



TITAN FLOW CONTROL, INC.

## "Y" (WYE) STRAINER ♦ THREADED AND SOCKET WELD

### ASME CLASS 600 ♦ CARBON AND STAINLESS STEEL

#### MODELS: YS81-CS

(CARBON STEEL - THREADED)

#### YS82-CS

(CARBON STEEL - SOCKET WELD)

#### YS81-SS

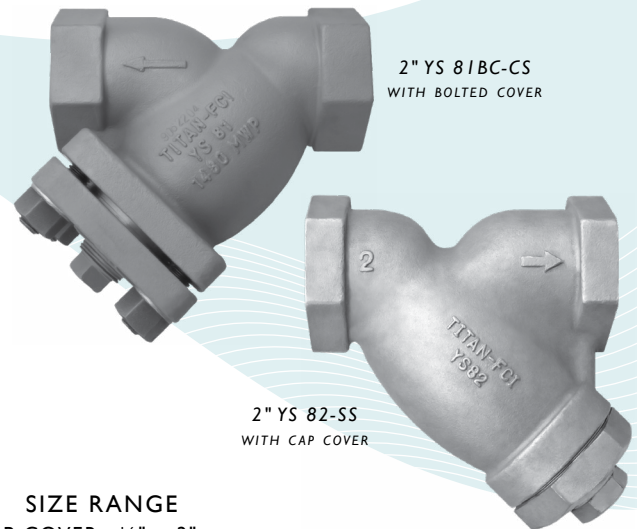
(STAINLESS STEEL - THREADED)

#### YS82-SS

(STAINLESS STEEL - SOCKET WELD)

#### YS81/82BC

(BOLTED COVER DESIGN)

2" YS 81 BC-CS  
WITH BOLTED COVER2" YS 82-SS  
WITH CAP COVER

SIZE RANGE  
CAP COVER: ¼" ~ 2"  
BOLTED COVER: 2" ~ 3"

## FEATURES

- ♦ **BOLTED AND CAP COVER DESIGNS**  
TITAN† UNITS YS81BC AND YS82BC SIZES 2½" AND 3" HAVE A BOLTED COVER AS STANDARD. AN OPTIONAL BOLTED COVER IS ALSO AVAILABLE ON SIZE 2". CAP COVERS ARE STANDARD ON YS81 AND 82 SIZES ¼" - 1½".
- ♦ **RUGGED - HIGH QUALITY DESIGN**  
THE YS81 AND YS82 ARE IDEAL FOR PETROCHEMICAL AND OTHER DEMANDING INDUSTRIAL APPLICATIONS THAT HAVE HIGHER PRESSURE AND TEMPERATURE REQUIREMENTS.
- ♦ **LARGE STRAINING CAPACITY**  
WITH ITS LARGE BODY AND SIZABLE STRAINING ELEMENT, THE YS81 AND YS82 PROVIDE EXCELLENT OPEN AREA RATIOS THAT ARE TYPICALLY TWO-AND-A-HALF TIMES LARGER THAN THE CORRESPONDING PIPELINE.
- ♦ **PRECISION MACHINED SEATS**  
PRECISION MACHINED SCREEN SEATS IN BOTH THE BODY AND CAP HELP TO ENSURE ACCURATE POSITIONING OF THE SCREEN DURING REASSEMBLY AFTER CLEANING. ALSO, THE MACHINED BODY SEATS ENABLE FINER FILTRATION BY PREVENTING DEBRIS BYPASS.
- ♦ **SELF-CLEANING CAPABILITY**  
WITH THE OPTIONAL SOCKET WELD BLOW-OFF CONNECTION, THIS UNIT CAN BE FITTED WITH A BLOW-DOWN VALVE WHICH FACILITATES CLEANING OF THE STRAINING ELEMENT. PLEASE CONTACT FACTORY FOR MORE INFORMATION.
- ♦ **EPOXY PAINTED**  
CARBON UNITS ARE EPOXY PAINTED TO HELP RESIST RUST AND CORROSION. TITAN FCI ALSO OFFERS EPOXY COATING. PLEASE CONTACT FACTORY FOR MORE INFORMATION.

## TECHNICAL

PRESSURE/TEMPERATURE RATING  
CS - ASTM A216 GR. WCB - CLASS 600

WOG (Non-shock): 1480 PSI @ 100 °F

PRESSURE/TEMPERATURE RATING  
SS - ASTM A351 GR. CF8M - CLASS 600

WOG (Non-shock): 1440 PSI @ 100 °F

- The above listed temperatures are theoretical and may vary during actual operating conditions.
- Carbon Steel not recommended for prolonged use above 800 °F.
- Stainless Steel not recommended for prolonged use above 1000 °F.

## APPLICATIONS

**CARBON STEEL PROPERTIES:** 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 PROPERTIES:** STAINLESS STEEL 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.

*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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**WYE STRAINER**

Threaded Ends  
**YS 81-CS** (Carbon Steel)  
**YS 81-SS** (Stainless Steel)

Socket Weld Ends  
**YS 82-CS** (Carbon Steel)  
**YS 82-SS** (Stainless Steel)

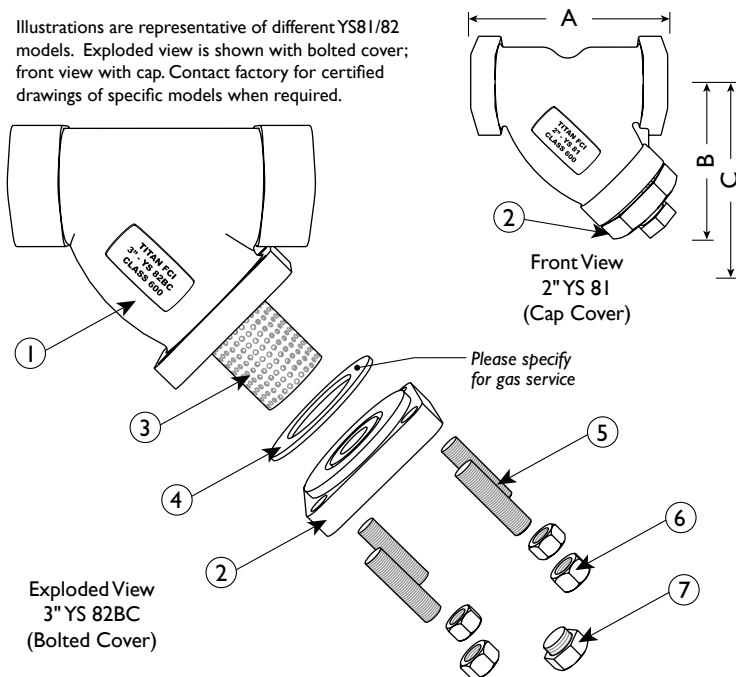
ASME Class  
**600**

**BILL OF MATERIALS (1)**

No.	PART	YS 81/82-CS (6)	YS 81/82-SS
1	Body (2)	Carbon Steel A216 Gr. WCB	Stainless Steel A351 Gr. CF8M
2	Cover/Cap (5)	Carbon Steel A216 Gr. WCB	Stainless Steel A351 Gr. CF8M
3	Straining Element (3)	Stainless Steel	Stainless Steel
4	Gasket (3)(4)	Stainless Steel Spiral Wound	Stainless Steel Spiral Wound
5	Studs (5) BC models only	Alloy Steel	Alloy Steel
6	Nuts (5) BC models only	Alloy Steel	Alloy Steel
7	Plug	Carbon Steel	Stainless Steel

- Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.
- Available in additional body materials, such as LCB, WC6, WC9, 316L, Alloy 20, and Monel.
- Denotes recommended spare parts.
- The cover gasket is encapsulated in a machined recessed seat. A wide range of gasket materials are available; contact factory.
- Only bolted cover designs (2 1/2", 3", and optional 2") have Parts 5 and 6 (Studs and Nuts). Threaded cap covers are standard on Sizes 1/4" through 1 1/2". Size 2" is available with either a bolted or cap cover.
- Carbon Steel bodies are epoxy painted.

Illustrations are representative of different YS81/82 models. Exploded view is shown with bolted cover; front view with cap. Contact factory for certified drawings of specific models when required.

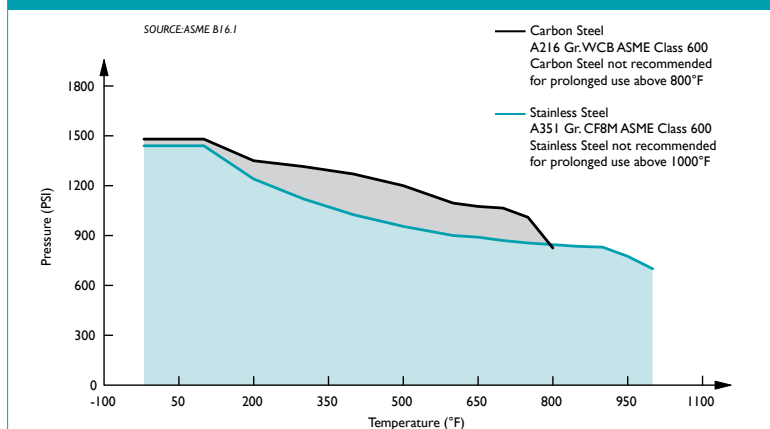


**DIMENSIONS AND PERFORMANCE DATA (1)**

SIZE	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2 (3)	2 1/2 (4)	3 (4)
	mm	8	10	15	20	25	32	40	50	65	80
<b>A DIMENSION</b> THREADED COVER	in	2.93	2.93	2.93	3.68	4.56	4.93	5.56	6.93	n/a	n/a
	mm	75	75	75	94	116	126	142	177	n/a	n/a
<b>A DIMENSION</b> BOLTED COVER	in	BOLTED COVER NOT AVAILABLE IN SIZES 1/4" - 1 1/2"							7.50	12.00	12.00
	mm	BOLTED COVER NOT AVAILABLE IN SIZES 1/4" - 1 1/2"							191	305	305
<b>B DIMENSION</b> CENTER LINE TO BOTTOM	in	2.37	2.37	2.37	2.81	3.68	4.12	4.75	6.00	10.50	10.50
	mm	61	61	61	72	94	105	121	153	267	267
<b>C DIMENSION</b> SCREEN REMOVAL	in	2.62	2.62	2.62	3.37	4.75	5.25	6.00	7.25	16.00	16.00
	mm	67	67	67	86	121	134	153	184	407	407
<b>D NPT Plug</b> BLOW-OFF	in	1/4	1/4	1/4	3/8	3/8	3/4	3/4	1	1 1/4	1 1/4
	mm	8	8	8	10	10	20	20	25	32	32
APPROXIMATE ASSEMBLED WEIGHT	lb	1.5	1.5	1.5	2.5	5.0	5.5	9.0	13.0	46.0	43.0
	kg	0.7	0.7	0.7	1.1	2.3	2.5	4.1	5.9	20.9	19.5
Flow Coefficient	C <sub>v</sub>	0.7	2	8	15	22	38	42	70	110	160

- Dimensions and weights are for reference only. When required, request certified drawings.
- Face to face values have a tolerance of ±0.06 in (±2.0 mm) for sizes 10" and lower.
- Size 2" is available in either a cap or bolted cover; please specify when ordering. Weight given is for model with cap cover.
- Sizes 2 1/2" and 3" have bolted covers.

**PRESSURE - TEMPERATURE RATINGS**



**PRESSURE - TEMPERATURE RATING**

Body Material	A216 Gr. WCB	A351 Gr. CF8M
WOG (Non-shock):	1480 PSI @ 100 °F	1440 PSI @ 100 °F

**REFERENCED STANDARDS & CODES**

CODE	DESCRIPTION
ASME B1.20.1	National Pipe Thread Taper
ASME B16.11	Forged Steel Fittings, Socket-Welding & Threaded
ASME B16.34	Flanged, Threaded, and Welding End

**SCREEN SELECTION GUIDELINES**

Size	Liquid	Open Area	Steam	Open Area
1/2" ~ 3"	1/16 (.0625)	41%	1/32 (.033)	28%

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.