



TITAN FLOW CONTROL, INC.

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

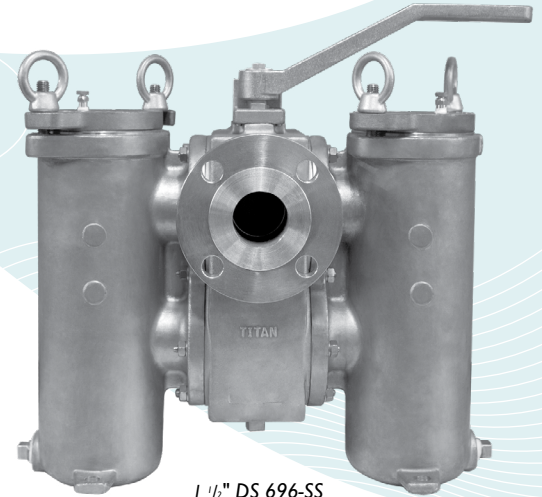
**MODELS: DS 596-CS**  
 (Threaded - Carbon Steel)

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

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

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

**NEW  
 Three-Piece  
 Design!**



1/2" DS 696-SS

## FEATURES

- ♦ **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**  
 THE TITAN<sup>†</sup> FCI 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.

SIZE RANGE: 3/4" ~ 4"

## TECHNICAL

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

WOG (Non-shock): 285 PSI @ 100 °F

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

WOG (Non-shock): 275 PSI @ 100 °F

1. The above listed temperatures are theoretical and may vary during actual operating conditions.
2. Max and min temperatures are for reference only. Prolonged use at these temperatures is not recommended for optimal service life.

## 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.

*Ball-Type Duplex Strainers are not recommended for slurry and fibrous content applications.*

*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<sup>®</sup> 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)

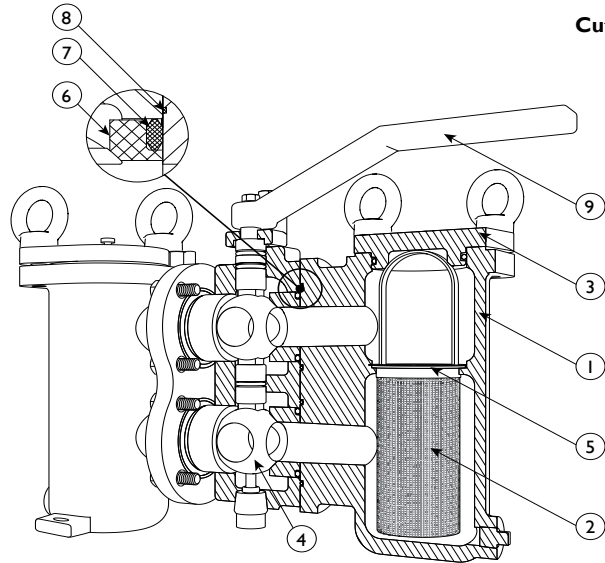
**Flanged Ends**  
**DS 696-CS** (Carbon Steel)  
**DS 696-SS** (Stainless Steel)

**ASME 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	Teflon (PTFE)	Teflon (PTFE)
7	Seal	Buna-N	Viton
8	O-Ring Body	Buna-N	Viton
9	Handle	Carbon Steel Zinc Coated	Carbon Steel Zinc Coated

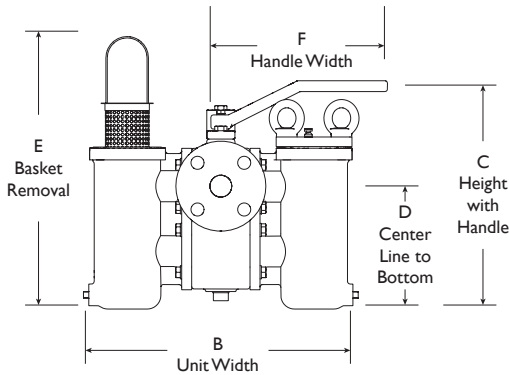
- Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.
- Aluminum Bronze and Cast Iron units are also available.
- Denotes recommended spare parts.



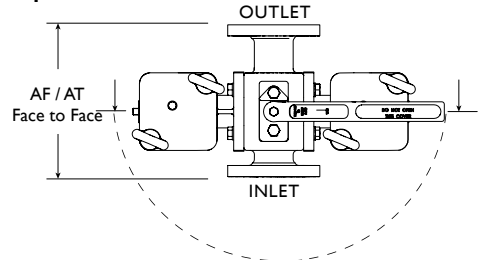
**Cut View**

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	12.0	12.0	14.8	14.8	18.4	22.7	22.7	25.5
	mm	305	305	377	377	468	579	579	649
<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>F DIMENSION</b> HANDLE LENGTH	in	7.87	7.87	7.87	7.87	10.03	13.00	13.00	15.00
	mm	200	200	200	200	270	330	330	380
<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

- Dimensions, weights, and flow coefficients are provided for reference only. Always request certified drawings.
- Larger sizes (6", 8") are available upon request. Please contact factory for pricing and delivery.
- Flanged units are not available in 3/4" size; threaded units are not available in 3" or 4" sizes.

**NPT FITTING SCHEDULE:**

Size	3/4" ~ 1"	1-1/4"	1-1/2"	2" ~ 4"
Cover Vent	1/8"	1/8"	1/8"	1/8"
Drain	1/4"	1/4"	1/4"	1/2"

**SCREEN SELECTION GUIDELINES**

Size	Liquid	Open Area
3/4" ~ 4"	1/16 (.0625)	41%

**PRESSURE - TEMPERATURE RATING**

ASME Class 150	DS 596/696-CS	DS 596/696-SS
WOG (Non-shock)	285 PSI @ 100 °F	275 PSI @ 100 °F

**REFERENCED STANDARDS & CODES**

Code	Description
ASME B16.5	Pipe Flanges and Flanged Fittings
ASME 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

- Max and min temperatures are for reference only. Prolonged use at these temperatures is not recommended for optimal service life.
- Contact factory for use above 200 °F

As †Titan product changes occur, there may be short-term differences between actual product specifications and the information contained within our literature. †Titan FCI reserves the right to make design and specification changes to improve our products without prior notification. When required, request certified drawings. †TITAN is a registered trademark of Titan Flow Control Incorporated.