



TITAN FLOW CONTROL, INC.

**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**

TITAN FCI'S 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**

TITAN'S 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

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

WOG (Non-shock): 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.*

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

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**DUPLEX BASKET STRAINER**

**Threaded Ends**

DS 596-CS (Carbon Steel)  
DS 596-SS (Stainless Steel)

**Flanged Ends**

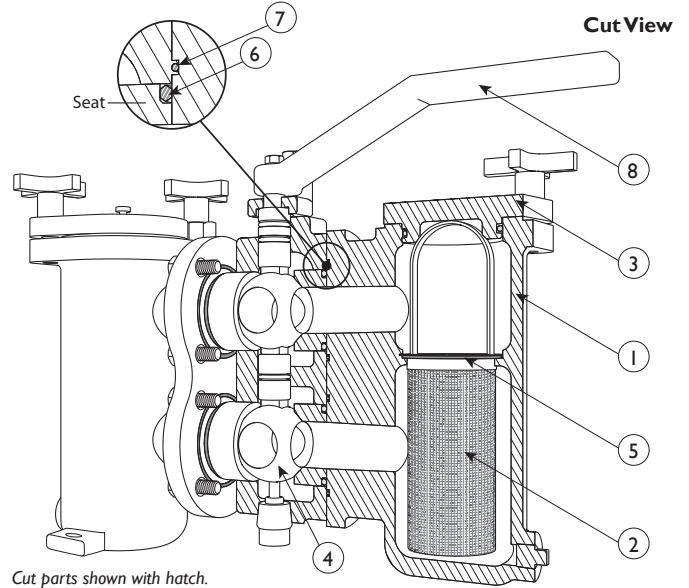
DS 696-CS (Carbon Steel)  
DS 696-SS (Stainless Steel)

ANSI  
Class  
150

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

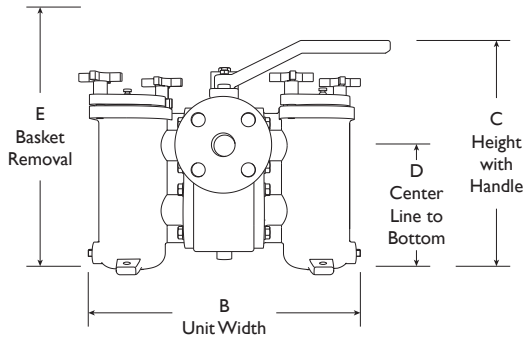
No.	Part	DS 596/696-CS	DS 596/696-SS
1	Main Body / Basket Housing <sup>(2)</sup>	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr.CF8M
2	Straining Element <sup>(3)</sup>	Stainless Steel	Stainless Steel
3	Cover	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr.CF8M
4	Ball	Stainless Steel	Stainless Steel
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.

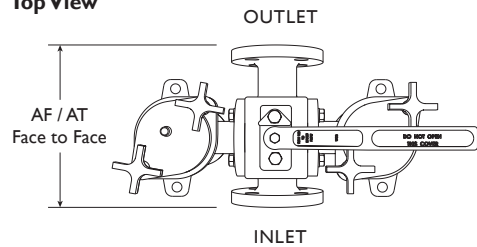


Cut parts shown with hatch.  
Illustrations are representative of a 1" DS696-CS (Flanged model).  
Please ask for certified drawings when required.

**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> FLANGED FACE TO FACE	in	---	7.0	9.37	9.37	10.6	13.5	13.5	16.0
	mm	---	178	238	238	270	343	343	406
<b>AT DIMENSION</b> THREADED FACE TO FACE	in	5.59	5.59	7.5	7.5	10.0	11.5	---	---
	mm	142	142	191	191	254	292	---	---
<b>B DIMENSION</b> UNIT WIDTH (INCLUDING PLUG)	in	12.95	12.95	15.12	15.12	18.43	22.05	22.0	26.85
	mm	329	329	384	384	468	560	560	682
<b>C DIMENSION</b> HEIGHT WITH HANDLE	in	11.0	11.0	14.2	14.2	17.7	22.0	22.0	25.2
	mm	280	280	360	360	450	560	560	640
<b>D DIMENSION</b> CENTER LINE TO BOTTOM	in	5.83	5.83	8.3	8.3	10.7	13.7	13.7	15.9
	mm	148	148	211	211	271	347	347	403
<b>E DIMENSION</b> BASKET REMOVAL	in	15.4	15.4	21.3	21.3	26.4	35.0	35.0	41.0
	mm	390	390	541	541	670	885	885	1040
<b>APPROXIMATE WEIGHT</b> DS 696, FLANGED	lb	---	46.3	73.9	73.9	121.3	237.0	238.1	373.7
	kg	---	21	33.5	33.5	55	107.5	108	169.5
<b>APPROXIMATE WEIGHT</b> DS 596, THREADED	lb	43.7	43.0	69.9	69.5	119.0	227.0	---	---
	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.

**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

**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

**MATERIAL TEMPERATURES**

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

**STANDARD SCREEN SELECTIONS**

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

Titan FCS/SS makes 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. Titan FCS/SS reserves the right to make design and specification changes to improve our products without prior notification. When required, request certified drawings.