



Purple Engineering

## SIMPLEX BASKET STRAINER ♦ FLANGED ENDS - FLAT FACE

### ANSI CLASS 125 ♦ CAST IRON ♦ CLAMPED & BOLTED COVER

**MODELS: BS 55-CI**  
(CLAMPED COVER)

**BS 65-CI**  
(BOLTED COVER)

SIZES: 2" ~ 20"

## FEATURES

#### ♦ VERSATILE - HIGH QUALITY DESIGN

THIS BASKET STRAINER IS AVAILABLE WITH EITHER A FULL RATED BOLTED COVER (BS65) OR CLAMPED COVER (BS55). BOTH MODELS ARE EPOXY PAINTED AND COME STANDARD WITH A PLUGGED SIDE DRAIN CONNECTION. LARGER SIZES (8" ~ 20") ALSO FEATURE REMOVABLE/ ADJUSTABLE LEG BRACKETS.

#### ♦ MINIMAL PRESSURE LOSS

PRESSURE LOSS IS MINIMIZED BY PROVIDING A SLANTED STRAINING ELEMENT DESIGN, A STRAIGHT-THROUGH FLOW PATH, AND A LARGE OPEN AREA RATIO. INLET AND OUTLET BOSSES ARE PROVIDED TO FACILITATE THE MOUNTING OF PRESSURE GAUGES TO MONITOR PRESSURE LOSS.

#### ♦ LARGE STRAINING CAPACITY

WITH ITS LARGE BODY AND SIZEABLE STRAINING ELEMENT, THIS BASKET STRAINER HAS THE ABILITY TO STORE LARGE QUANTITIES OF DEBRIS WITHOUT AFFECTING PRESSURE LOSS - THUS MAXIMIZING TIME BETWEEN SERVICING.

#### ♦ 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, THE BOTTOM DRAIN CAN BE FITTED WITH A BALL VALVE TO ALLOW FOR THE AUTOMATIC CLEANING OR FLUSHING OF THE STRAINING ELEMENT WHILE KEEPING THE PIPELINE IN SERVICE.

#### ♦ POTABLE WATER/FDA APPROVED COATINGS AVAILABLE



IN ADDITION TO ITS LEAD FREE, CAST IRON BODY, WE 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.

BS 55-CI is shown with clamp cover and removable leg brackets

Side drain is standard, an optional bottom drain is available



## TECHNICAL

### PRESSURE/TEMPERATURE RATING CAST IRON ASTM A126 GR. B - CLASS 125

BS 55-CI (Clamped Cover) (2" ~ 12")  
WOG (Non-shock): 200 PSI @ 100 °F  
Saturated Steam: Not Recommended  
Maximum Liquid: Not Recommended

BS 65-CI (Bolted Cover) (2" ~ 12")  
WOG (Non-shock): 200 PSI @ 150 °F  
Saturated Steam: 125 PSI @ 353 °F  
Maximum Liquid: 125 PSI @ 450 °F

BS 55-CI (Clamped Cover) (14" ~ 20")  
WOG (Non-shock): 100 PSI @ 100 °F  
Saturated Steam: Not Recommended  
Maximum Liquid: Not Recommended

BS 65-CI (Bolted Cover) (14" ~ 20")  
WOG (Non-shock): 150 PSI @ 150 °F  
Saturated Steam: 100 PSI @ 353 °F  
Maximum Liquid: 100 PSI @ 353 °F

## APPLICATIONS

**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.



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Providing Equipment for:  
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Pipeline Industry  
Marine Industry  
Power Generation

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**SIMPLEX BASKET STRAINER**

**BS 55-CI - (Clamped Cover)**  
**BS 65-CI - (Bolted Cover)**

**Flanged Ends • Flat Face • Cast Iron Body**

**ANSI  
 Class 125**

**BILL OF MATERIALS (1)**

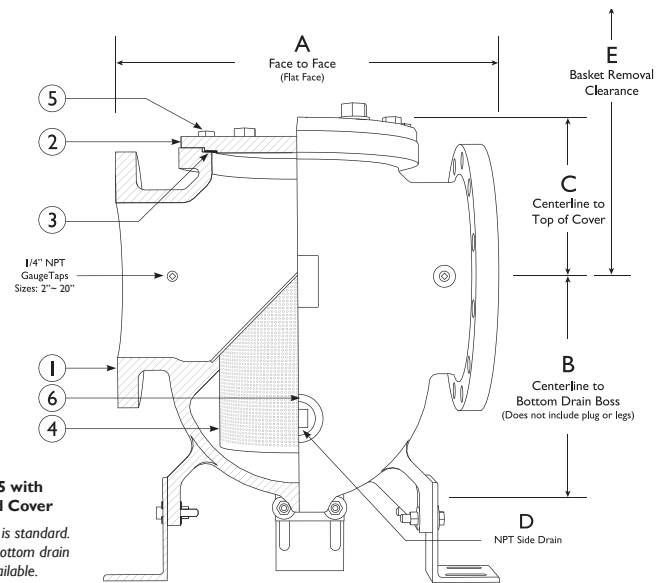
| No. | PART                  | BS 65-CI                  | BS 55-CI             |
|-----|-----------------------|---------------------------|----------------------|
| 1   | Body (2)              | Cast Iron ASTM A126 Gr. B |                      |
| 2   | Cover                 | Cast Iron ASTM A126 Gr. B |                      |
| 3   | Cover Gasket (3)      | Non-Asbestos - BS65       | Buna-N O-Ring - BS55 |
| 4   | Straining Element (3) | Type 304 Stainless Steel  |                      |
| 5   | Cap Screws            | Zinc Plated Carbon Steel  |                      |
| 6   | Plugs (Boss/Drain)    | Cast Iron                 |                      |

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

**STANDARD SCREEN SELECTIONS**

| Size     | Liquid       | Open Area | Steam           | Open Area |
|----------|--------------|-----------|-----------------|-----------|
| 2" ~ 4"  | 1/16 (.0625) | 41%       | 3/64 (.045)     | 36%       |
| 5" ~ 12" | 1/8 (.125)   | 40%       | 3/64 (.045) (1) | 36%       |

1. For 10" and above, consult factory on screen selections for steam.



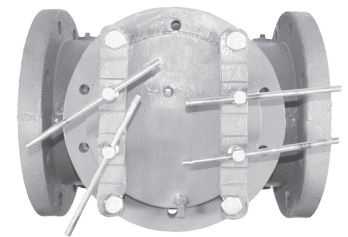
**DIMENSIONS AND PERFORMANCE DATA (1)**

| SIZE  | DIMENSIONS AND PERFORMANCE DATA (1) |        |        |       |       |       |       |        |       |       |       |        |       |
|---|-------------------------------------|--------|--------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|
|   | in                                  | 2      | 2 1/2  | 3     | 4     | 5     | 6     | 8      | 10    | 12    | 14    | 16     | 20    |
| <b>A DIMENSION (2)</b><br>FACE TO FACE        | in                                  | 8.625  | 7.562  | 8.75  | 11.25 | 12.25 | 14.00 | 17.125 | 22.00 | 25.25 | 29.00 | 31.875 | 36.49 |
|   | mm                                  | 220    | 193    | 223   | 286   | 311   | 356   | 435    | 559   | 642   | 737   | 810    | 927   |
| <b>B DIMENSION (3)</b><br>CTR. LINE TO BOTTOM | in                                  | 4.88   | 5.12   | 4.63  | 7.00  | 7.88  | 8.00  | 11.38  | 14.12 | 20.25 | 30.00 | 36.66  | 38.44 |
|   | mm                                  | 124    | 130    | 118   | 178   | 200   | 204   | 289    | 359   | 515   | 762   | 931    | 976   |
| <b>C DIMENSION</b><br>CTR. LINE TO TOP        | in                                  | 3.83   | 3.75   | 5.125 | 5.375 | 4.75  | 7.00  | 8.00   | 8.82  | 10.32 | 15.00 | 16.00  | 15.75 |
|   | mm                                  | 97     | 96     | 131   | 137   | 121   | 178   | 203    | 224   | 262   | 381   | 406    | 400   |
| <b>D DIMENSION</b><br>NPT BLOW-OFF            | in                                  | 1/2    | 3/4    | 3/4   | 1     | 1     | 1 1/4 | 1 1/2  | 1 1/2 | 2     | 2     | 2      | 2     |
|   | mm                                  | 15     | 20     | 20    | 25    | 25    | 32    | 40     | 40    | 50    | 50    | 50     | 50    |
| <b>E DIMENSION</b><br>SCREEN REMOVAL          | in                                  | 10.875 | 10.875 | 11.25 | 15.50 | 15.50 | 18.25 | 23.375 | 27.50 | 35.00 | 45.00 | 55.00  | 65.00 |
|   | mm                                  | 277    | 277    | 286   | 394   | 394   | 464   | 594    | 699   | 889   | 1143  | 1397   | 1651  |
| <b>ASSEMBLED WEIGHT (BS65)</b>                | lb                                  | 27.0   | 30.0   | 40.0  | 64.0  | 84.0  | 142.0 | 244.0  | 416.0 | 732.0 | 992   | 1735   | C/F   |
|   | kg                                  | 12.2   | 13.6   | 18.1  | 29.0  | 38.1  | 64.4  | 110.6  | 188.5 | 332.0 | 450.0 | 787.0  | C/F   |
| <b>ASSEMBLED WEIGHT (BS55)</b>                | lb                                  | 31.0   | 34.0   | 42.0  | 81.0  | 84.0  | 150.0 | 275.0  | 436.8 | 768.0 | 1246  | C/F    | C/F   |
|   | kg                                  | 14.0   | 15.4   | 19.0  | 36.7  | 38.1  | 68.0  | 124.7  | 197.8 | 348.4 | 565.2 | C/F    | C/F   |
| <b>Flow Coefficient</b>                       | C <sub>v</sub>                      | 43     | 86     | 135   | 290   | 490   | 780   | 1600   | 3250  | 5200  | 8000  | 10000  | 16500 |

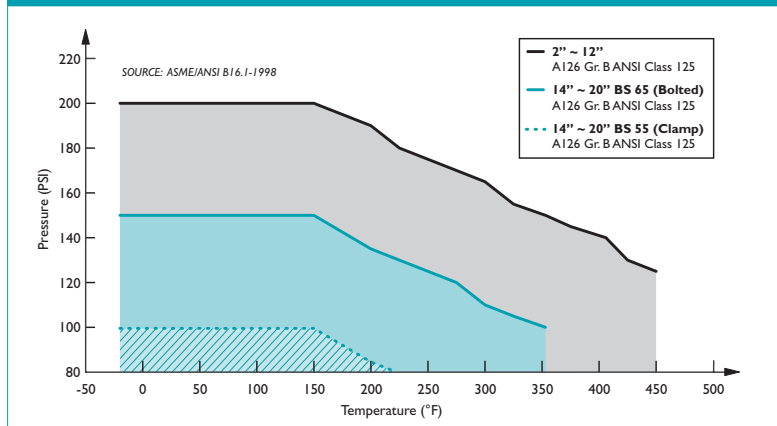
1. Dimensions, weights, and flow coefficients are provided for reference only. When required request certified drawings.
2. Face to face values have a tolerance of ±0.06 in (±2.0 mm) for sizes 10" and lower and a tolerance of ±0.12 in (±3.0 mm) for sizes 12" and larger.
3. Removable/adjustable leg brackets are standard on sizes 8" through 20". Centerline to bottom dimension does not include removable legs, which can extend approximately three to five inches beyond the bottom boss drain.

**Additional Design & Technical Notes:**

- Inlet and outlet bosses are standard on sizes 8" through 14".
- Inlet and outlet 1/4" NPT gauge taps with plugs are standard on sizes 8" through 14".
- 1/4" cover vent taps with plugs are standard on sizes 8" through 20".
- Straining element features a bow shaped handle that presses against the cover to help ensure the straining element remains securely seated during operation.
- Clamped cover design:  
 Sizes 2" ~ 4" are designed with (1) Tee Bolt  
 Size 6" is designed with (2) Tee Bolts  
 Sizes 8" ~ 16" are designed with (4) Tee Bolts  
 Size 20" is designed with (6) Tee Bolts



**PRESSURE - TEMPERATURE RATINGS**



**PRESSURE - TEMPERATURE RATING**

| ANSI CLASS 125  | BS 65-CI (2 ~ 12")  | BS 55-CI (2 ~ 12")  |
|-----------------|---------------------|---------------------|
| WOG (Non-shock) | 200 PSI @ 150 °F    | 200 PSI @ 100 °F    |
| Saturated Steam | 125 PSI @ 353 °F    | Not Recommended     |
| Max Liquid      | 125 PSI @ 450 °F    | Not Recommended     |
| ANSI CLASS 125  | BS 65-CI (14 ~ 20") | BS 55-CI (14 ~ 20") |
| WOG (Non-shock) | 150 PSI @ 150 °F    | 100 PSI @ 100 °F    |
| Saturated Steam | 100 PSI @ 353 °F    | Not Recommended     |
| Max Liquid      | 100 PSI @ 353 °F    | Not Recommended     |

**REFERENCED STANDARDS & CODES**

| CODE            | DESCRIPTION                                 |
|-----------------|---|
| ASME/ANSI B16.1 | Cast Iron Pipe Flanges and Flanged Fittings |

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.