



TITAN FLOW CONTROL, INC.

DUPLEX STRAINER ♦ DUAL BALL TYPE ♦ DUO-FLO

ANSI CLASS 125 ♦ CAST IRON ♦ FLANGED & THREADED ENDS

MODEL: DS 593-CI

(Threaded - Cast Iron)

DS 693-CI

(Flanged - Cast Iron)

TITAN'S NEW
"DUO-FLO"
DUPLEX STRAINER



FEATURES

SIZE RANGE: 3/4" ~ 4"

- ◆ **UNIQUE DIVERTER DESIGN**

THE DUO-FLO 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**

THE DUO-FLO 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. NEXT, THERE ARE NO SPECIAL TOOLS REQUIRED TO ACCESS AND REMOVE THE STRAINING ELEMENT FROM THE CHAMBER. FINALLY, THE DUO-FLO PROVIDES COVER VENTS, DRAIN PLUGS, AND FOOT PADS ON EACH CHAMBER.
- ◆ **ENDLESS SCREEN OPTIONS**

THE DUO-FLO 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.
- ◆ **COMPACT DESIGN**

THE DUO-FLO HAS A COMPACT, LOW PROFILE DESIGN CAPABLE OF BEING INSTALLED IN APPLICATIONS THAT HAVE LIMITED SPACE - BUT IT STILL UTILIZES FULL-SIZED STRAINING ELEMENTS WITH EXCEPTIONAL OPEN AREA RATIOS.

TECHNICAL

PRESSURE/TEMPERATURE RATING ⁽¹⁾
CAST IRON - ASTM A126 GR. B - CLASS 125

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

INLET/OUTLET SEAL MATERIAL
TEMPERATURE RANGE

TEFLON (PTFE): -100 ~ 400 °F

BALL MATERIAL
MAXIMUM TEMPERATURE

STAINLESS STEEL: 450 °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-INTERUPTABLE 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

DS 593-CI

DS 693-CI

Cast Iron • Threaded Ends

Cast Iron • Flanged Ends

**ANSI
Class
125 lb**

BILL OF MATERIALS (1)

No.	Part	DS 593/693-CI	Qty
1	Main Body	Cast Iron	1
2	Basket Body	Cast Iron	1
3	Handle	Carbon Steel Zinc Coated	1
4	Bolt	Alloy Steel	n/a
5	Nut	Carbon Steel	n/a
6	Knob	Carbon Steel Zinc Coated	4
7	Vent Valve	Copper	2
8	Straining Element (2)	Stainless Steel	2
9	Ball	Stainless Steel	2
10	O-Ring Straining Element (3)	Buna-N	2
11	Inlet & Outlet Seals (4)	Teflon (PTFE)	2 ea
12	O-Ring Cover Seal (3)	Buna-N	2
13	O-Ring Shaft Seal (3) (4)	Buna-N	3
14	Cover	Ductile Iron	2
15	Upper Shaft	Stainless Steel	1
16	Lower Shaft	Stainless Steel	1
17	O-Ring Seal(3)	Buna-N	4
18	O-Ring Seal (3)	Buna-N	2
19	O-Ring Body (3)	Buna-N	2

BOM Notes:

- Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.
- Denotes recommended spare parts.
- These items are part of the Replacement Seal Kit.
- Sizes 2 1/2", 3", and 4" have four o-rings on the shaft.
- There are two outlet seals and two inlet seals per unit.

Dimensions and Performance Data Notes:

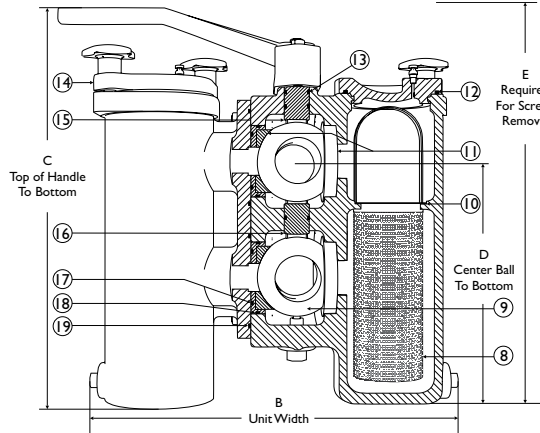
- Dimensions, weights, and flow coefficients are provided for reference only. Always request certified drawings.
- Larger sizes (5" ~ 8") are available upon request. Please contact factory for pricing and delivery.
- Flow Coefficients are based on clean, perforated screens.
- Titan FCI Duplex Strainers are not recommended for steam service.
- Bronze, Carbon, and Stainless Steel units are also available. Contact factory for details.
- Flanged units are not available in 3/4" size.
- Threaded units are not available in 3" or 4" sizes.

REFERENCED STANDARDS & CODES

Code	Description
ASME/ANSI B16.1	Cast Iron Pipe Flanges and Flanged Fittings
ASME/ANSI B16.4	Cast Iron Pipe Threaded Fittings

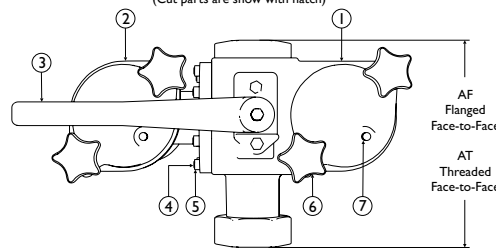
STANDARD SCREEN SELECTIONS

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

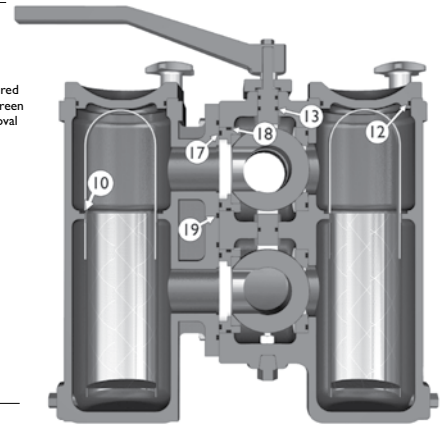


Front View

(Cut parts are show with hatch)



Top View (Threaded Unit Shown Only)



Front View Cutaway Image
(Illustrates Seal Kit Parts)

Seal Replacement Kit includes Parts:

No.	Description	Qty
10	Straining Element O-Ring	2
11	Inlet & Outlet Seals	2 ea.
12	Cover O-Ring	2
13	Shaft O-Ring	3 or 4
17	O-Ring (Seal Flat)	4
18	O-Ring (Seal Circle)	2
19	Body O-Ring	2

Contact factory for pricing.

DIMENSIONS AND PERFORMANCE DATA (1)

SIZE (2)	in	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	mm	50	65	80	100	125	150	200	250
AF DIMENSION FLANGED FACE TO FACE	in	---	6.90	9.40	9.40	10.6	13.5	13.5	16.0
	mm	---	175	238	238	270	343	343	406
AT DIMENSION THREADED FACE TO FACE	in	5.50	5.50	7.50	7.50	10.0	11.5	---	---
	mm	140	140	191	191	254	292	---	---
B DIMENSION UNIT WIDTH	in	11.1	11.1	13.6	13.6	16.5	20.9	20.9	24.4
	mm	282	282	345	345	420	530	530	620
C DIMENSION HEIGHT WITH HANDLE	in	11.0	11.0	13.7	13.7	17.7	22.0	22.0	25.2
	mm	280	280	347	347	450	560	560	640
D DIMENSION CENTER LINE TO BOTTOM	in	5.83	5.83	8.10	8.10	10.7	13.7	13.7	15.9
	mm	148	148	205	205	271	347	347	403
E DIMENSION BASKET REMOVAL	in	15.4	15.4	21.3	21.3	26.4	35.0	35.0	41.0
	mm	390	390	540	540	670	885	885	1040
WEIGHT - Flanged (APPROXIMATE)	lb	---	38	67	66	116	228	225	374
	kg	---	17.2	30.4	29.9	52.6	103.3	101.9	169.5
WEIGHT - Threaded (APPROXIMATE)	lb	35	35	61	60	114	216	---	---
	kg	15.9	15.9	27.6	27.2	51.7	97.9	---	---
Flow Coefficient (3)	C _v	13	14	19	24	42	68	105	180

MATERIAL TEMPERATURES

Seat/Seal	Temp Range	Ball	Max Temp
Teflon (PTFE)	-100 ~ 400 °F	Stainless Steel	450 °F
Buna-N O-Ring	-20 ~ 250 °F		

PRESSURE - TEMPERATURE RATING

ANSI Class 125	DS 593-CI	DS 693-CI
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

1. The above values are theoretical and may vary during actual operating conditions.

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