



Purple Engineering

**DUPLEX STRAINER ♦ DUAL BALL TYPE ♦ THREE PIECE BODY**  
**ANSI CLASS 150 ♦ CARBON & STAINLESS ♦ FLANGED & THREADED**

**NEW**  
**Three-Piece**  
**Design!**

**MODELS: DS 596-CS**

(Threaded - Carbon Steel)

**DS 596-SS**

(Threaded - Stainless Steel)

**DS 696-CS**

(Flanged - Carbon Steel)

**DS 696-SS**

(Flanged - Stainless Steel)



1 1/2" DS 696-SS

## FEATURES

SIZE RANGE: 3/4" ~ 4"

♦ **DUAL-BALL DIVERTER DESIGN**

THIS DUPLEX IS DESIGNED WITH TWO STAINLESS STEEL BALLS THAT EFFICIENTLY DIVERT THE PIPELINE FLOW FROM ONE BASKET CHAMBER TO THE OTHER. TEFLON SEATS ENSURE A POSITIVE SEAL AND HELP TO PREVENT SEEPAGE INTO THE CHAMBER THAT IS BEING SERVICED FOR CLEANING.

♦ **EASY TO OPERATE**

OUR DUPLEX STRAINER FEATURES A LOW TORQUE, EASY TO OPERATE HANDLE THAT DOES NOT REQUIRE A GEARBOX. ADDITIONALLY, THE HANDLE'S POSITION CLEARLY INDICATES WHICH BASKET IS IN SERVICE AND WHICH BASKET CAN SAFELY BE REMOVED FOR CLEANING.

♦ **REDUCED "IN-LINE" MAINTENANCE**

OUR DUPLEX HAS NUMEROUS ATTRIBUTES THAT HELP REDUCE MAINTENANCE DURING CLEANING OPERATIONS. FIRST, THE DUAL BALL DESIGN ISOLATES EACH CHAMBER AND KEEPS THE SERVICING CHAMBER DRY DURING CLEANING. THERE ARE ALSO NO SPECIAL TOOLS REQUIRED TO ACCESS AND REMOVE THE STRAINING ELEMENT FROM THE CHAMBER. LASTLY, THE DUPLEX PROVIDES COVER VENTS, DRAIN PLUGS, AND FOOT PADS ON EACH CHAMBER.

♦ **ENDLESS SCREEN OPTIONS**

THIS STRAINER CAN BE FITTED WITH VIRTUALLY ANY CONFIGURATION OF PERFORATION OR MESH LINED STRAINING ELEMENTS. STRAINING ELEMENTS CAN ALSO BE CONSTRUCTED FROM SPECIAL MATERIALS SUCH AS ALLOY 20.

## TECHNICAL

**PRESSURE/TEMPERATURE RATING <sup>(1)</sup>**  
**CARBON STEEL - A216 GR. WCB - CLASS 150**

WOG (Non-shock): 200 PSI @ 150 °F  
 Saturated Steam: Not Recommended  
 Max Liquid: 200 PSI @ 150 °F

**PRESSURE/TEMPERATURE RATING <sup>(1)</sup>**  
**STAINLESS STEEL- A351 GR. CF8M - CLASS 150**

WOG (Non-shock): 200 PSI @ 150 °F  
 Saturated Steam: Not Recommended  
 Max Liquid: 200 PSI @ 150 °F

*1. The above listed temperatures are theoretical and may vary during actual operating conditions.*

## APPLICATIONS

**GENERAL APPLICATION:** THE DUPLEX STRAINER IS A UNIQUE PRODUCT WITHIN THE PIPELINE INDUSTRY. LIKE OTHER BASKET STRAINERS, THE DUPLEX STRAINER PROTECTS EXPENSIVE DOWNSTREAM EQUIPMENT BY MECHANICALLY REMOVING SOLIDS FROM FLOWING FLUIDS VIA A PERFORATED, MESH, OR WEDGE WIRE STRAINING ELEMENT. HOWEVER, THE DUPLEX STRAINER IS DESIGNED WITH TWO BASKET CHAMBERS AND A FLOW DIVERTER SYSTEM THAT ALLOWS THE PIPELINE FLOW TO BE SWITCHED FROM ONE CHAMBER TO THE OTHER, COMPLETELY ISOLATING THE FLOW TO A SINGLE CHAMBER. THIS MAKES THE DUPLEX STRAINER IDEAL FOR NON-INTERRUPTIBLE APPLICATIONS THAT CANNOT BE SHUT DOWN DURING ROUTINE MAINTENANCE AND CLEANING OPERATIONS.

*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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## DUPLEX BASKET STRAINER

### Threaded Ends

**DS 596-CS** (Carbon Steel)

**DS 596-SS** (Stainless Steel)

### Flanged Ends

**DS 696-CS** (Carbon Steel)

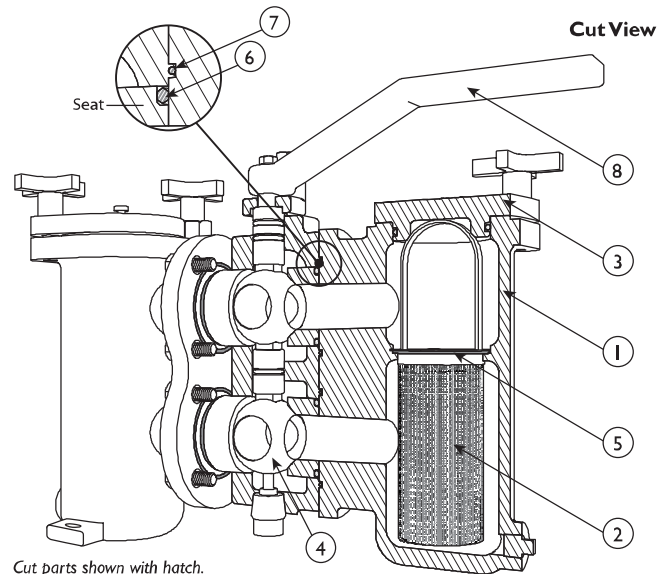
**DS 696-SS** (Stainless Steel)

ANSI  
Class  
150

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

No.	Part	DS 596/696-CS	DS 596/696-SS
1	Main Body / Basket Housing <sup>(2)</sup>	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
2	Straining Element <sup>(3)</sup>	Stainless Steel	Stainless Steel
3	Cover	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
4	Ball	Stainless Steel	Stainless Steel
5	O-Ring Straining Element	Buna-N	Viton
6	Seat Seal	Teflon (PTFE)	Teflon (PTFE)
7	Seals	Buna-N	Viton
8	Handle	Carbon Steel Zinc Coated	Carbon Steel Zinc Coated

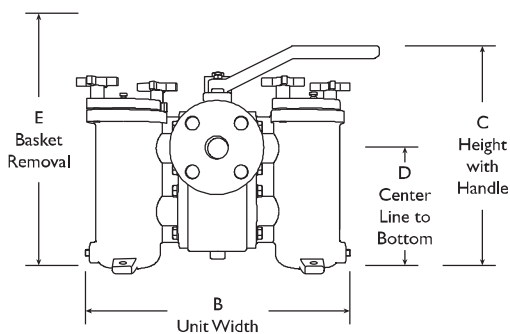
1. Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.  
2. Aluminum Bronze and Cast Iron units are also available.  
3. Denotes recommended spare parts.



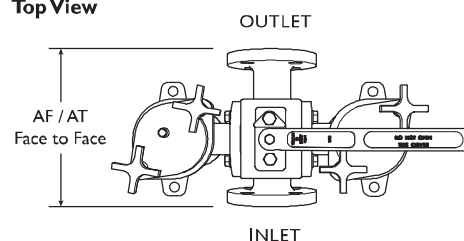
Cut parts shown with hatch.

Illustrations are representative of a 1" DS696-CS (Flanged model).  
Please ask for certified drawings when required.

### Front View



### Top View



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

SIZE <sup>(2)</sup>	in	3/4 <sup>(3)</sup>	1	1 1/4	1 1/2	2	2 1/2	3 <sup>(3)</sup>	4 <sup>(3)</sup>
	mm	20	25	32	40	50	65	80	100
<b>AF DIMENSION</b>	in	---	7.0	9.37	9.37	10.6	13.5	13.5	16.0
FLANGED FACET TO FACE	mm	---	178	238	238	270	343	343	406
<b>AT DIMENSION</b>	in	5.59	5.59	7.5	7.5	10.0	11.5	---	---
THREADED FACET TO FACE	mm	142	142	191	191	254	292	---	---
<b>B DIMENSION</b>	in	12.95	12.95	15.12	15.12	18.43	22.05	22.0	26.85
UNIT WIDTH (INCLUDING PLUG)	mm	329	329	384	384	468	560	560	682
<b>C DIMENSION</b>	in	11.0	11.0	14.2	14.2	17.7	22.0	22.0	25.2
HEIGHT WITH HANDLE	mm	280	280	360	360	450	560	560	640
<b>D DIMENSION</b>	in	5.83	5.83	8.3	8.3	10.7	13.7	13.7	15.9
CENTER LINE TO BOTTOM	mm	148	148	211	211	271	347	347	403
<b>E DIMENSION</b>	in	15.4	15.4	21.3	21.3	26.4	35.0	35.0	41.0
BASKET REMOVAL	mm	390	390	541	541	670	885	885	1040
<b>APPROXIMATE WEIGHT</b>	lb	---	46.3	73.9	73.9	121.3	237.0	238.1	373.7
DS 696, FLANGED	kg	---	21	33.5	33.5	55	107.5	108	169.5
<b>APPROXIMATE WEIGHT</b>	lb	43.7	43.0	69.9	69.5	119.0	227.0	---	---
DS 596, THREADED	kg	19.8	19.5	31.7	31.5	54	103	---	---
<b>Flow Coefficient</b>	C <sub>v</sub>	13	14	19	24	42	68	105	180

1. Dimensions, weights, and flow coefficients are provided for reference only. Always request certified drawings.  
2. Larger sizes (5" ~ 8") are available upon request. Please contact factory for pricing and delivery.  
3. Flanged units are not available in 3/4" size; threaded units are not available in 3" or 4" sizes.

### STANDARD SCREEN SELECTIONS

Size	Liquid	Open Area	Steam	Open Area
3/4" ~ 4"	1/16 (.0625)	41%	Not Recommended	

### MATERIAL TEMPERATURES

Seat/Seal/Ball	Temp Range
Buna-N (Seal)	-20 ~ 250 °F
Viton (Seal)	-40 ~ 400 °F
Stainless Steel Ball	Max 450 °F

### REFERENCED STANDARDS & CODES

Code	Description
ASME/ANSI B16.5	Pipe Flanges and Flanged Fittings
ASME/ANSI B16.11	Forged Steel Fittings, Socket-Welding, and Threaded

### PRESSURE - TEMPERATURE RATING

ANSI Class 150	DS 596/696-CS	DS 596/696-SS
WOG (Non-shock)	200 PSI @ 150 °F	200 PSI @ 150 °F
Saturated Steam	Not Recommended	Not Recommended
Max Liquid	200 PSI @ 150 °F	200 PSI @ 150 °F