

### SIMPLEX BASKET STRAINER \* THREADED & FLANGED END

### ANSI CLASS 125 \* CAST IRON BODY \* QUICK-OPEN COVER

MODELS:

**BS 25-CI** 

(THREADED)

SIZES: 3/8" ~ 3"

**BS 25F-CI** 

(FLANGED - FLAT FACED)

SIZES: I" ~ 8"

Designed for easy maintenance and large straining capacities!

3/8" - 3" Standard Quick-Open Cover is Knob Style. 4" - 8" Standard Quick-Open Cover is Clamp Style.

4" BS 25F-Cl is shown with standard Quick-Open Cove & removable leg brackets.

Side Drain is standard on sizes 4" and ub.

**FEATURES** 

#### ♦ VERSATILE - HIGH QUALITY CONSTRUCTION

THIS BASKET STRAINER IS AVAILABLE WITH EITHER THREADED (BS 25-CI) OR FLAT-FACED FLANGED ENDS (BS 25F-CI). BOTH MODELS HAVE EPOXY-PAINTED CAST IRON BODIES, PLUGGED DRAIN CONNECTIONS, AND SAFETY VENTS IN. A QUICK OPEN COVER COMES STANDARD, BUT A FULL ANSI RATED BOLTED COVER IS ALSO AVAILABLE.

♦ MINIMAL PRESSURE LOSS

PRESSURE LOSS IS MINIMIZED BY PROVIDING AN OVER-THE-TOP FLOW PATH AND LARGE OPEN AREA RATIO. THE STRAINING CAPACITY IS A MINIMUM OF SIX TIMES THAT OF THE CONNECTING PIPE.

♦ LARGE STRAINING CAPACITY

WITH ITS LARGE BODY AND SIZEABLE STRAINING ELEMENT, THIS BASKET STRAINER HAS THE ABILITY TO STORE LARGE QUANTITIES OF DEBRIS - THUS MAXIMIZING TIME BETWEEN SERVICING. IT ALSO FEATURES A MACHINED SEAT WITH O-RING THAT ENABLES FINE FILTRATIONS DOWN TO 40 MICRONS.

♦ NUMEROUS STRAINING ELEMENT OPTIONS

STRAINING ELEMENTS ARE AVAILABLE IN A VARIETY OF PERFORATIONS, MESHES, AND MATERIALS. SPECIAL DESIGNS ARE ALSO AVAILABLE INCLUDING MAGNETIC, WEDGE WIRE, DRILLED PERFORATIONS, AND PLEATED STRAINING ELEMENTS. THE STANDARD MATERIAL FOR STRAINING ELEMENTS IS TYPE 304 STAINLESS STEEL.

♦ SELF-CLEANING OPTION

UTILIZING A MODIFIED STRAINING ELEMENT, DRAINS CAN BE FITTED WITH A TITAN FCI BALL VALVE TO ALLOW FOR THE AUTOMATIC CLEANING OR FLUSHING OF THE STRAINING ELEMENT WHILE KEEPING THE PIPELINE IN SERVICE.

O POTABLE WATER/FDA APPROVED COATINGS AVAILABLE



IN ADDITION TO ITS LEAD FREE, CAST IRON BODY, TITAN CAN PROVIDE NSF/ANSI AND FDA APPROVED EPOXY COATINGS WHICH MAKE THIS PRODUCT SUITABLE FOR POTABLE WATER AND FOOD CONTACT APPLICATIONS. NUMEROUS OPTIONS ARE AVAILABLE. PLEASE CONTACT US FOR MORE DETAILS.

## **TECHNICAL**

# PRESSURE/TEMPERATURE RATING (1) CAST IRON ASTM A 126 GR. B - CLASS 125

BS 25-Cl (Threaded) (2) WOG: 200 PSI @ 100 °F

Saturated Steam: Not Recommended Maximum Liquid: Not Recommended

BS 25F-CI (Flanged) (2) WOG: 200 PSI @ 100 °F

Saturated Steam: Not Recommended Maximum Liquid: Not Recommended

- The above listed temperatures are theoretical and may vary during actual operating conditions.
- Quick-Open (knob-type) cover is not recommended for steam or high temperature.
   Full ANSI rated bolted cover is also available.

MARKETS: WATER & WASTEWATER, PULP & PAPER, CHEMICAL & PETROCHEMICAL, PETROLEUM, OIL & GAS, TRANSPORTATION, MARINE INDUSTRY, AND FOOD INDUSTRY

GENERAL APPLICATION: SIMPLEX BASKET STRAINERS ARE INSTALLED INTO A PIPELINE SYSTEM TO REMOVE UNWANTED DEBRIS FROM THE PIPELINE FLOW. BASKET STRAINERS ARE COMMONLY USED IN HORIZONTAL PIPELINES WHERE DEBRIS LOADING IS HIGH AND THE COLLECTION OF SOLIDS IS REQUIRED. STRAINING IS ACCOMPLISHED VIA A PERFORATED OR MESH LINED STRAINING ELEMENT, INTERNAL TO THE BASKET STRAINER. IN GENERAL, THE SIZE OF THE PERFORATION OR MESH SHOULD BE SLIGHTLY SMALLER THAN THE SMALLEST DEBRIS PARTICLE TO BE REMOVED. IT IS IMPORTANT TO NOTE THAT THE CORRECT SIZE OF A BASKET STRAINER IS DETERMINED BY ITS JOB FUNCTION, NOT BY THE SIZE OF THE PIPELINE.

The above data represents common market and service applications. No representation or guarantee, expressed or implied, is given due to the numerous variations of concentrations, temperatures and flow conditions that may occur during actual service.

**APPLICATIONS** 

Purple Engineering

#### **SIMPLEX BASKET STRAINER**

BS 25-CI - (Threaded)

BS 25F-CI - (Flanged - Flat Faced)

Flanged & Threaded Ends • Quick-Open Cover • Cast Iron

ANSI

Class 125

| $A_{\pm^{1/16}}$ Face to Face          | <br>  | •                | 3/8" - 3"<br>Quick-Open Cover<br>is Knob Style. |
|--|---|------------------|---|
|  | C Centerline to Top of Cover                  | Screen ° Removal | 4" - 8"<br>Quick Open Cover<br>is Clamp Style.  |
| 3                                      |   | 0                | Side drain is standard on sizes 4" and up.      |
|  | B<br>Centerline<br>to Bottom of<br>Boss Drain | 9 8 2 3          |   |
| BS 25F-CI with Quick-Open Knob Cover 7 |   |                  | SF-CI with<br>en Clamp Cover                    |

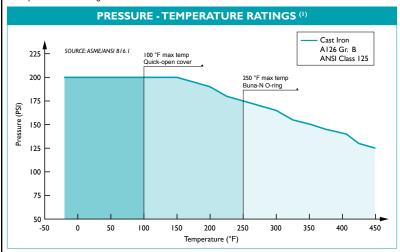
**BILL OF MATERIALS**(1) BS 25-CI and BS 25F-CI No. PART Body (2) Cast Iron ASTM A126 Gr. B Knob Cover: Cast Iron ASTM A126 Gr. B Clamp Cover: Carbon Steel A516-70 2 Cover O-Ring / Gasket (3) 3 Buna-N 4 Straining Element (3) Type 304 Stainless Steel 5 Studs Zinc Plated Alloy Steel Zinc Plated Ductile Iron 6 Knobs Carbon Steel Drain Plugs 8 Clamp Zinc Plated Ductile Iron 9 **Bolts** Zinc Plated Alloy Steel A 193-B7 10 Tee Handle Zinc Plated Carbon Steel

Equivalent or better materials may be substituted at the manufacturer's discretion.
 Cast Iron bodies are epoxy painted.
 Denotes recommended spare parts.

Illustration displays flanged end connections only (BS 25F). Tables to the left and below contain dimensions and material information for both threaded and flanged types. Contact factory for more information on the optional bolted cover. When required, always request certified drawings.

|                                      |    |       |       | DII   | <b>1ENSIONS</b> | AND PERF | ORMANC | E DATA (I) |        |        |        |        |        |
|--------------------------------------|----|-------|-------|-------|-----------------|----------|--------|------------|--------|--------|--------|--------|--------|
| Size                                 | in | 3/8   | 1/2   | 3/4   | ı               | I 1/4    | I 1/2  | 2          | 2 1/2  | 3      | 4      | 6      | 8      |
|                                      | mm | 10    | 15    | 20    | 25              | 32       | 40     | 50         | 65     | 80     | 100    | 150    | 200    |
| A_ DIMENSION FACE TO FACE (THREADED) | in | 4.562 | 4.562 | 4.562 | 5.312           | 6.312    | 6.312  | 8.25       | 9.625  | 11.25  | n/a    | n/a    | n/a    |
|                                      | mm | 116   | 116   | 116   | 135             | 161      | 161    | 210        | 245    | 286    | n/a    | n/a    | n/a    |
| A <sub>E</sub> DIMENSION             | in | n/a   | n/a   | n/a   | 5.687           | n/a      | 7.00   | 9.00       | 10.44  | 11.75  | 15.00  | 20.25  | 27.38  |
| FACE TO FACE (FLANGED)               | mm | n/a   | n/a   | n/a   | 145             | n/a      | 178    | 229        | 267    | 299    | 381    | 515    | 696    |
| B <sub>T</sub> DIMENSION             | in | 4.00  | 4.00  | 4.00  | 4.687           | 6.50     | 6.50   | 7.875      | 8.75   | 11.375 | n/a    | n/a    | n/a    |
| CTR. TO BOSS BOTTOM (THREADED)       | mm | 102   | 102   | 102   | 120             | 166      | 166    | 201        | 223    | 289    | n/a    | n/a    | n/a    |
| B <sub>F</sub> DIMENSION             | in | n/a   | n/a   | n/a   | 4.687           | n/a      | 6.50   | 8.00       | 8.75   | 11.50  | 13.75  | 20.00  | 24.24  |
| CTR. TO BOSS BOTTOM (FLANGED)        | mm | n/a   | n/a   | n/a   | 120             | n/a      | 166    | 204        | 223    | 293    | 350    | 508    | 616    |
| C <sub>T</sub> DIMENSION             | in | 2.50  | 2.50  | 2.50  | 2.75            | 3.00     | 3.00   | 3.625      | 4.00   | 4.50   | n/a    | n/a    | n/a    |
| CTR. LINE TO TOP (THREADED)          | mm | 64    | 64    | 64    | 70              | 77       | 77     | 93         | 102    | 115    | n/a    | n/a    | n/a    |
| C <sub>E</sub> DIMENSION             | in | n/a   | n/a   | n/a   | 3.00            | n/a      | 3.00   | 3.75       | 4.00   | 4.75   | 7.00   | 8.45   | 12.00  |
| CTR. LINE TO TOP (FLANGED)           | mm | n/a   | n/a   | n/a   | 77              | n/a      | 77     | 96         | 102    | 121    | 178    | 215    | 305    |
| <b>D</b> DIMENSION                   | in | 3/8   | 3/8   | 3/8   | 3/8             | 1/2      | 1/2    | 3/4        | 1      | 1      | 2      | 2      | 2      |
| NPT BLOW-OFF (BOTH)                  | mm | 10    | 10    | 10    | 10              | 15       | 15     | 20         | 25     | 25     | 50     | 50     | 50     |
| E DIMENSION                          | in | 4.812 | 4.812 | 4.812 | 5.875           | 8.125    | 8.125  | 10.125     | 11.875 | 14.812 | 19.875 | 29.125 | 29.125 |
| SCREEN REMOVAL (BOTH)                | mm | 123   | 123   | 123   | 150             | 207      | 207    | 258        | 302    | 377    | 505    | 740    | 943    |
| ASSEMBLED WEIGHT                     | lb | 5.5   | 5.5   | 5.0   | 8.0             | 15.0     | 14.0   | 27.0       | 36.0   | 55.5   | n/a    | n/a    | n/a    |
| THREADED (APPROXIMATE)               | kg | 2.5   | 2.5   | 2.3   | 3.6             | 6.8      | 6.4    | 12.2       | 16.3   | 25.2   | n/a    | n/a    | n/a    |
| ASSEMBLED WEIGHT                     | lb | n/a   | n/a   | n/a   | 11.5            | n/a      | 21.0   | 34.0       | 48.5   | 64.0   | 118.0  | 266.0  | 518.0  |
| FLANGED (APPROXIMATE)                | kg | n/a   | n/a   | n/a   | 5.2             | n/a      | 9.5    | 15.4       | 22.0   | 29.0   | 53.5   | 120.7  | 235.0  |
| Flow Coefficient                     | Cv | 14    | 14    | 14    | 24              | 43       | 43     | 70         | 90     | 140    | 290    | 780    | 1600   |

Dimensions, weights, and flow coefficients are provided for reference only. When required, always request certified drawings



This chart displays the pressure-temperature ratings for the strainer's body material per ANSI B16.1. Max  $^{\circ}$ 

temperature limits have been added for Quick-Open cover and Buna-N O-ring.

| REFERENCED STANDARDS & CODES |   |  |  |  |  |
|------------------------------|---|--|--|--|--|
| CODE                         | DESCRIPTION                                 |  |  |  |  |
| ASME/ANSI B16.1              | Cast Iron Pipe Flanges and Flanged Fittings |  |  |  |  |
| ASME/ANSI B16.4              | Cast Iron Threaded Fittings                 |  |  |  |  |

| PRESSURE - TEMPERATURE RATING |                  |                  |  |  |  |
|-------------------------------|------------------|------------------|--|--|--|
| ANSI CLASS 125                | BS 25-CI         | BS 25F-CI        |  |  |  |
| WOG (water, oil, gas)         | 200 PSI @ 100 °F | 200 PSI @ 100 °F |  |  |  |
| Saturated Steam (I)           | Not Recommended  | Not Recommended  |  |  |  |
| Max Liquid (1)                | Not Recommended  | Not Recommended  |  |  |  |

1. Quick-Open cover is not recommended for steam or high temperatures. Full ANSI rated bolted cover is also available.

| STANDARD SCREEN SELECTIONS |              |           |             |           |  |  |  |
|----------------------------|--------------|-----------|-------------|-----------|--|--|--|
| Size                       | Liquid       | Open Area | Steam       | Open Area |  |  |  |
| 3/8" ~ 2"                  | 1/16 (.0625) | 41%       | 1/32 (.033) | 28%       |  |  |  |
| 2 1/2" ~ 4"                | 1/16 (.0625) | 41%       | 3/64 (.045) | 36%       |  |  |  |
| 5" ~ 8"                    | 1/8 (.125)   | 40%       | 3/64 (.045) | 36%       |  |  |  |

We make every effort to ensure the information presented on our literature accurately reflects exact product specifications. However, as product changes occur, there may be short-term differences between actual product specifications and the information contained within our literature. We reserve the right to make design and specification changes to improve our products without prior notification. When required, request certified drawings