277	195	440	68	1"	½"	144
DN40 - 1½"	220	-	314	314	314	314	208	508	68	1"	1"	168
DN50 - 2"	214	-	314	314	314	314	208	558	68	1"	1"	168

Weights/volume (approximate) kg and litres

Size	Weight		Volume	
	Scrd/SW/BW	Flanged	Scrd/SW/BW	Flanged
DN15 - ½"	6.0	7.5	0.71	0.72
DN20 - ¾"	6.9	9.2	0.90	0.92
DN25 - 1"	12.2	15.1	2.83	2.86
DN32 - 1¼"	16.2	20.4	4.15	4.19
DN40 - 1½"	22.5	27.3	6.93	7.00
DN50 - 2"	24.4	30.8	7.74	7.88

Recommended tightening torques

Item	Size		N m
3 and 5	DN15 - DN50	46 A/F	180 - 200



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P023-55) supplied with the product.

Installation note:

Install in a horizontal pipeline with the drain directly below.  
To ensure that any separated liquid is drained quickly, a suitable steam trap/liquid drainer must be connected to the drain connection.  
For those steam systems where air can be present, air can collect in the upper portion of the separator. In this situation a suitable air vent should be connected to the air vent connection.  
If an air vent is not being fitted then the connection must have the plastic transit protection plug removed and must have a stainless steel class 3000 lb plug fitted.

Disposal:

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

How to order

**Example:** 1 off Spirax Sarco DN20 S6 separator with an austenitic stainless steel body flanged to EN 1092 PN40.



TI-P138-10  
CMGT Issue 9

spirax

sarco

S8

Stainless Steel

Separator DN65 to DN350

Description

The S8 is a stainless steel baffle type separator for the efficient removal of entrained liquids from steam, air and gas systems. A suitable steam trap (FT) or liquid drainer (CA) is required to drain the collected condensate/liquid depending on the application:

For steam service fit an FT ball float steam trap and AV air vent

For air/gas service fit a CA ball float liquid drainer

Standards

This product fully complies with the requirements of the Pressure Equipment Directive (PED) and is designed and manufactured in accordance with EN 13445:2016 – 'Unfired Pressure Vessels'.

Certification

This product is available with material certification to EN 10204 3.1 as standard. A full data dossier is available at extra cost – consult Spirax Sarco.

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

Sizes and pipeline connections

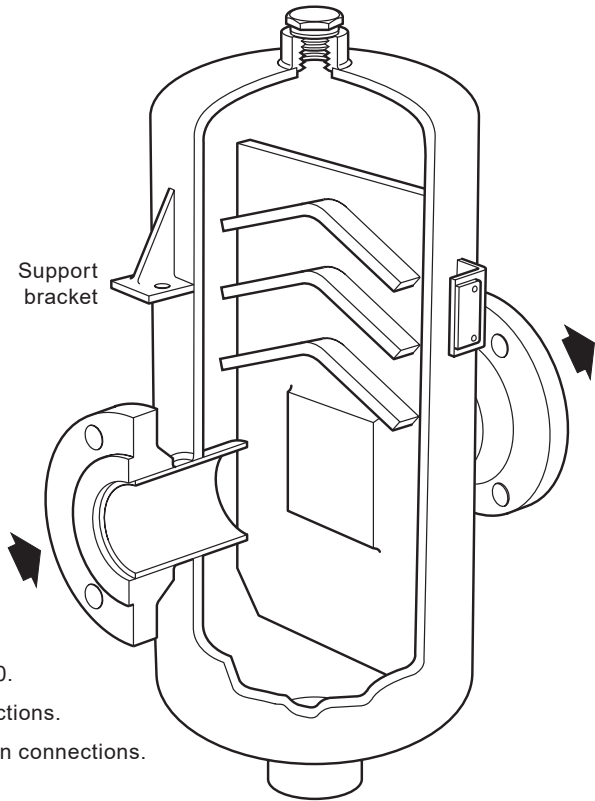
DN65, DN80, DN100, DN125, DN150, DN200, DN250, DN300 and DN350.

Flanged EN 1092 PN16 or PN40 with screwed BSP vent and drain connections.

Flanged ASME B16.5 Class 150 and 300 with screwed NPT vent and drain connections.

Flanged JIS/KS 20K with screwed BSP vent and drain connections.

Screwed, socket weld and other connections are available to special order – consult Spirax Sarco.



Materials

All components of the S8 are manufactured from austenitic stainless steel (304). For a complete carbon steel version (S7) see TI-P138-03.

Pressure/temperature limits

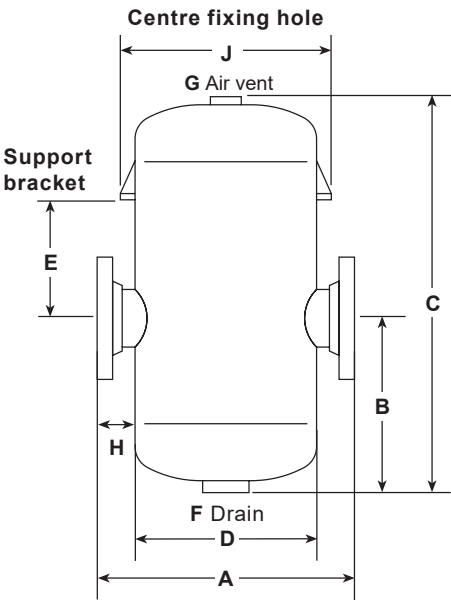
Size	Flange standard	Design pressure bar g	Design temperature °C	Designed for maximum cold hydraulic test pressure according to EN13445-5 2016 bar g
DN65 to DN350	PN16	14	198	24.0
	ASME 150	20	213	35.1
	JIS/KS 20K	23	217	40.6
	PN40	25	225	44.7
	ASME 300	25	225	44.7

**Please note:** For pressures and temperatures that exceed these operating conditions please contact Spirax Sarco for a quotation.

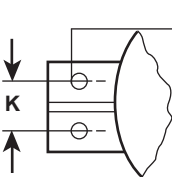
Pipeline ancillaries  
Separators and insulation jackets

Dimensions, weight and volume (approximate)

Size	Design pressure (bar g)	A	B	C (mm)	D	E	F (inches)	G (inches)	H	J (mm)	K	Weight (kg)	Volume (litres)
DN65	14	420	252	638	219	181	1"	¾"	100.5	263	30	38	14
	20 and 23	420	252	638	219	181	1"	¾"	100.5	263	30	38	14
	25	420	252	638	219	181	1"	¾"	100.5	263	30	38	14
DN80	14	489	332	735	273	194	1"	¾"	108	368	30	58	31
	20 and 23	489	332	735	273	194	1"	¾"	108	368	30	58	31
	25	489	332	735	273	194	1"	¾"	108	368	30	58	31
DN100	14	574	337	795	324	180	2"	¾"	125	384	40	83	48
	20 and 23	574	337	795	324	180	2"	¾"	125	384	40	83	48
	25	574	337	795	324	180	2"	¾"	125	384	40	83	48
DN125	14	656	310	843	377	247	2"	¾"	139.5	436	44	118	66
	20 and 23	656	310	843	377	247	2"	¾"	139.5	436	44	118	66
	25	656	310	843	377	247	2"	¾"	139.5	436	44	118	66
DN150	14	706	347	935	426	273	2"	¾"	140	466	60	154	110
	20 and 23	706	347	935	426	273	2"	¾"	140	466	60	154	110
	25	706	347	935	426	273	2"	¾"	140	466	60	154	110
DN200	14	858	460	1200	530	372	2"	2"	164	585	60	292	223
	20 and 23	858	460	1200	530	372	2"	2"	164	585	60	292	223
	25	858	460	1200	530	372	2"	2"	164	585	60	292	223
DN250	14	950	615	1580	600	530	2"	2"	175	688	72	440	376
	20 and 23	950	615	1580	600	530	2"	2"	175	688	72	440	376
	25	950	615	1580	600	530	2"	2"	175	688	72	440	376
DN300	14	1010	740	1700	600	540	2"	2"	205	698	72	564	415
	20 and 23	1010	740	1700	600	540	2"	2"	205	698	72	564	415
	25	1010	740	1700	600	540	2"	2"	205	698	72	564	415
DN350	14	1100	754	1800	700	525	2"	2"	200	816	108	735	623
	20 and 23	1100	754	1800	700	525	2"	2"	200	816	108	735	623
	25	1100	754	1800	700	525	2"	2"	200	816	108	735	623



Support bracket viewed from above

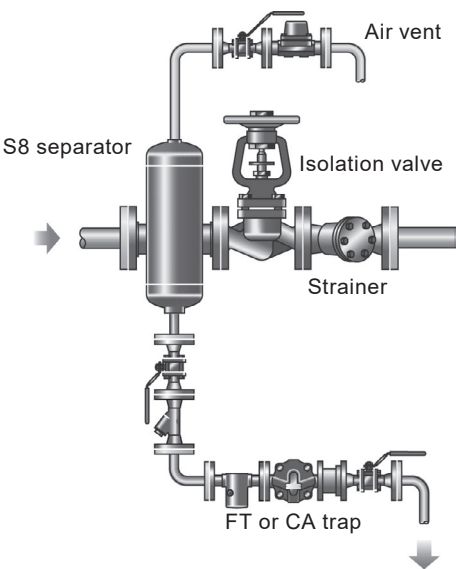


- Ø 8.5 (DN65 to DN100)
- Ø 10.5 (DN125 to DN150)
- Ø 10.5 (DN200)
- Ø 12.5 (DN250 to DN300)
- Ø 14.5 (DN350)

How to order

Example: 1 off Spirax Sarco DN80 S8 stainless steel separator with PN40 flanges. Suitable for pressures up to 25 bar (please specify design conditions).

Separator on a steam line



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P023-55) supplied with the product.

**Installation note:** To ensure efficient drainage of condensate a suitable ball float trap and air vent should be installed. For air/gas applications a balance line is required between the CA trap and the main line or top of the separator – consult Spirax Sarco for further details.

Disposal

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

Spare parts

The S8 is non maintainable - No spare parts are available.

