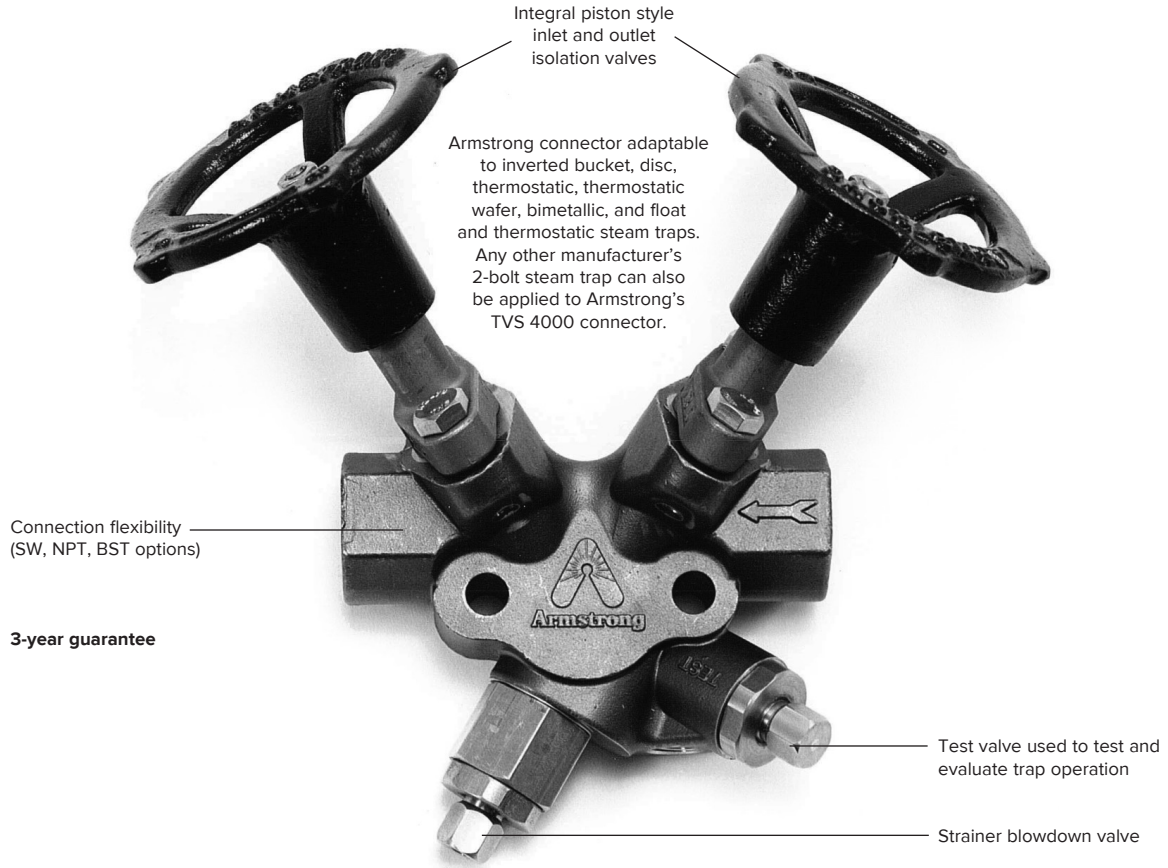


# TVS 4000 Series Stainless Steel Trap Valve Station



## Description

Same principle. Different package with two piston-style isolation valves, test valve and integral stainless steel strainer with blowdown valve. What you'll find new are all the benefits of a piston valve integrated into the same space-saving package.

## Maximum Operating Conditions

Maximum allowable pressure:  
830 psig (57.2 barg) @ 800°F (427°C)

## Materials—TVS 4000 Connector

Connector:	ASTM A351 Gr. CF8M
Strainer screen:	Stainless steel
Test valve:	Stainless steel
Blowdown valve:	Stainless steel

## Isolation Valve Components

All wetted parts:	Stainless steel
Valve sealing rings:	Graphite and stainless steel
Handwheel:	Ductile iron

## Weight

6-1/2 lb (2.9 kg)

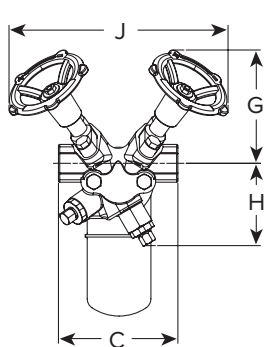
## How to Order

Model	Connection	Type of Connection Inlet/Outlet	Flow Direction	Trap Type
TVS 4000	1/2" 3/4"	NPT SW BSPT Flanged*	R = Right to Left L = Left to Right	Inverted Bucket Disc Thermostatic wafer Bimetallic Float and Thermostatic

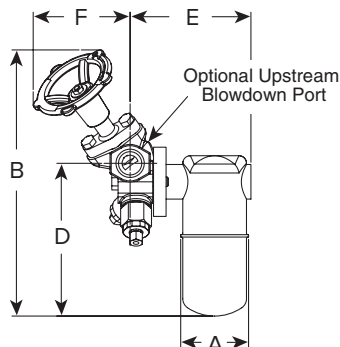
\*Consult factory.

U.S. Patent 6,467,503

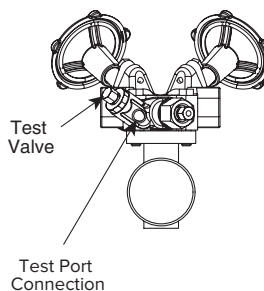
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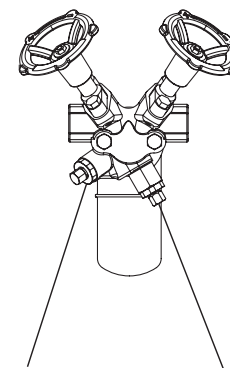
**Model TVS 4000 With 2000 Series SS Trap**  
Front View



**Model TVS 4000 With 2000 Series SS Trap**  
Side View



**Model TVS 4000 With 2000 Series SS Trap**  
Bottom View



**Test Valve**  
Used to test and evaluate trap operation

**Strainer Blowdown Valve**

Same principle. Different package with two piston-style isolation valves, test valve and integral stainless steel strainer with blowdown valve. Now the energy-saving performance and reliability of the inverted bucket steam trap are available in a versatile new package. You'll still enjoy all the familiar benefits. And the same efficient condensate drainage from virtually every kind of steam-using equipment. What you'll find new are all the benefits of a piston valve integrated into the same space-saving package.

## Materials—TVS 4000 Connector

Connector:	ASTM A351 Gr. CF8M
Strainer screen:	Stainless steel
Screen retainer:	Stainless steel
Gasket:	Stainless steel
Retainer unit:	Stainless steel
Test valve:	Stainless steel
Blowdown valve:	Stainless steel

## Isolation Valve Components

Handwheel:	Ductile iron
Nut:	Stainless steel
Stem, washers:	Stainless steel
Bonnet:	ASTM A351 Gr. CF8M
Bonnet, bolts:	DIN 933, Gr. A2 Class 70 per DIN 267
Valve plug:	Stainless steel
Disc springs:	Stainless steel
Valve sealing rings:	Graphite and stainless steel
Lantern bushing:	Stainless steel
Valve washers:	Stainless steel

## Materials—Series 2000 Traps

Body:	ASTM A240 Gr. 304L
Internals:	All stainless steel—304
Valve and seat:	Stainless steel—17-4PH

TVS 4000 Series With 2000 Series Inverted Bucket Steam Trap						
Model No.	2010		2011		2022	
	in	mm	in	mm	in	mm
Pipe Connections	3/8, 1/2, 3/4	10, 15, 20	1/2, 3/4	15, 20	1/2, 3/4	15, 20
"A" Trap Diameter	2-11/16	68	2-11/16	68	3-7/8	98
"B" Height (Valve Open)	8	203	10-1/2	268	12-1/2	318
"C" Face to Face	4-3/4	120	4-3/4	120	4-3/4	120
"D" Connection $\varnothing$ to Bottom	4-3/4	120	6	154	8	203
"E" Connection $\varnothing$ to Outside of Trap	4-1/2	114	4-13/16	122	5-7/8	149
"F" Connection $\varnothing$ to Front of Handwheel (Valve Open)	3-1/2	89	3-7/8	98	3-7/8	98
"G" Connection $\varnothing$ to Top of Handwheel (Valve Open)	3-1/4	83	4-1/2	114	4-1/2	114
"H" Connection $\varnothing$ to Bottom of Connector	1-7/8	47	3-1/4	83	3-1/4	83
"J" Width Across Handwheels (Valve Open)	9-1/4	235	8-3/4	222	8-3/4	222
Test Port Connection	1/4 NPT	6	1/4 NPT	6	1/4 NPT	6
Weight lb (kg)	9	4	9-1/2	4.3	12	5.4
Maximum Operating Pressure (Trap)	200 psig (14 barg)		400 psig (28 barg)		650 psig (45 barg)	
Maximum Operating Conditions (Connector)	830 psig (57.2 barg) @ 800°F (427°C) 1400 psig (96.5 barg) @ 100°F (38°C)					
Maximum Allowable Pressure (Trap)	400 psig (28 barg) @ 750°F (399°C)				650 psig @ 600°F (45 barg @ 315°C)	

U.S. Patent 6,467,503

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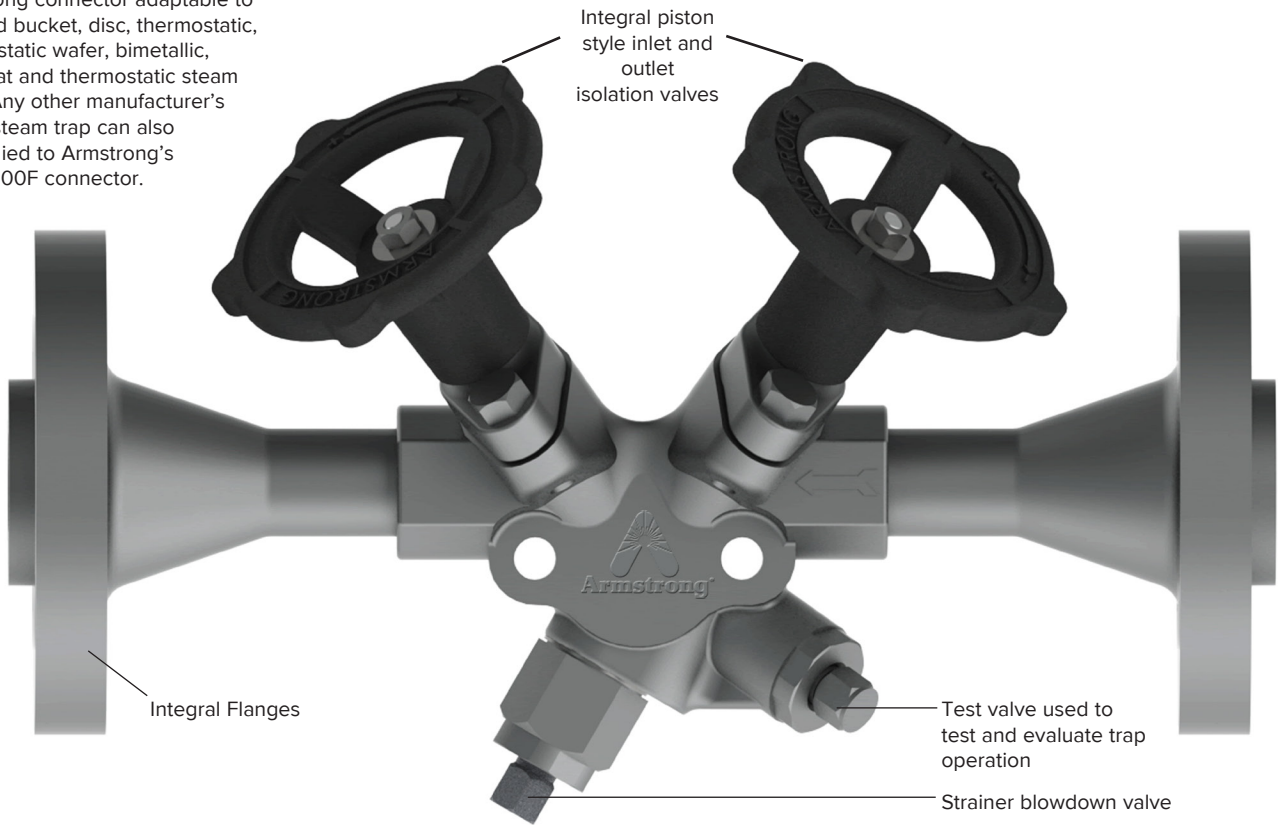
# TVS 4000F Series Stainless Steel Trap Valve Station

For Pressures to 830 psig (57.2 barg)...Capacities to 1 300 lb/hr (590 kg/hr) (Using 2000 Series Inverted Bucket Steam Traps)



Steam Trapping and  
Steam Tracing Equipment

Armstrong connector adaptable to inverted bucket, disc, thermostatic, thermostatic wafer, bimetallic, and float and thermostatic steam traps. Any other manufacturer's 2-bolt steam trap can also be applied to Armstrong's TVS 4000F connector.



## Description

A complete package featuring two piston-style isolation valves, test valve and integral stainless steel strainer with blowdown valve. You'll realize all the benefits of a piston valve integrated into the same space-saving package.

## Maximum Operating Conditions

Maximum allowable pressure:  
830 psig (57.2 barg) @ 800°F (427°C)

## Materials—TVS 4000F Connector

Connector..... ASTM A351 Gr. CF8M  
Strainer screen..... Stainless steel  
Test valve ..... Stainless steel  
Blowdown valve ..... Stainless steel

## Isolation Valve Components

All wetted parts..... Stainless steel  
Valve sealing rings ..... Graphite and stainless steel  
Handwheel..... Ductile iron

## Weight

14 lb (6.4 kg)

## How to Order

Model	Connection	Type of Connection Inlet/Outlet	Flow Direction	Trap Type
TVS 4000F	3/4"	Flanged ASME B16.5 Class 150, 300, 600	R = Right to Left L = Left to Right	Inverted Bucket • Disc • Thermostatic wafer Bimetallic • Float and Thermostatic
	1"	Flanged ASME B16.5 Class 150, 300		

U.S. Patent 6,467,503

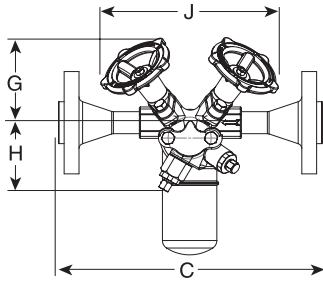
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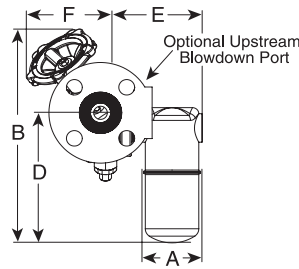
# TVS 4000F Series Stainless Steel Trap Valve Station

For Pressures to 830 psig (57.2 barg)...Capacities to 1300 lb/hr (590 kg/hr) (Using 2000 Series Inverted Bucket Steam Traps)

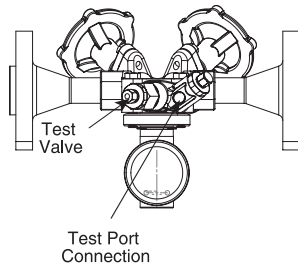
Steam Trapping and Steam Tracing Equipment



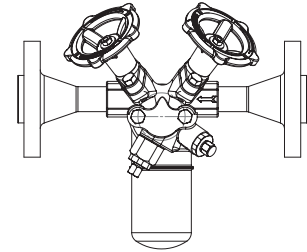
**Model TVS 4000F with 2000 Series SS Trap**  
Front View



**Model TVS 4000F with 2000 Series SS Trap**  
Side View



**Model TVS 4000F with 2000 Series SS Trap**  
Bottom View



**Strainer Blowdown Valve**

Same principle. Different package with two piston-style isolation valves, test valve and integral stainless steel strainer with blowdown valve. Now the energy-saving performance and reliability of the inverted bucket steam trap are available in a versatile new package. You'll still enjoy all the familiar benefits. And the same efficient condensate drainage from virtually every kind of steam-using equipment. What you'll find new are all the benefits of a piston valve integrated into the same space-saving package.

## Materials—TVS 4000F Connector

- Connector.....ASTM A351 Gr. CF8M
- Strainer screen.....Stainless steel
- Screen retainer.....Stainless steel
- Gasket.....Stainless steel
- Retainer unit.....Stainless steel
- Test valve.....Stainless steel
- Blowdown valve.....Stainless steel

## Isolation Valve Components

- Handwheel.....Ductile iron
- Nut.....Stainless steel
- Stem, washers.....Stainless steel
- Bonnet.....ASTM A351 Gr. CF8M
- Bonnet, bolts.....DIN 933, Gr. 8.8 per DIN 267
- Valve plug.....Stainless steel
- Disc springs.....Stainless steel
- Valve sealing rings.....Graphite and stainless steel
- Lantern bushing.....Stainless steel
- Valve washers.....Stainless steel

## Materials—Series 2000 Traps

- Body.....ASTM A240 Gr. 304L
- Internals.....All stainless steel—304
- Valve and seat.....Stainless steel—17-4PH

TVS 4000 Series With 2000 Series Inverted Bucket Steam Trap						
Model No.	2010		2011		2022	
	in	mm	in	mm	in	mm
Pipe Connections	3/4, 1	20, 25	3/4, 1	20, 25	3/4, 1	20, 25
"A" Trap Diameter	2-11/16	68	2-11/16	68	3-7/8	98
"B" Height (Valve Open)	8	203	10-1/2	268	12-1/2	318
"C" Face to Face	12	305	12	305	12	305
"D" Connection $\varnothing$ to Bottom	4-3/4	120	6	154	8	203
"E" Connection $\varnothing$ to Outside of Trap	4-1/2	114	4-13/16	122	5-7/8	149
"F" Connection $\varnothing$ to Front of Handwheel (Valve Open)	3-1/2	89	3-7/8	98	3-7/8	98
"G" Connection $\varnothing$ to Top of Handwheel (Valve Open)	3-1/4	83	4-1/2	114	4-1/2	114
"H" Connection $\varnothing$ to Bottom of Connector	1-7/8	47	3-1/4	83	3-1/4	83
"J" Width Across Handwheels (Valve Open)	9-1/4	235	8-3/4	222	8-3/4	222
Test Port Connection	1/4 NPT	6	1/4 NPT	6	1/4 NPT	6
Weight lb (kg)	16	7.3	16.5	7.5	19	8.6
Maximum Operating Pressure (Trap)	200 psig (14 barg)		400 psig (28 barg)		650 psig (45 barg)	
Maximum Operating Conditions (Connector)	830 psig (57.2 barg) @ 800°F (427°C) 1400 psig (96.5 barg) @ 100°F (38°C)					
Maximum Allowable Pressure (Trap)	400 psig (28 barg) @ 800°F (427°C)				650 psig @ 600°F (45 barg @ 315°C)	

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