

# SIMPLEX BASKET STRAINER \* FLANGED ENDS (RF)

# ANSI CLASS 150 \* CARBON AND STAINLESS STEEL

# MODEL BCF1

(CARBON STEEL)

# MODEL BSF1

(STAINLESS STEEL)

FEATURES

SIZES: 2" ~ 12"



Quick-opening clamp cover option is also available.
Quick-opening clamp

is also available.

Quick-opening clamp cover rated at 200 PSI.

### O 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.

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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PLICATIONS

### SIMPLEX BASKET STRAINER

# MODEL BSF1

Bolted cover is shown.

Flanged Ends • Raised Face • Carbon & Stainless Steel

ANSI Class 150

BILL OF MATERIALS (1) No. PART BSF1 BCF1 Body Carbon Steel A216 Gr. WCB Stainless Steel A351 Gr. CF8M Cover (4) Carbon Steel A216 Gr.WCB Stainless Steel A351 Gr. CF8M Bolted Cover: Spiral Wound Stainless Steel Non-Asbestos Cover Gasket (3) (4) (6) Clamp Cover (Optional): Buna-N O-Ring Straining (3) (5) Type 304 Stainless Steel (Other materials are available) Element Alloy Steel A 193-B7 Stainless Steel 18-8 Series 300 Stud Stainless Steel 18-8 Series 300 Carbon Steel A 194-2H Nut

Equivalent or better materials may be substituted at the manufacturer's discretion.

Carbon Steel

- Carbon Steel bodies are epoxy painted.
- Denotes recommended spare parts.

Plug

- Bolted cover is shown. For information on clamp cover, please contact factory.
- 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.

Quick-opening clamp	cover rated at 200 PSI is	also available	
5	(Includes Raised Face	NPT Cover Vent	E Basket Removal Clearance
3			C Centerline to Top of Cover
I/4" NPT Gauge Taps	10000000000000000000000000000000000000		(Does not include studs)
4			B Centerline to Bottom
( <b>7</b> )		Dimension B: Centerline to botton	
t el		Dimension B:	Sizes 6"~12" bottom of leg
n D — n NPT Bottom Dra	ain		t-in Support Legs es 6" and larger

		DIMEN	SIONS	AND PER	RFORMA	NCE DA	TA (I)			
CIZE	in	2	2 1/2	3	4	5	6	8	10	12
SIZE	mm	50	65	80	100	125	150	200	250	300
A DIMENSION	in	8.50	8.00	8.75	11.187	C/F	13.875	17.375	22.00	26.25
FACE TO FACE	mm	216	204	223	285	C/F	353	442	559	667
B DIMENSION	in	5.875	5.437	5.25	7.875	C/F	13.125	16.375	18.25	18.75
CTR. LINE TO BOTTOM	mm	150	139	134	201	C/F	334	416	464	476
C DIMENSION	in	5.00	4.75	5.50	6.125	C/F	6.75	8.875	10.75	13.75
CTR. LINE TO TOP	mm	127	121	140	156	C/F	172	226	274	350
<b>D</b> DIMENSION	in	.50	.75	.75	1.00	C/F	1.25	1.50	1.50	2.00
NPT BLOW-OFF	mm	15	20	20	25	C/F	32	40	40	50
E DIMENSION	in	10.875	10.187	10.75	14.0	C/F	19.875	25.25	30.125	37.5
SCREEN REMOVAL	mm	276	259	273	356	C/F	505	641	765	953
ASSEMBLED WEIGHT	lb	27.0	33.0	38.0	64.0	89.0	128.0	227.0	362.0	487.0
APPROXIMATE	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

Stainless Steel

## 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 I/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.
- 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 Carbon Steel 300 A216 Gr. WCB ANSI Class 150 Carbon Steel not recommended 250 for prolonged use above 800 °F Stainless Steel 200 A351 Gr. CF8M ANSI Class 150 Stainless Steel not recommended 150 for prolonged use above 1000 °F 100 50 -100 350 500 800 950 1100 200 650 Temperature (°F)

### 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

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

SIANDARI	SCREEN SEI	LECTIONS
1 ::-	O A	C4

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)

FEATURES

SIZES: 2" ~ 12"



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.



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.

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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PPLICATIONS

### SIMPLEX BASKET STRAINER

# MODEL BSF2

Flanged Ends • Raised Face • Carbon & Stainless Steel

ANSI Class 300

	BILL OF MATERIALS(1)							
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 (3)(4)(6)	Spiral Wound Stainless Steel Non-Asbestos						
4	Straining <sup>(3)</sup> Element		04 Stainless Steel aterials 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					

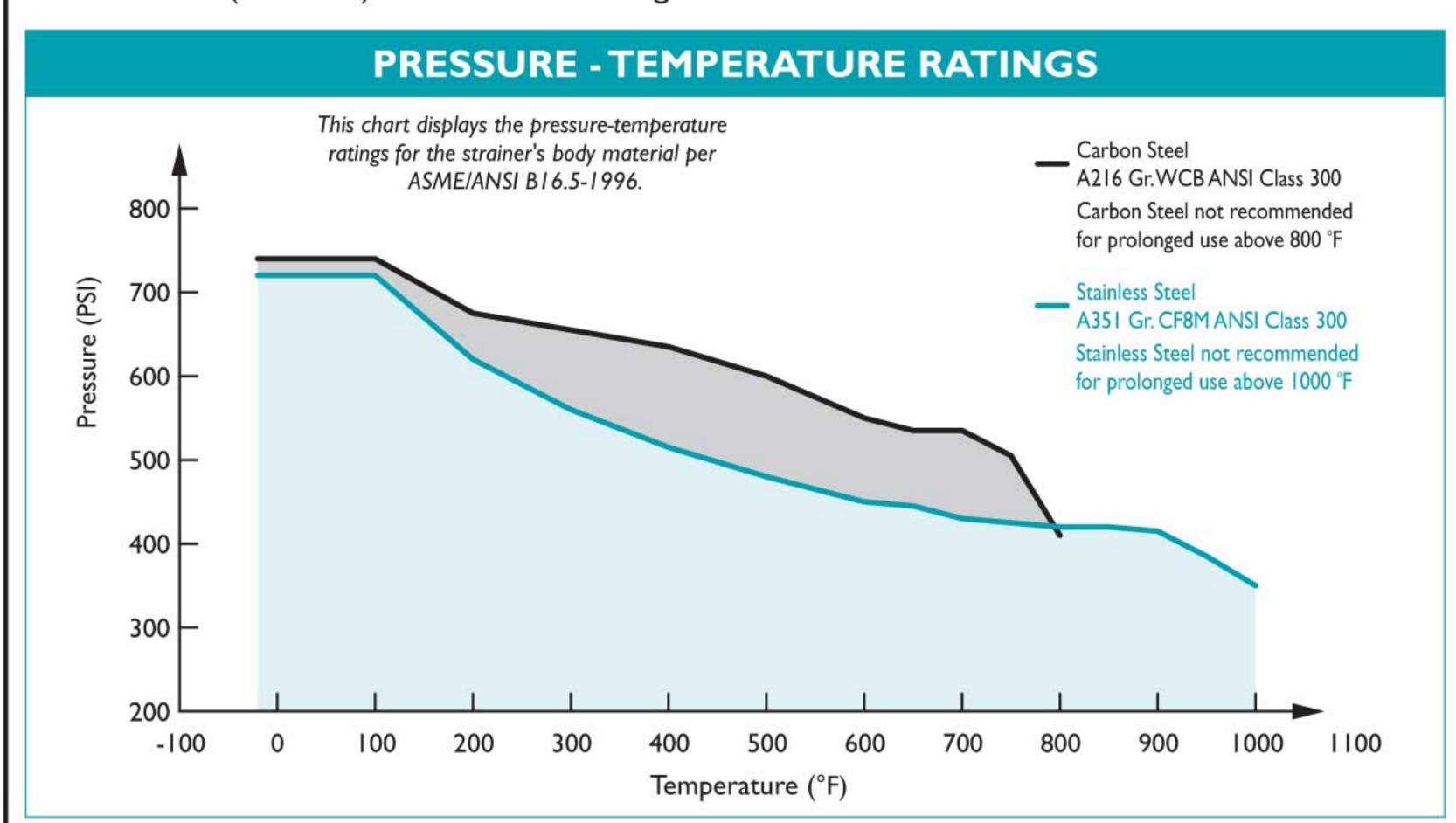
- 1. Equivalent or better materials may be substituted at the manufacturer's discretion.
- 2. Carbon Steel bodies are epoxy painted.
- 3. Denotes recommended spare parts.
- 4. Gasket is for bolted cover. For special cover designs, different gasket may be used.
- 6. Carbon Fiber Compressed gasket may be substituted at the manufacturer's discretion.

### **Body Material Application Notes:**

- <u>Carbon Steel</u> 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.

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DIMENSIONS AND PERFORMANCE DATA (1)										
SIZE	in	2	2 1/2	3	4	5	6	8	10	12
SIZE	mm	50	65	80	100	125	150	200	250	300
A DIMENSION	in	8.50	8.69	9.56	11.75	C/F	14.75	18.13	22.88	25.38
FACE TO FACE (2)	mm	216	221	243	302	C/F	375	461	582	645
B DIMENSION	in	6.14	6.25	8.25	8.62	C/F	12.75	15.51	17.13	24.92
CTR. LINE TO BOTTOM	mm	156	159	210	219	C/F	324	394	435	633
C DIMENSION	in	4.91	5.45	6.08	5.31	C/F	6.38	8.09	9.70	11.70
CTR. LINE TO TOP	mm	125	139	155	135	C/F	162	206	247	298
<b>D</b> DIMENSION	in	.50	.75	.75	1.00	C/F	1.25	1.50	1.50	2.00
NPT BLOW-OFF	mm	15	20	20	25	C/F	32	40	40	50
E DIMENSION	in	9.00	10.00	10.00	10.00	C/F	20.00	20.00	26.00	35.00
SCREEN REMOVAL	mm	229	254	254	254	C/F	508	508	661	889
ASSEMBLED WEIGHT 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
Flow Coefficient	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.
- 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.



# Face to Face (Includes Raised Face) S NPT Cover Vent Basket Removal Clearance C Centerline to Top of Cover B Centerline to Bottom Drain Boss

### Additional Design & Technical Notes:

- Cover vent provided on all sizes.
   Cover vent is I/4" NPT on all sizes and is furnished with plug.
- Bottom drain is furnished with plug. See table to the left for sizes
- I/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				
ASME/ANSI B16.5	Pipe Flanges and Flanged Fittings			
ANSI/MSS SP-55	Quality Standard - Visual Inspection			

PRESSURE - TEMPERATURE RATING					
ANSI CLASS 300 A216 Gr. WCB A351 Gr. CF8M					
WOG (Non-shock)	740 PSI @ 100 °F	720 PSI @ 100 °F			

STANDARD SCREEN SELECTIONS						
Size Liquid Open Area Steam Open A						
2" ~ 4"	1/16 (.0625)	41%	3/64 (.045)	36%		
5" ~ 12"	1/8 (.125)	40%	30 Mesh (I)	44.8 %		

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