



## SIMPLEX BASKET STRAINER ♦ FLANGED ENDS (RF)

### ASME CLASS 150 ♦ CARBON AND STAINLESS STEEL

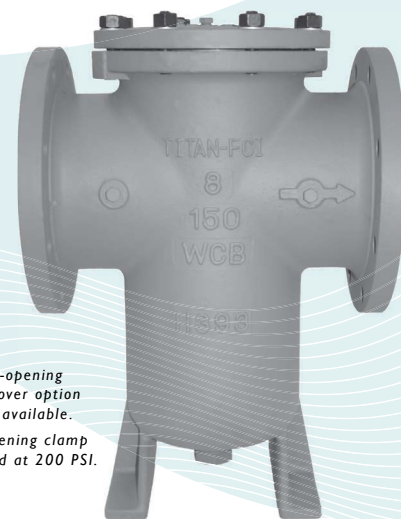
**MODELS: BS 85-CS**  
(CARBON STEEL)

**BS 85-SS**  
(STAINLESS STEEL)

SIZES: 2" ~ 12"



Quick-opening  
clamp cover option  
is also available.  
Quick-opening clamp  
cover rated at 200 PSI.



## FEATURES

### ♦ HIGH QUALITY DESIGN

THE BS85 BASKET STRAINER BOASTS MANY UNIQUE DESIGN FEATURES INCLUDING: INLET/OUTLET BOSSES WITH GAUGE TAPS (2" AND UP), SPOT-FACED FLANGE BOLT HOLES, PLUGGED BOTTOM DRAIN AND COVER VENT, CAST-IN SUPPORT LEGS (6" AND UP), EPOXY PAINTED CARBON BODIES, ENCAPSULATED COVER GASKET, AND AN OPTIONAL QUICK-OPENING COVER DESIGN.

### ♦ MINIMAL PRESSURE LOSS

PRESSURE LOSS IS MINIMIZED BY PROVIDING A SLANTED STRAINING ELEMENT DESIGN AND STRAIGHT FLOW PATH. PLUGGED, NPT TAPS ARE PROVIDED (NEAR THE INLET AND OUTLET ON BOTH SIDES) ALLOWING FOR THE QUICK MOUNTING OF PRESSURE GAUGES TO MONITOR PRESSURE LOSS.

### ♦ LARGE STRAINING CAPACITY

WITH ITS LARGE BODY AND SIZEABLE STRAINING ELEMENT, THE BS 85-CS/SS 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 TITAN FCI BALL VALVE TO ALLOW FOR THE AUTOMATIC CLEANING OR FLUSHING OF THE STRAINING ELEMENT WHILE KEEPING THE PIPELINE IN SERVICE.

## TECHNICAL

**PRESSURE/ TEMPERATURE RATING**  
CS - ASTM A216 GR. WCB - CLASS 150

WOG (Non-shock): 285 PSI @ 100 °F

**PRESSURE/ TEMPERATURE RATING**  
SS - ASTM A351 GR. CF8M - CLASS 150

WOG (Non-shock): 275 PSI @ 100 °F

- Carbon Steel not recommended for prolonged use above 800 °F
- Stainless Steel not recommended for prolonged use above 1000 °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.*

**TITAN® FLOW CONTROL, INC.**  
**YOUR PIPELINE TO THE FUTURE!**

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**SIMPLEX BASKET STRAINER****BS 85-CS - (Carbon Steel)****BS 85-SS - (Stainless Steel)****Flanged Ends • Raised Face • Carbon & Stainless Steel**

**ASME**  
**Class 150**

**BILL OF MATERIALS <sup>(1)</sup>**

| No. | PART                                 | BS 85-CS <sup>(2)</sup>                                                                          | BS 85-SS                        |
|-----|--------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------|
| 1   | Body                                 | Carbon Steel A216 Gr.WCB                                                                         | Stainless Steel A351 Gr. CF8M   |
| 2   | Cover <sup>(4)</sup>                 | Carbon Steel A216 Gr.WCB                                                                         | Stainless Steel A351 Gr. CF8M   |
| 3   | Cover Gasket <sup>(3) (4) (6)</sup>  | Bolted Cover: Spiral Wound Stainless Steel Non-Asbestos<br>Clamp Cover (Optional): Buna-N O-Ring |                                 |
| 4   | Straining Element <sup>(3) (5)</sup> | Type 304 Stainless Steel (Other materials are available)                                         |                                 |
| 5   | Stud                                 | Alloy Steel A193-B7                                                                              | Stainless Steel 18-8 Series 300 |
| 6   | Nut                                  | Carbon Steel A194-2H                                                                             | Stainless Steel 18-8 Series 300 |
| 7   | Plug                                 | Carbon Steel                                                                                     | Stainless Steel                 |

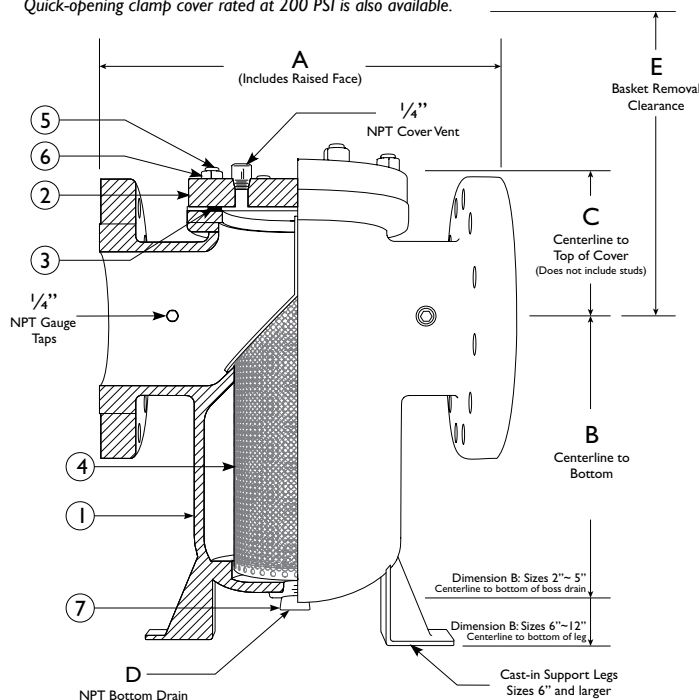
- Equivalent or better materials may be substituted at the manufacturer's discretion.
- Carbon Steel bodies are epoxy painted.
- Denotes recommended spare parts.
- Bolted cover is shown. For information on clamp cover, please contact factory.
- Straining element on 2" BS 85 is a straight screen. It is not diagonal as illustrated on right.
- Carbon Fiber Compressed gasket may be substituted at the manufacturer's discretion.

**Body Material Application Notes:**

- Carbon Steel performs exceptionally well in high temperatures, up to 800 °F in continuous service. It provides high resistance to shock, vibration, piping strains, and fire and freezing hazards. Carbon Steel strainers are often used in the oil and petrochemical industries.
- Stainless Steel is highly corrosion resistant, extremely strong, and is commonly specified for high temperature service, up to 1000 °F in continuous service. Stainless Steel strainers are commonly found in the chemical, food, and pharmaceutical industries.

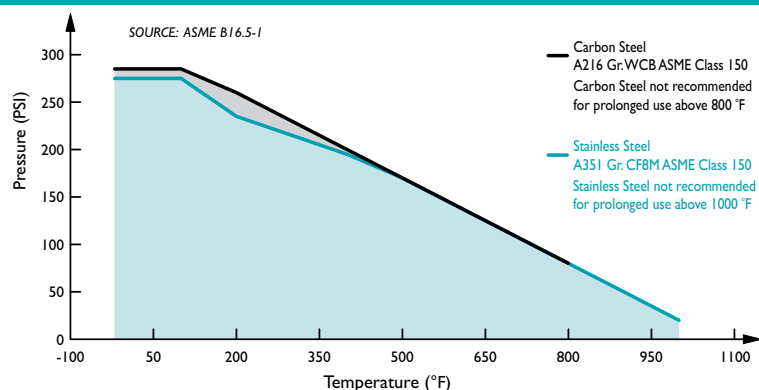
Bolted cover is shown.

Quick-opening clamp cover rated at 200 PSI is also available.

**DIMENSIONS AND PERFORMANCE DATA <sup>(1)</sup>**

| SIZE                                      | in             | 2      | 2 1/2  | 3     | 4      | 5    | 6      | 8      | 10     | 12    |
|-------------------------------------------|----------------|--------|--------|-------|--------|------|--------|--------|--------|-------|
|                                           | mm             | 50     | 65     | 80    | 100    | 125  | 150    | 200    | 250    | 300   |
| <b>A DIMENSION</b><br>FACE TO FACE        | in             | 8.50   | 8.00   | 8.75  | 11.187 | C/F  | 13.875 | 17.375 | 22.00  | 25.00 |
|                                           | mm             | 216    | 204    | 223   | 285    | C/F  | 353    | 442    | 559    | 635   |
| <b>B DIMENSION</b><br>CTR. LINE TO BOTTOM | in             | 5.875  | 5.437  | 5.25  | 7.875  | C/F  | 13.125 | 16.375 | 18.25  | 18.75 |
|                                           | mm             | 150    | 139    | 134   | 201    | C/F  | 334    | 416    | 464    | 476   |
| <b>C DIMENSION</b><br>CTR. LINE TO TOP    | in             | 5.00   | 4.75   | 5.50  | 6.125  | C/F  | 6.75   | 8.875  | 10.75  | 13.75 |
|                                           | mm             | 127    | 121    | 140   | 156    | C/F  | 172    | 226    | 274    | 350   |
| <b>D DIMENSION</b><br>NPT DRAIN           | in             | .50    | .75    | .75   | 1.00   | C/F  | 1.25   | 1.50   | 1.50   | 2.00  |
|                                           | mm             | 15     | 20     | 20    | 25     | C/F  | 32     | 40     | 40     | 50    |
| <b>E DIMENSION</b><br>SCREEN REMOVAL      | in             | 10.875 | 10.187 | 10.75 | 14.0   | C/F  | 19.875 | 25.25  | 30.125 | 37.5  |
|                                           | mm             | 276    | 259    | 273   | 356    | C/F  | 505    | 641    | 765    | 953   |
| <b>ASSEMBLED WEIGHT</b><br>APPROXIMATE    | lb             | 27.0   | 33.0   | 38.0  | 64.0   | 89.0 | 128.0  | 227.0  | 362.0  | 487.0 |
|                                           | kg             | 12.2   | 15.0   | 17.2  | 29.0   | 40.4 | 58.0   | 102.9  | 164.0  | 220.7 |
| <b>Flow Coefficient</b>                   | C <sub>v</sub> | 45     | 90     | 140   | 290    | 500  | 800    | 1600   | 2800   | 3700  |

- Dimensions, weights, and flow coefficients are provided for reference only. When required, always request certified drawings.
- Face to face values have a tolerance of  $\pm 0.06$  in ( $\pm 2.0$  mm) for sizes 10" and lower and a tolerance of  $\pm 0.12$  in ( $\pm 3.0$  mm) for sizes 12" and larger.

**PRESSURE - TEMPERATURE RATING****Additional Design & Technical Notes:**

- Cover vent is provided on all sizes. Cover vent is 1/4" NPT on all sizes and is furnished with plug.
- Bottom drain is furnished with plug. See table to the left for sizes.
- Plugged 1/4" NPT gauge taps (inlet and outlet) are provided on sizes 2" and larger.
- Cast-in support legs are provided on sizes 6" and larger.
- Optional cover designs are available - C/F.
- Steam jacketed designs are available - C/F.
- Epoxy coating is available - C/F.
- Designed for horizontal pipelines only.
- Standard material for straining elements is Type 304 Stainless Steel. Other materials are available upon request.

**REFERENCED STANDARDS & CODES**

| CODE       | DESCRIPTION                          |
|------------|--------------------------------------|
| ASME B16.5 | Pipe Flanges and Flanged Fittings    |
| MSS SP-55  | Quality Standard - Visual Inspection |

**PRESSURE - TEMPERATURE RATING**

| ASME CLASS 150  | A216 Gr.WCB      | A351 Gr. CF8M    |
|-----------------|------------------|------------------|
| WOG (Non-shock) | 285 PSI @ 100 °F | 275 PSI @ 100 °F |

**SCREEN SELECTION GUIDELINES**

| Size     | Liquid       | Open Area | Steam                      | Open Area |
|----------|--------------|-----------|----------------------------|-----------|
| 2" ~ 4"  | 1/16 (.0625) | 41%       | 3/64 (.045)                | 36%       |
| 5" ~ 12" | 1/8 (.125)   | 40%       | 30 Mesh Ln. <sup>(1)</sup> | 44.8 %    |

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