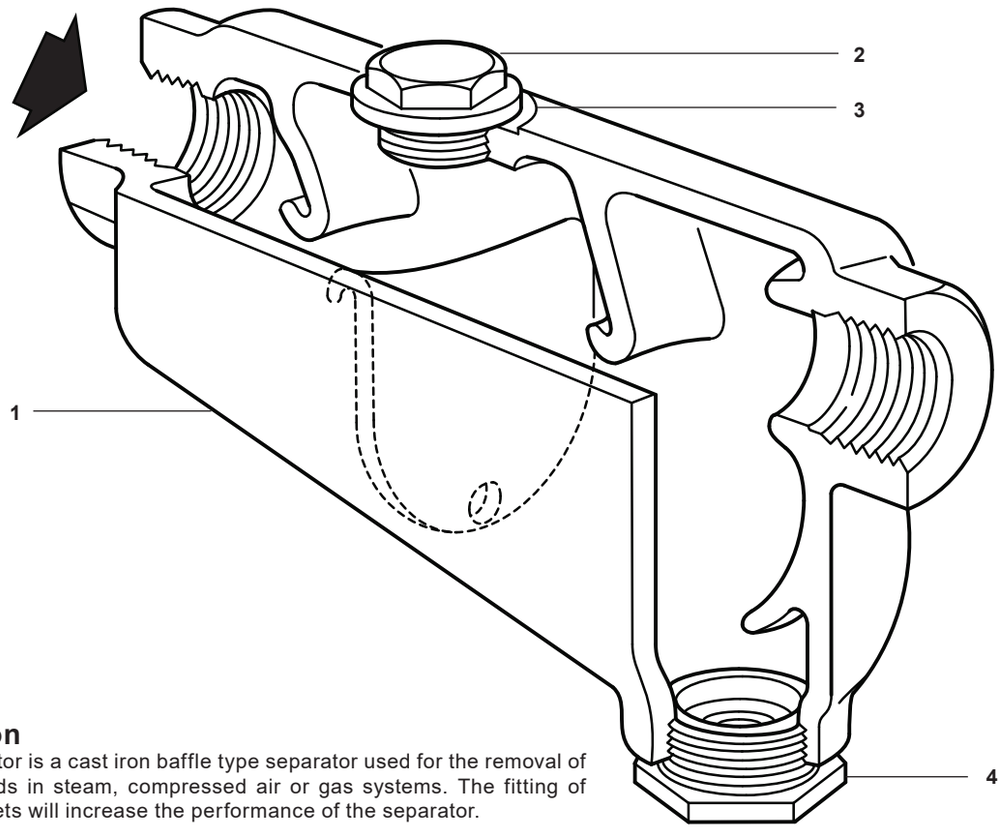
TI-P023-07
CMGT Issue 7

S2
Cast Iron
Separator (Screwed)



Description
The S2 separator is a cast iron baffle type separator used for the removal of entrained liquids in steam, compressed air or gas systems. The fitting of insulation jackets will increase the performance of the separator.

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

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

Sizes and pipe connections
1¼", 1½" and 2" screwed BSP or NPT.

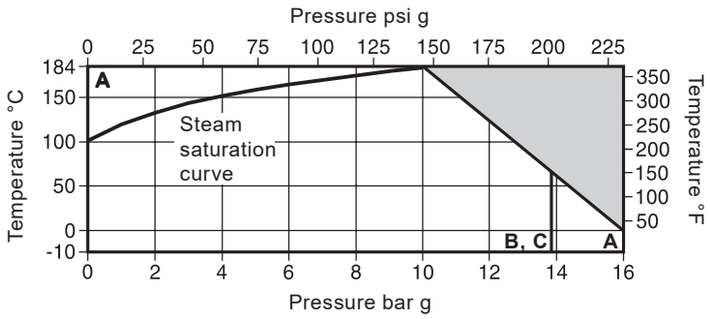
Materials

No.	Part	Material	
1	Body	Cast iron	ASTM A126 Cl B
2	Plug (2" only)	SG iron	DIN 1693 GGG 40
3	Gasket (2" only)	Reinforced exfoliated graphite	
4	Drain reducing bush	Steel	ASTM A105

Pipeline ancillaries

Separators and insulation jackets

Pressure/temperature limits (ISO 6552)



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

A - A Flanged EN 1092 PN16, Table F and screwed BSP or NPT.

A - B Flanged JIS/KS 10K.

A - C Flanged ASME Class 125.

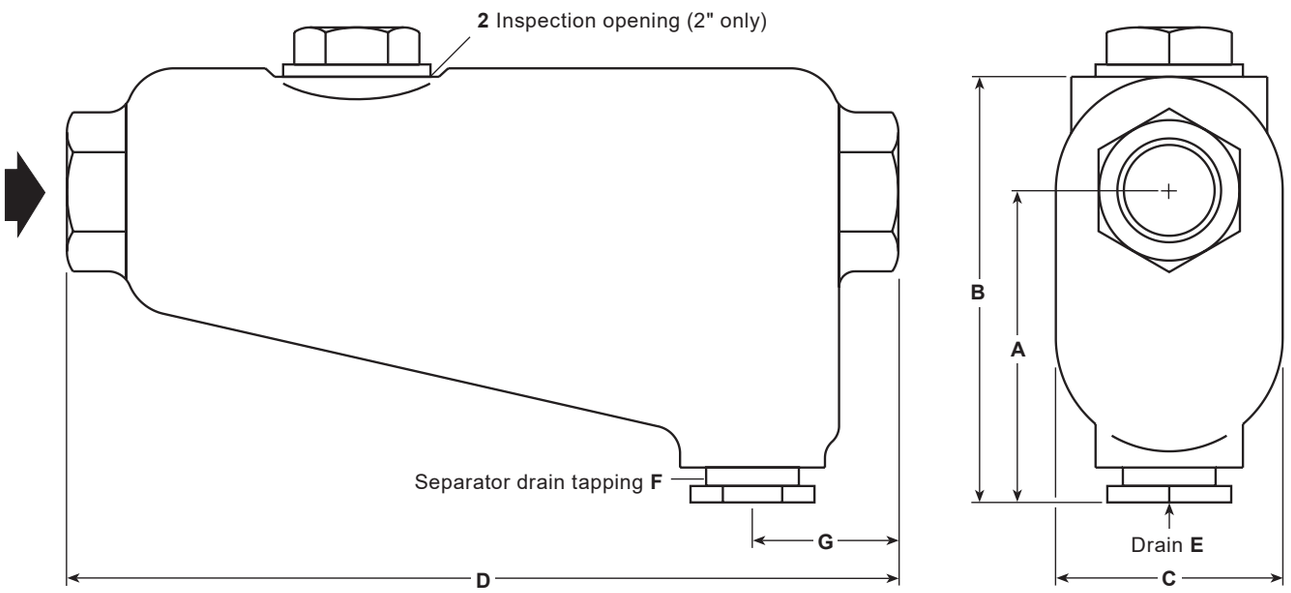
Body design conditions		PN16
PMA Maximum allowable pressure	16 bar g @ 0 °C	(232 psi g @ 32 °F)
TMA Maximum allowable temperature	184 °C @ 10 bar g	(363 °F @ 145 psi g)
Minimum allowable temperature	-10 °C	(14 °F)
PMO Maximum operating pressure for saturated steam service	10 bar g	(145 psi g)
TMO Maximum operating temperature	184 °C @ 10 bar g	(363 °F @ 145 psi g)
Minimum operating temperature **Note:** For lower operating temperatures consult Spirax Sarco.	-10 °C	(14 °F)
Designed for a maximum cold hydraulic test pressure of:	24 bar g	(348 psi g)

Note: Flanged separators (S3) 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, weights and volumes (approximate)

	Size	A	B	C	D	E	F	G	Weight	Volume
mm, kg and litres	1¼" 1½"	111	156	89	304	12.7	38.1	60	9.6	1.5
	2"	166	205	117	397	12.7	38.1	71	19.0	3.2

	Size	A	B	C	D	E	F	G	Weight	Volume
inches, lbs and gallons	1¼" 1½"	4.37	6.14	3.5	11.9	½"	1½"	2.36	21.1	0.32
	2"	6.53	8.07	4.60	15.6	½"	1½"	2.79	41.8	0.70



Recommended tightening torques

Item	Size	or mm		N m	(lbf ft)
2	2"	60 A/F	M72	190 - 210	(140 - 155)

Safety information, installation and maintenance

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

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Installation note:

Install in a horizontal pipeline with the drain directly below.
Note: To ensure that any separated liquid is drained away quickly, a suitable liquid drainer or steam trap must be connected to the drain connection 'E' - consult Spirax Sarco for further details.

Disposal

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

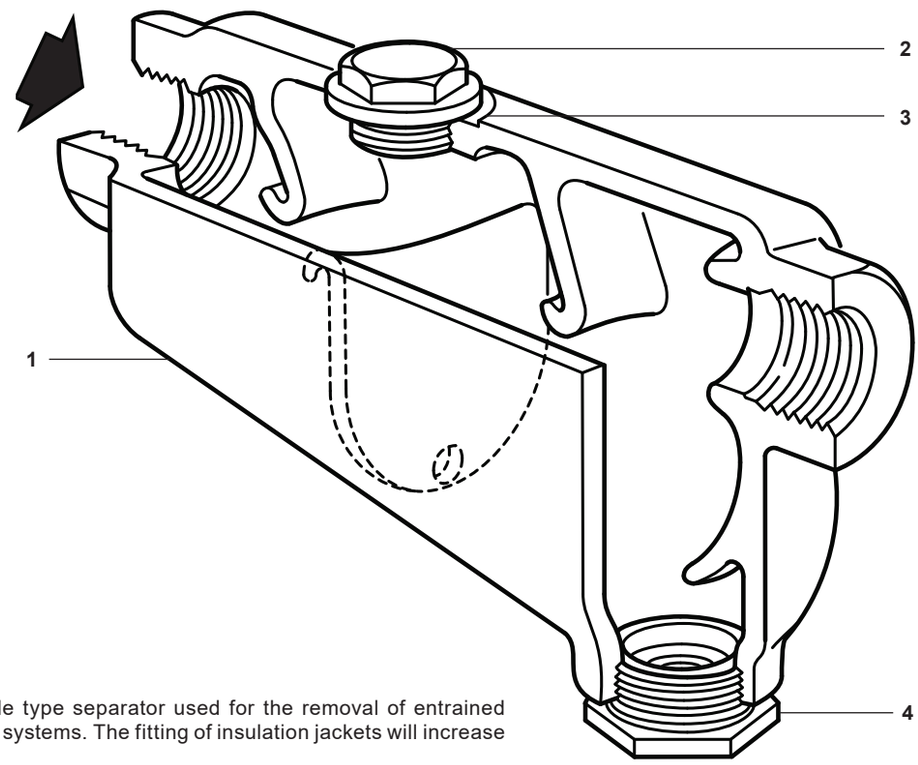
How to order

Example: 1 off 2" Spirax Sarco S2 separator with cast iron body having screwed BSP connections.

10 Pipeline ancillaries
Separators and insulation jackets

TI-P023-25
CMGT Issue 4

S12
SG Iron
Separator (Screwed)



Description
The S12 separator is an SG iron baffle type separator used for the removal of entrained liquids in steam, compressed air or gas systems. The fitting of insulation jackets will increase the performance of the separator.

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

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

Sizes and pipe connections
1¼", 1½" and 2" screwed BSP with screwed BSP drain or
1¼", 1½" and 2" screwed NPT with screwed NPT drain.

Materials

No.	Part	Material	
1	Body	SG iron	DIN 1693 GGG40/ASTM A395
2	Plug (2" only)	Carbon steel	1.0460 (C22.8)
3	Gasket (2" only)	Reinforced exfoliated graphite	
4	Drain reducing bush	Forged carbon steel	ASTM A105

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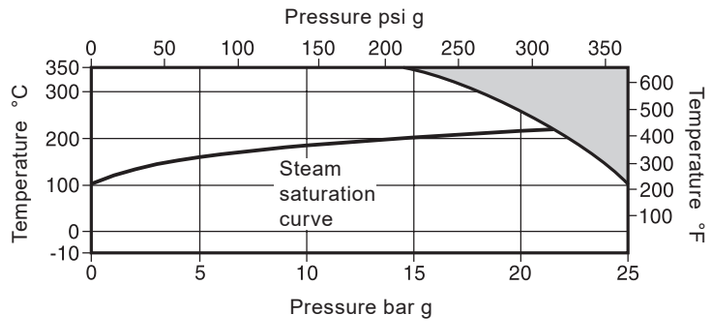
Pipeline ancillaries
Separators and insulation jackets

Pressure/temperature limits (ISO 6552)



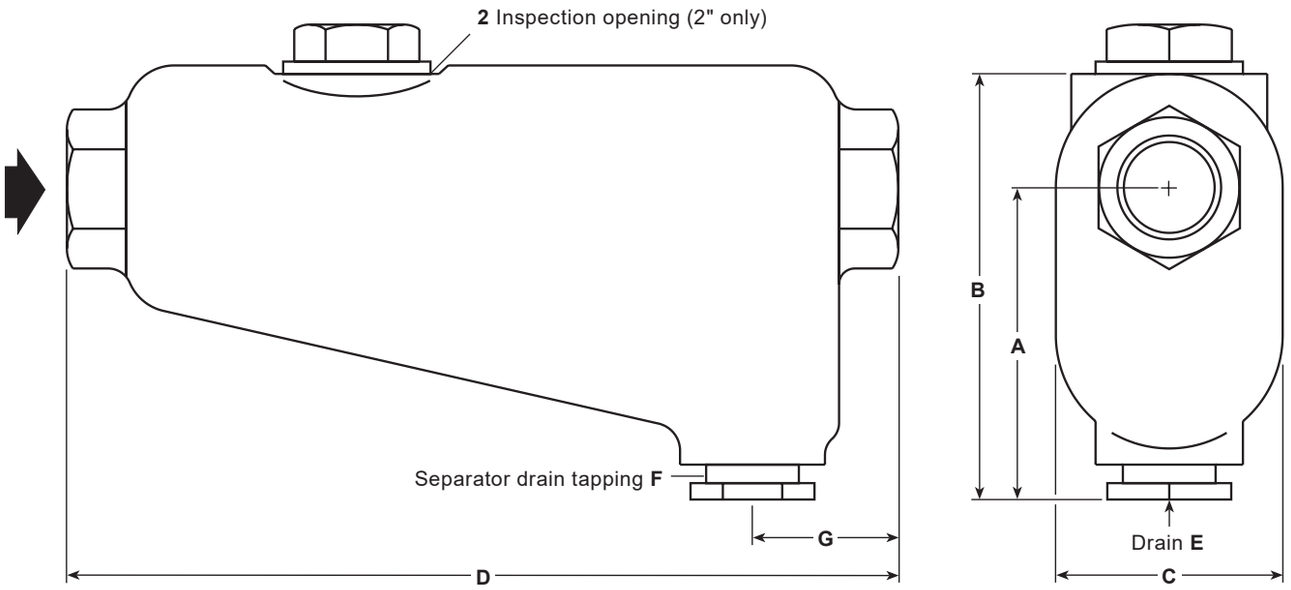
The product **must not** be used in this region.

Body design conditions			PN25
PMA	Maximum allowable pressure	25 bar g @ 100 °C	(362 psi g @ 212 °F)
TMA	Maximum allowable temperature	350 °C @ 14 bar g	(662 °F @ 203 psi g)
Minimum allowable temperature		-10 °C	(14 °F)
PMO	Maximum operating pressure for saturated steam service	21.3 bar g	(309 psi g)
TMO	Maximum operating temperature	350 °C @ 14 bar g	(662 °F @ 203 psi g)
Minimum operating temperature **Note:** For lower operating temperatures consult Spirax Sarco.		-10 °C	(14 °F)
Designed for a maximum cold hydraulic test pressure of:		38 bar g	(551 psi g)

Dimensions, weights and volumes (approximate)

	Size	A	B	C	D	E	F	G	Weight	Volume
mm, kg and litres	1¼" 1½"	111	156	89	304	12.7	25.4	60	9.0	1.5
	2"	146	205	117	397	12.7	25.4	71	17.0	3.2

	Size	A	B	C	D	E	F	G	Weight	Volume
inches, lbs and gallons	1¼" 1½"	4.37	6.14	3.5	11.9	½"	1"	2.36	19.8	0.32
	2"	5.78	8.07	4.60	15.6	½"	1"	2.79	37.7	0.70



Recommended tightening torques

Item	Size	or mm		N m	(lbf ft)
2	2"	46 A/F	M56	150 - 165	(110 - 121)

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.
Note: To ensure that any separated liquid is drained away quickly, a suitable liquid drainer or steam trap must be connected to the drain connection 'E' - consult Spirax Sarco for further details.

Disposal

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

How to order

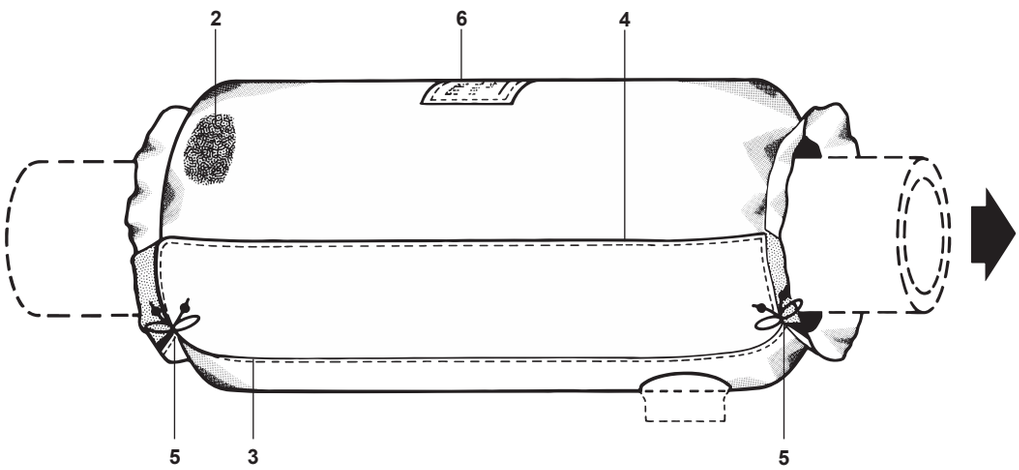
Example: 1 off 2" Spirax Sarco S12 separator with SG iron body having screwed BSP connections.

TI-P023-33
CMGT Issue 4

IJ-S2 and IJ-S12 Insulation Jackets for S2 and S12 Separators

Description

A range of one piece insulation jackets having velcro fastenings, for fitting to all sizes of screwed S2 and S12 separators.
TI-P023-37 gives details of a payback calculator based on the energy saving to be made by fitting an insulation jacket.



IJ-S2/IJ-S12
shown fitted to a separator

Available types

IJ-S2 and IJ-S12 for insulating DN32 to DN50, S2 and S12 separators.

Limiting conditions

Maximum metal surface temperature	220 °C
Thermal conductivity	0.044 W/m K at 100 °C

Materials

No.	Part	Material
1	Inner and outer face	Silicone rubber coated glass fibre
2	Insulation	Mineral fibre
3	Stitching	Polyester cotton
4	Sealing	Velcro
5	Drawcords	Nylon
6	Label	Nylon

Installation
Once the separator has been installed, the insulation jacket can be fitted as follows:

IJ-S2 and IJ-S12
Place the jacket onto the top of the separator, wrap around and secure jacket into position by using the velcro flap. The label should be on top and the large flap on the underside of the separator to prevent the ingress of water. The jacket shall be positioned so that the drain connection passes through the circular opening. Finally, pull and tie the drawcords to minimise any gaps that would allow air to flow through or allow ingress of water.

Important note:
Both the inner/outer face and installation are made with a bonded aluminium foil. At a temperature of 120 °C the adhesive bonding the aluminium will start to degrade and delamination of the foil will occur at 150 °C to 170 °C.
Scorching of the internal fabric may occur at 150 °C. Neither of these reactions will impair the performance.

Removal
Before removing the jacket, check if the separator is in service. If it is then the metal surface will be hot enough to burn and suitable protective clothing (e.g. gloves) should be worn.
Removal is the reverse procedure to the above.

Handling
When the jacket is new the insulation material is fully enclosed within the inner and outer face and retained by the stitching. In this condition for handling no special protective clothing is required. However, if the inner and outer face becomes unstitched or damaged, so as to expose the insulation material then suitable protective clothing (e.g. gloves, safety glasses, face mask and overalls) should be worn when handling.

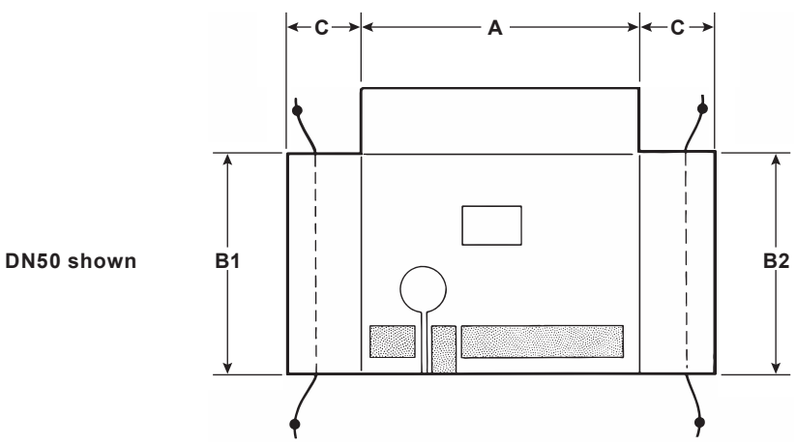
Disposal
This product is not recyclable and is non-combustible. For disposal purposes consider the product to be mineral fibre and dispose of in accordance with local regulations.

Dimensions/mass (approximate) in mm and kg

IJ-S2 and IJ-S12

Size	A	B1	B2	C	Insulation thickness	Mass
DN32 and DN40	410	520	465	53	50	0.84
DN50	650	640	640	53	50	1.58

The diagram below shows the unfolded dimensions of the jacket



DN50 shown

How to order
Example: 1 off IJ-S2 insulation jacket to fit a DN32, S2 separator.

10 Pipeline ancillaries
Separators and insulation jackets