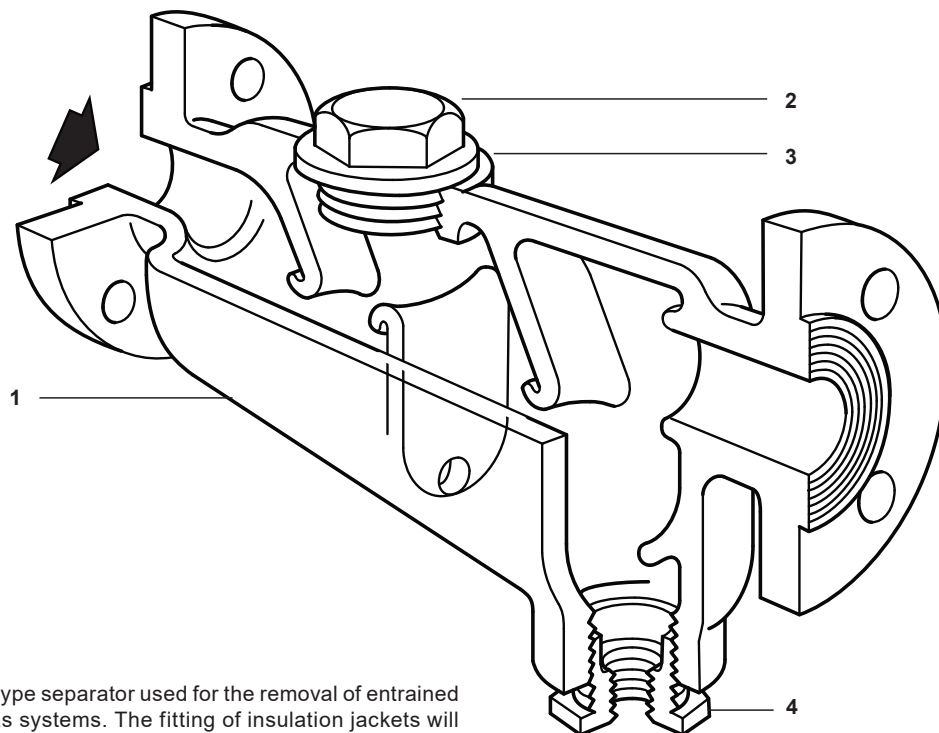




# S13 SG Iron Separator (Flanged)



## Description

The S13 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 EU Pressure Equipment Directive / UK Pressure Equipment (Safety) Regulations and is designed in accordance with ASME B31.3.

## 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

DN40, DN50, DN65, DN80, DN100, DN125, DN150 and DN200.

Flanged EN 1092 PN16 and PN25 with screwed BSP drain.

Flanged JIS/KS 10K with screwed BSP drain.

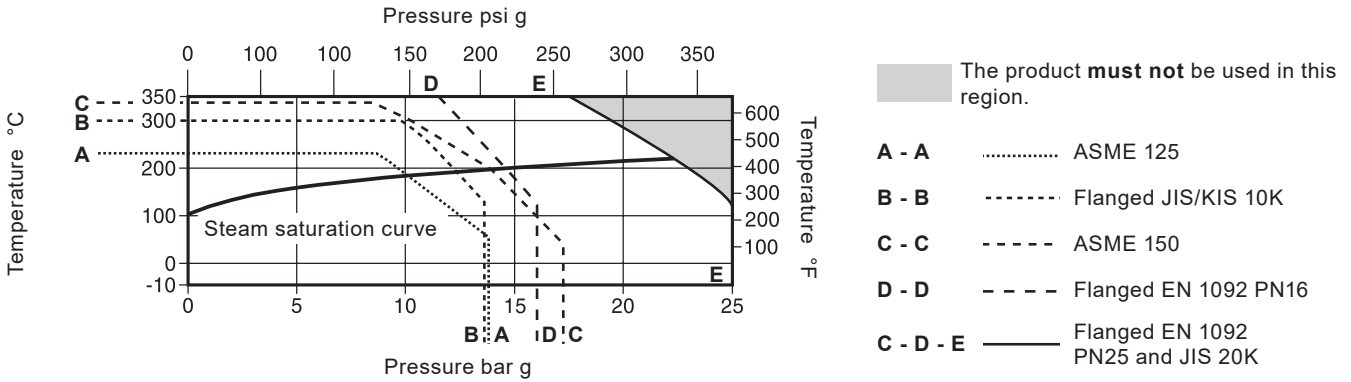
Flanged JIS/KS 20K with screwed BSP drain - DN40, DN50, DN65 and DN200 only.

Flanged ASME125/150 with screwed NPT drain

## Materials

| No. | Part                | Material                       |                           |
|-----|---------------------|--------------------------------|---------------------------|
| 1   | Body                | SG iron                        | BS EN 1563/EN-JS1030/A395 |
| 2   | Plug                | Carbon steel                   | 1.0460 (C22.8)/A105N      |
| 3   | Gasket              | Reinforced exfoliated graphite |                           |
| 4   | Drain reducing bush | Forged carbon steel            | ASTM A105                 |

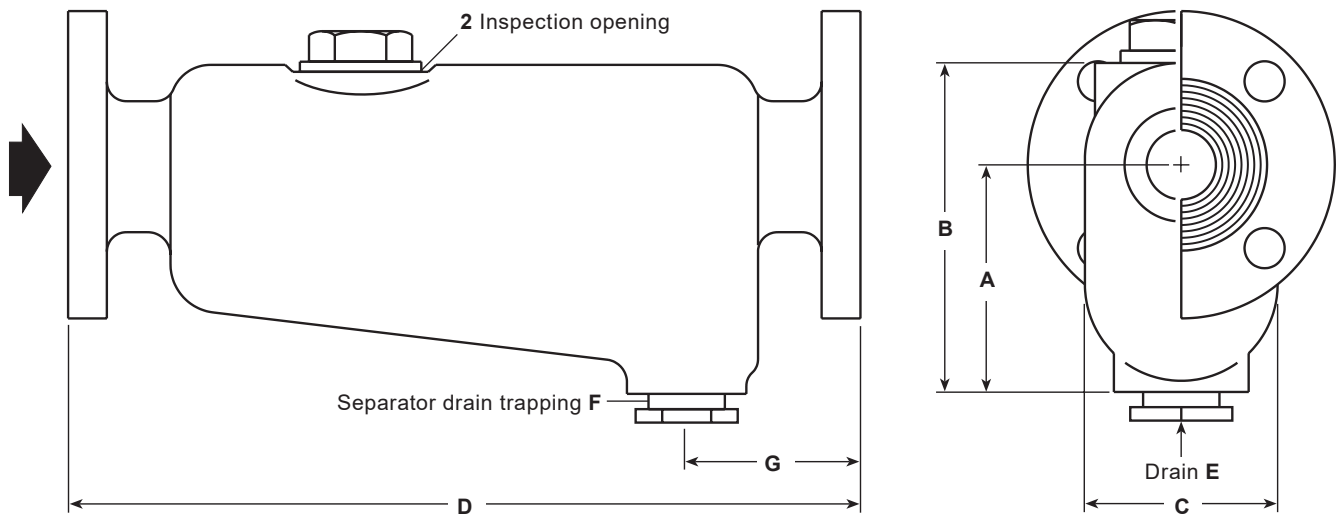
## Pressure/temperature limits (ISO 6552)



| Body design conditions  |  | PN25              |  |
|---|--|-------------------|--|
| PMA   | Maximum allowable pressure                             | JIS/KS10          | 14 bar g @ 120 °C (200 psi g @ 248 °F)   |
|   |  | PN16              | 16 bar g @ 120 °C (232 psi g @ 248 °F)   |
|   |  | PN25 and JIS/KS20 | 25 bar g @ 120 °C (632 psi g @ 248 °F)   |
|   |  | ASME125           | 13.8 bar g @ 65 °C (200 psi g @ 150 °F)  |
|   |  | ASME150           | 17.2 bar g @ 38 °C (250 psi g @ 100 °F)  |
| TMA   | Maximum allowable temperature                          | JIS/KS10          | 300 °C @ 10 bar g (572 °F @ 145 psi g)   |
|   |  | PN16              | 350 °C @ 11.2 bar g (662 °F @ 162 psi g) |
|   |  | PN25 and JIS/KS20 | 350 °C @ 17.5 bar g (662 °F @ 253 psi g) |
|   |  | ASME125           | 232 °C @ 8.6 bar g (450 °F @ 125 psi g)  |
|   |  | ASME150           | 343 °C @ 8.6 bar g (650 °F @ 125 psi g)  |
| Minimum allowable temperature                                       |  |                   | -10 °C (14 °F)                           |
| PMO   | Maximum operating pressure for saturated steam service | JIS / KS 10K      | 12.3 bar g (178 psi g)                   |
|   |  | PN16              | 13.7 bar g (198 psi g)                   |
|   |  | PN25 and JIS/KS20 | 21.3 bar g (309 psi g)                   |
|   |  | ASME125           | 10.1 bar g (147 psi g)                   |
|   |  | ASME150           | 13.9 bar g (201 psi g)                   |
| TMO   | Maximum operating temperature                          | JIS/KS10          | 300 °C @ 10 bar g (572 °F @ 145 psi g)   |
|   |  | PN16              | 350 °C @ 11.2 bar g (662 °F @ 162 psi g) |
|   |  | PN25 and JIS/KS20 | 350 °C @ 17.5 bar g (662 °F @ 253 psi g) |
|   |  | ASME125           | 232 °C @ 8.6 bar g (450 °F @ 125 psi g)  |
|   |  | ASME150           | 343 °C @ 8.6 bar g (650 °F @ 125 psi g)  |
| Minimum operating temperature                                       |  |                   | -10 °C (14 °F)                           |
| <b>Note:</b> For lower operating temperatures consult Spirax Sarco. |  |                   |  |
| Designed for a maximum cold hydraulic test pressure of:             |  | JIS / KS 10K      | 20.4 bar g (296 psi g)                   |
|   |  | PN16              | 24.0 bar g (348 psi g)                   |
|   |  | PN25 and JIS/KS20 | 37.5 bar g (544 psi g)                   |
|   |  | ASME125           | 20.7 bar g (300 psi g)                   |
|   |  | ASME150           | 25.8 bar g (374 psi g)                   |

**Note:** Flanged separators (S13) 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, weight and volumes (approximate)



| mm, kg and litres | Size  | A   | B   | C   | D   | E    | F    | G   | Weight | Volume |
|-------------------|-------|-----|-----|-----|-----|------|------|-----|--------|--------|
|                   | DN40  | 111 | 156 | 89  | 365 | 12.7 | 25.4 | 94  | 14     | 1.6    |
|                   | DN50  | 146 | 205 | 117 | 456 | 12.7 | 25.4 | 98  | 25     | 3.2    |
|                   | DN65  | 178 | 249 | 146 | 406 | 19.0 | 38.1 | 98  | 28     | 4.6    |
|                   | DN80  | 178 | 252 | 152 | 483 | 25.4 | 38.1 | 98  | 36     | 6.5    |
|                   | DN100 | 223 | 315 | 197 | 692 | 25.4 | 38.1 | 118 | 60     | 13.5   |
|                   | DN125 | 226 | 397 | 381 | 706 | 25.4 | 38.1 | 121 | 128    | 38.5   |
|                   | DN150 | 226 | 397 | 381 | 706 | 25.4 | 38.1 | 121 | 130    | 42.5   |
|                   | DN200 | 308 | 502 | 426 | 762 | 38.1 | 38.1 | 140 | 190    | 68.0   |

| inches, lbs and gallons | Size  | A    | B    | C    | D    | E   | F   | G    | Weight | Volume |
|-------------------------|-------|------|------|------|------|-----|-----|------|--------|--------|
|                         | DN40  | 4.37 | 6.14 | 3.50 | 14.3 | ½"  | 1"  | 3.70 | 30.8   | 0.42   |
|                         | DN50  | 5.74 | 8.07 | 4.60 | 17.9 | ½"  | 1"  | 3.85 | 55.1   | 0.84   |
|                         | DN65  | 7.00 | 9.80 | 5.74 | 15.9 | ¾"  | 1½" | 3.85 | 61.7   | 1.21   |
|                         | DN80  | 7.00 | 9.92 | 5.98 | 19.0 | 1"  | 1½" | 3.85 | 79.3   | 1.71   |
|                         | DN100 | 8.77 | 12.4 | 7.75 | 27.2 | 1"  | 1½" | 4.64 | 132.2  | 3.56   |
|                         | DN125 | 8.89 | 15.6 | 15.0 | 27.7 | 1"  | 1½" | 4.76 | 282.1  | 10.1   |
|                         | DN150 | 8.89 | 15.6 | 15.0 | 27.7 | 1"  | 1½" | 4.76 | 286.6  | 11.2   |
|                         | DN200 | 12.1 | 19.7 | 16.7 | 30.0 | 1½" | 1½" | 5.51 | 418.8  | 17.9   |

## Recommended tightening torques

| Item | Size  | or  |   | N m       | (lbf ft)    |
|------|-------|---|---|-----------|-------------|
|      |       |  |  |           |             |
| 2    | DN40  | 46 A/F  | M56   | 150 - 165 | (110 - 121) |
|      | DN50  | 46 A/F  | M56   | 150 - 165 | (110 - 121) |
|      | DN65  | 46 A/F  | M56   | 150 - 165 | (110 - 121) |
|      | DN80  | 60 A/F  | M72   | 190 - 210 | (140 - 155) |
|      | DN100 | 60 A/F  | M72   | 190 - 210 | (140 - 155) |
|      | DN125 | 60 A/F  | M72   | 190 - 210 | (140 - 155) |
|      | DN150 | 60 A/F  | M72   | 190 - 210 | (140 - 155) |
|      | DN200 | 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.

### 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 DN50 Spirax Sarco S13 separator with SG iron body having flanged EN 1092 PN16 connections.