

### MODEL BCF1 (CARBON STEEL)

### MODEL BSF1 (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 BSF1 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 BCF1/BSF1 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 STAYFLOW 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.*



### BILL OF MATERIALS (1)

No.	PART	BCF1	BSF1
1	Body	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
2	Cover (4)	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
3	Cover Gasket (3) (4) (6)	Bolted Cover: Spiral Wound Stainless Steel Non-Asbestos Clamp Cover (Optional): Buna-N O-Ring	
4	Straining (3) (5) Element	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

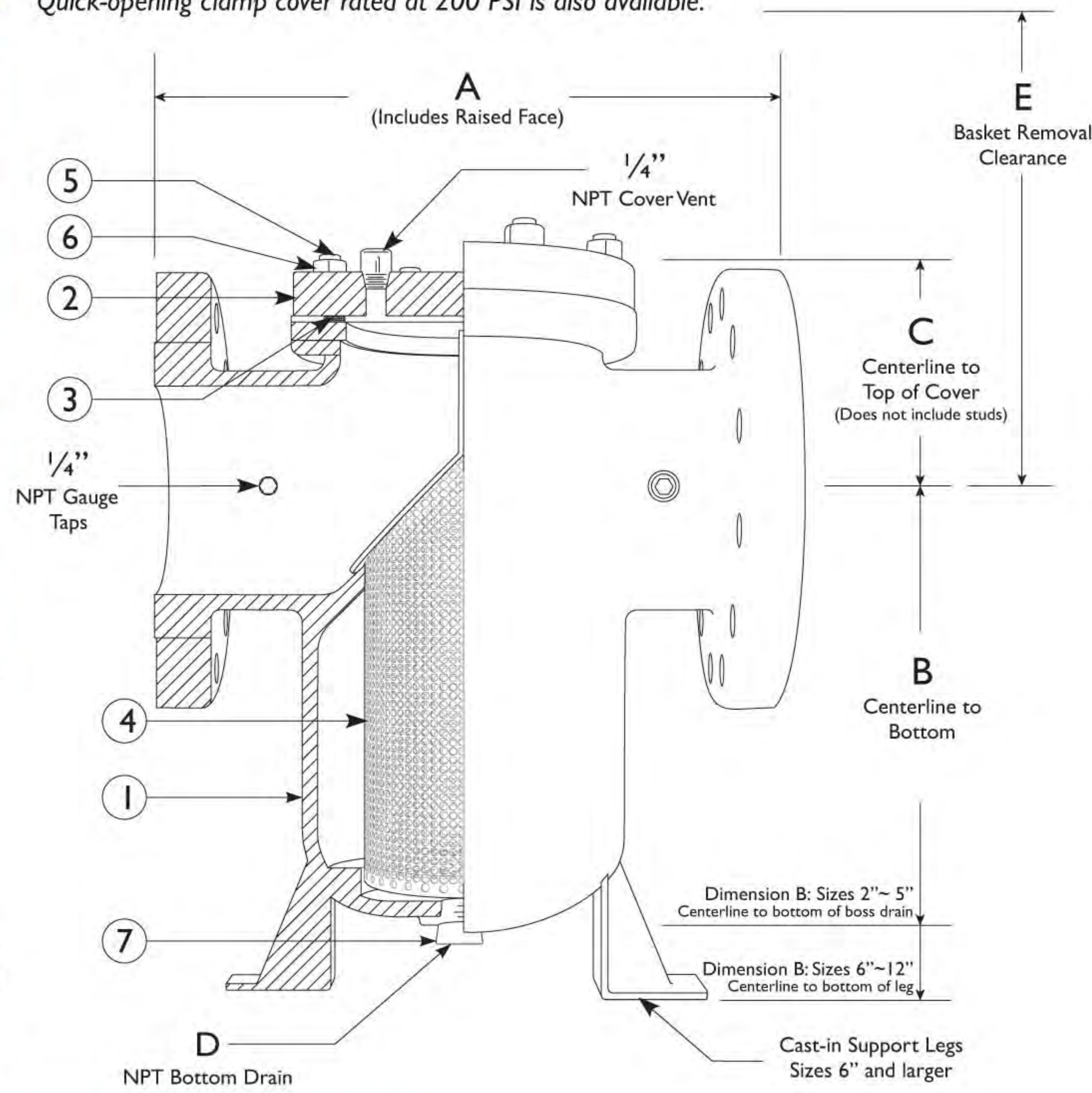
1. Equivalent or better materials may be substituted at the manufacturer's discretion.
2. Carbon Steel bodies are epoxy painted.
3. Denotes recommended spare parts.
4. Bolted cover is shown. For information on clamp cover, please contact factory.
5. Straining element on 2" BSF1 is a straight screen. It is not diagonal as illustrated on right.
6. 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.

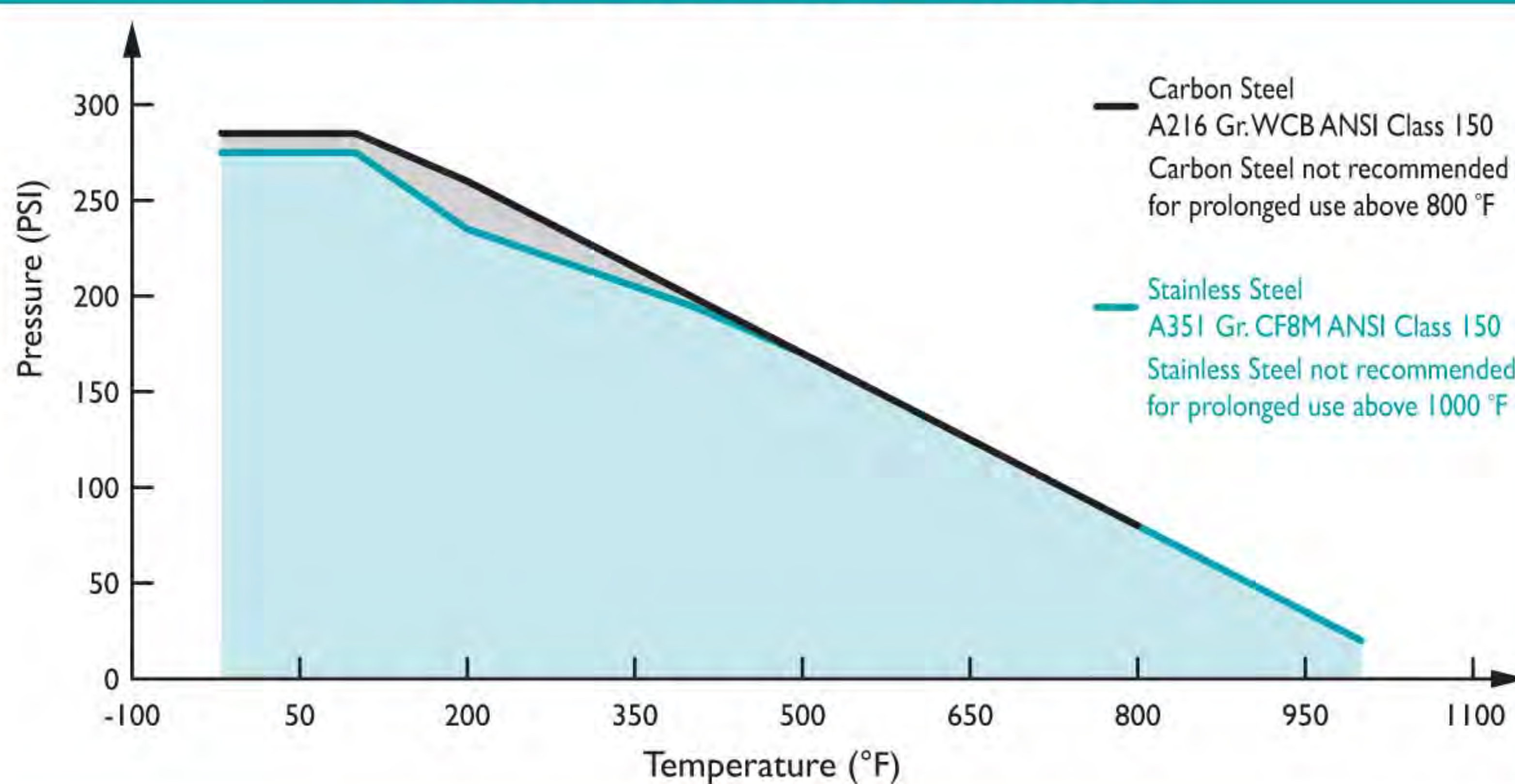


### DIMENSIONS AND PERFORMANCE DATA (1)

SIZE	in	2	2 1/2	3	4	5	6	8	10	12
	mm	50	65	80	100	125	150	200	250	300
A DIMENSION FACE TO FACE	in	8.50	8.00	8.75	11.187	C/F	13.875	17.375	22.00	26.25
	mm	216	204	223	285	C/F	353	442	559	667
B DIMENSION 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
C DIMENSION 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
D DIMENSION NPT BLOW-OFF	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
E DIMENSION 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
ASSEMBLED WEIGHT 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
Flow Coefficient	C <sub>v</sub>	45	90	140	290	500	800	1600	2800	3700

1. Dimensions, weights, and flow coefficients are provided for reference only. When required, always 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.

### 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/ANSI B16.5	Pipe Flanges and Flanged Fittings
ANSI/MSS SP-55	Quality Standard - Visual Inspection

### PRESSURE - TEMPERATURE RATING

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

### 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%	30 Mesh Ln. (1)	44.8 %

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





# SIMPLEX BASKET STRAINER ♦ FLANGED ENDS

## ANSI CLASS 300 ♦ CARBON AND STAINLESS STEEL

### MODEL BCF2 (CARBON STEEL)

### MODEL BSF2 (STAINLESS STEEL)

SIZES: 2" ~ 12"



## FEATURES

- ♦ **RUGGED, HIGH QUALITY CONSTRUCTION**  
THE MODEL BSF2 IS A HEAVY DUTY BASKET STRAINER DESIGNED WITH EXCEPTIONAL WALL THICKNESS. IT IS AVAILABLE IN BOTH CARBON STEEL AND STAINLESS STEEL. IT IS A LOGICAL CHOICE FOR SERVICE APPLICATIONS THAT HAVE HIGHER TEMPERATURE AND PRESSURE REQUIREMENTS.
- ♦ **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 BCF2/BSF2 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 STAYFLOW 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 300

WOG (Non-shock): 740 PSI @ 100 °F

PRESSURE/ TEMPERATURE RATING  
SS - ASTM A351 GR. CF8M - CLASS 300

WOG (Non-shock): 720 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.

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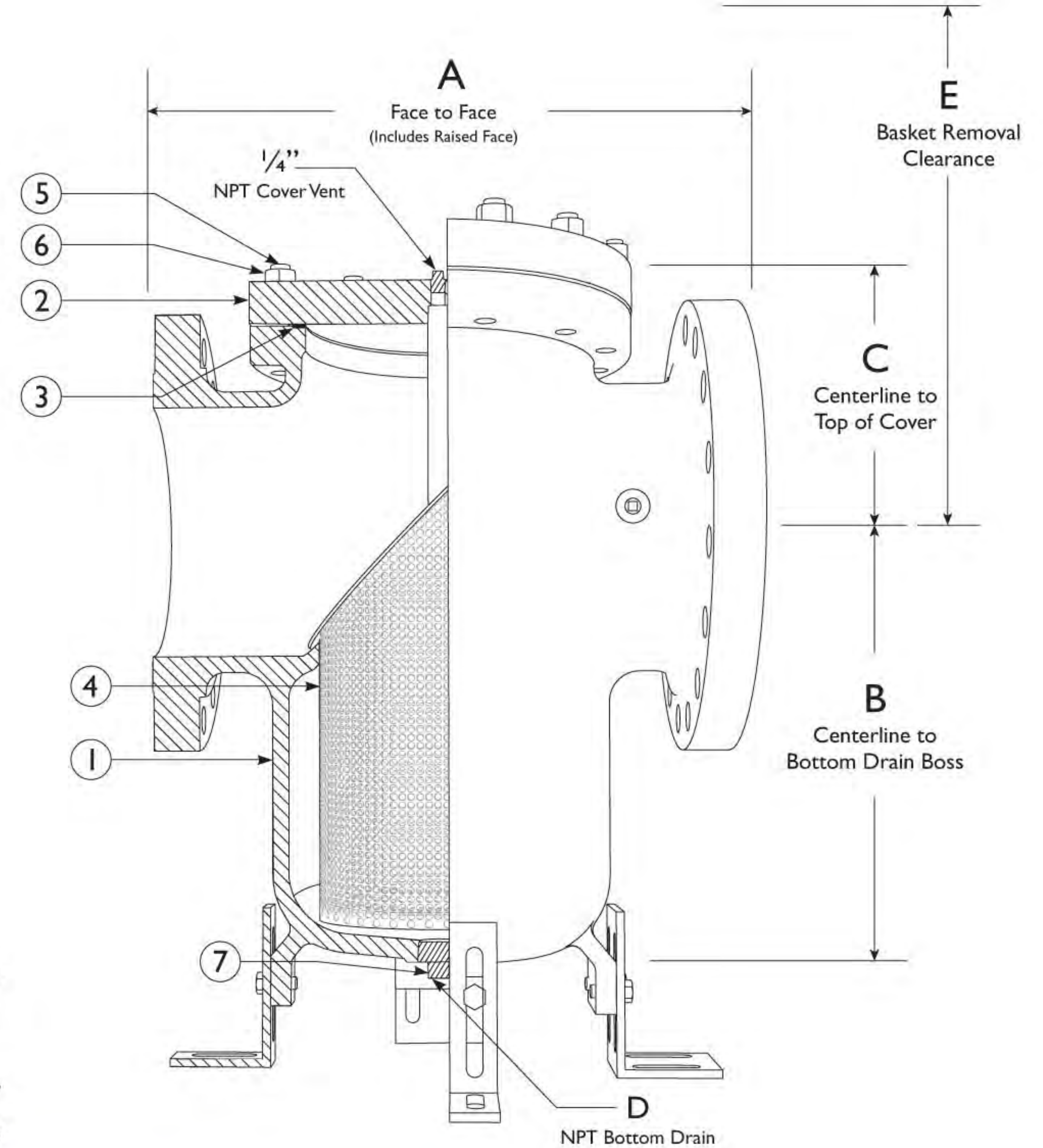
### BILL OF MATERIALS <sup>(1)</sup>

No.	PART	BCF2	BSF2
1	Body	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
2	Cover	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
3	Cover Gasket <sup>(3)(4)(6)</sup>	Spiral Wound Stainless Steel Non-Asbestos	
4	Straining Element <sup>(3)</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.
- Gasket is for bolted cover. For special cover designs, different gasket may be used.
- 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.



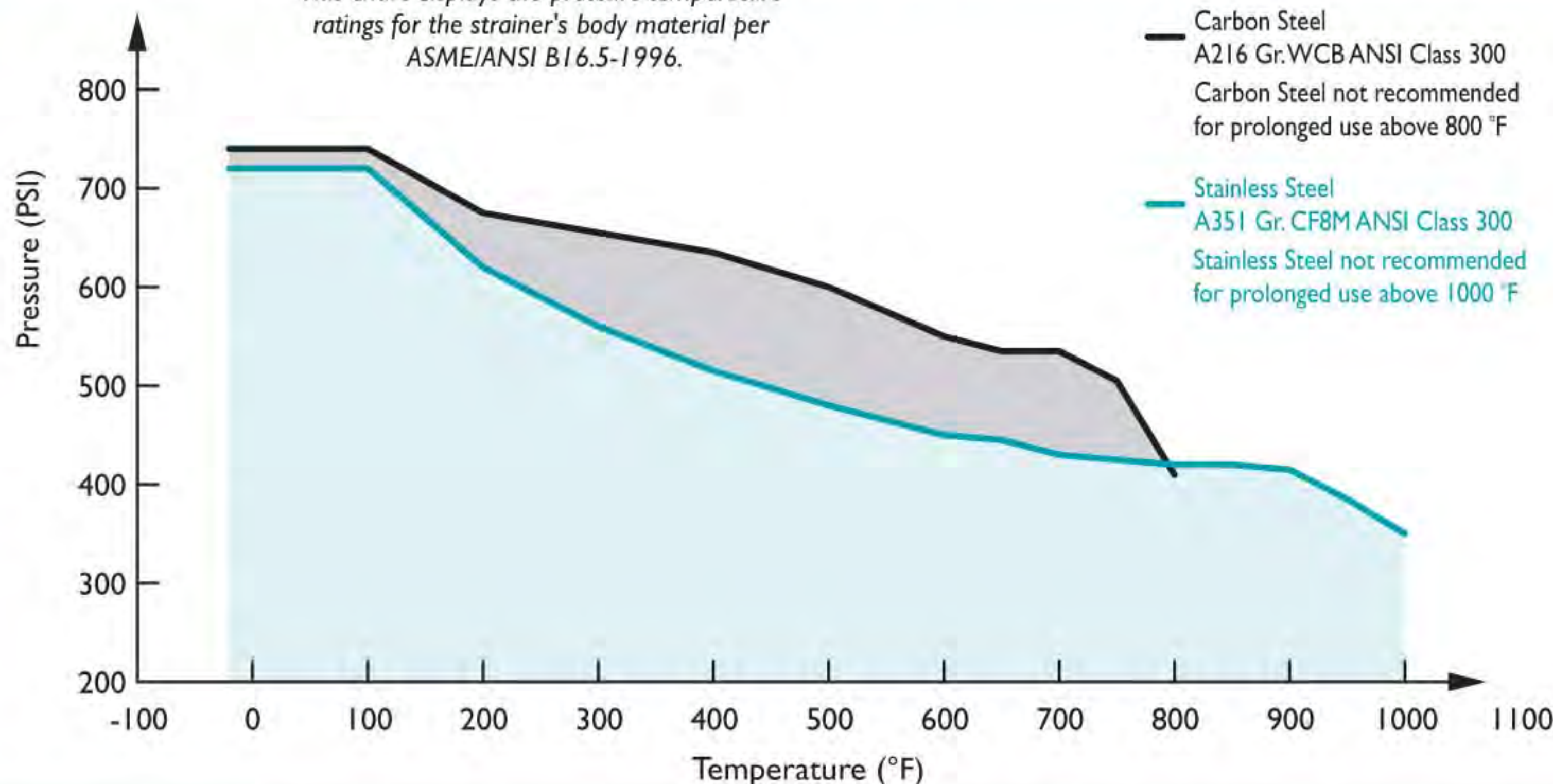
### DIMENSIONS AND PERFORMANCE DATA <sup>(1)</sup>

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> FACE TO FACE <sup>(2)</sup>	in	8.50	8.69	9.56	11.75	C/F	14.75	18.13	22.88	25.38
	mm	216	221	243	302	C/F	375	461	582	645
<b>B DIMENSION</b> CTR. LINE TO BOTTOM	in	6.14	6.25	8.25	8.62	C/F	12.75	15.51	17.13	24.92
	mm	156	159	210	219	C/F	324	394	435	633
<b>C DIMENSION</b> CTR. LINE TO TOP	in	4.91	5.45	6.08	5.31	C/F	6.38	8.09	9.70	11.70
	mm	125	139	155	135	C/F	162	206	247	298
<b>D DIMENSION</b> NPT BLOW-OFF	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> SCREEN REMOVAL	in	9.00	10.00	10.00	10.00	C/F	20.00	20.00	26.00	35.00
	mm	229	254	254	254	C/F	508	508	661	889
<b>ASSEMBLED WEIGHT</b> APPROXIMATE	lb	40.0	63.0	63.0	108.0	C/F	200.0	342.0	542.0	946.0
	kg	18.1	28.5	28.5	48.9	C/F	90.6	155.0	245.6	429.1
<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 ±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.

### PRESSURE - TEMPERATURE RATINGS

This chart displays the pressure-temperature ratings for the strainer's body material per ASME/ANSI B16.5-1996.



### Additional Design & Technical Notes:

- Cover vent 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
- 1/4" NPT gauge taps are provided on all sizes and are furnished with plugs.
- Adjustable/Removable Support legs are provided on sizes 4" 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
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### STANDARD SCREEN SELECTIONS

Size	Liquid	Open Area	Steam	Open Area
2" ~ 4"	1/16 (.0625)	41%	3/64 (.045)	36%
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- For 10" and above, consult factory on screen selections for steam.