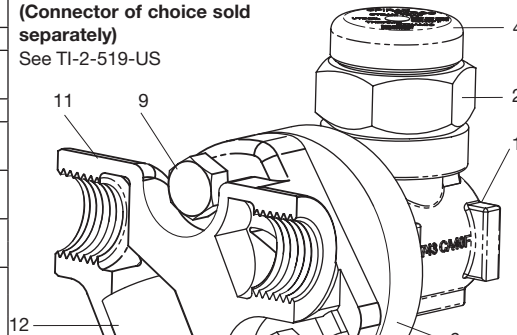


## UTD52 Series Universal Thermodynamic Steam Trap (for use with Universal Connector)

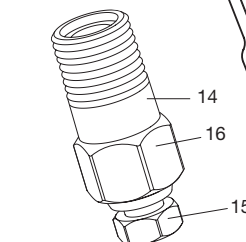
The **Thermodynamic steam trap** cycles periodically to discharge condensate very near to steam temperature. It is unaffected by waterhammer or superheat. The UTD is a unique solution to maintain the disc in the horizontal plane by means of a universal connector. The trap is easily replaced or removed for servicing without disturbing the pipe connections.

<b>Model</b>	UTD52L, UTD52H, UTD52L-HP UTD52SL, and UTD52SH
<b>PMO</b>	450 psig / 600 psig HP model
<b>Trap Construction</b>	Stainless Steel
<b>Trap Options</b>	Slotted disc
<b>Connector Sizes</b>	1/2", 3/4", 1"
<b>Connector Connections</b>	NPT, SW
<b>Connector Construction</b>	Straight or strainer type (left or right hand) Stainless steel or cast steel
<b>Connector Options</b>	SW connections to ANSI B16.11 Carbon steel USTSII trap station

**Standard Strainer Connector shown**  
(Connector of choice sold separately)  
See TI-2-519-US

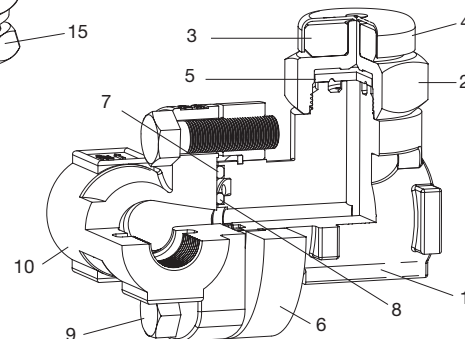


**Note:** Left Hand Strainer Connector Style is mirror image.



Optional Blowdown Valve for strainer connector

Standard on UTD52S models



### Limiting Operating Conditions

**Max. Operating Pressure (PMO)** 450 psig (31 barg) Standard  
600 psig (42 barg) UTD52L-HP

**Max. Operating Temperature** 750°F (400°C)

**Pressure Range** 3.5 to 450 psig UTD52L, UTD52H,  
UTD52SL, UTD52SH  
300 to 600 psig UTD52L-HP

Maximum back pressure should not exceed 80% of the upstream pressure

### Pressure Shell Design Conditions

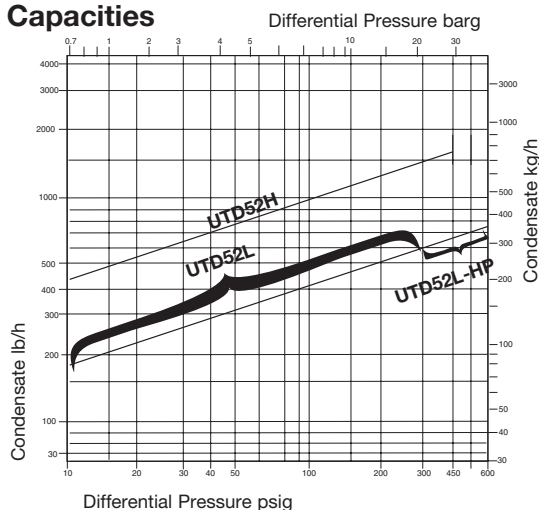
**PMA** 720 psig/up to 100°F 50 barg/up to 38°C - ALL  
Max. allowable pressure 450 psig/750°F 31 barg/238-400°C - Standard  
600 psig/750°F 42 barg/400°C - UTD52L-HP

**TMA** 750°F/0-450 psig 400°C/0-31 barg - Standard  
Max. allowable temperature 750°F/600 psig 400°C/42 barg - UTD52L-HP

Designed for a maximum cold hydraulic test pressure of 1080 psig.

**Typical Applications** Steam main drainage, and steam tracing and constant pressure/constant load applications.

### Capacities



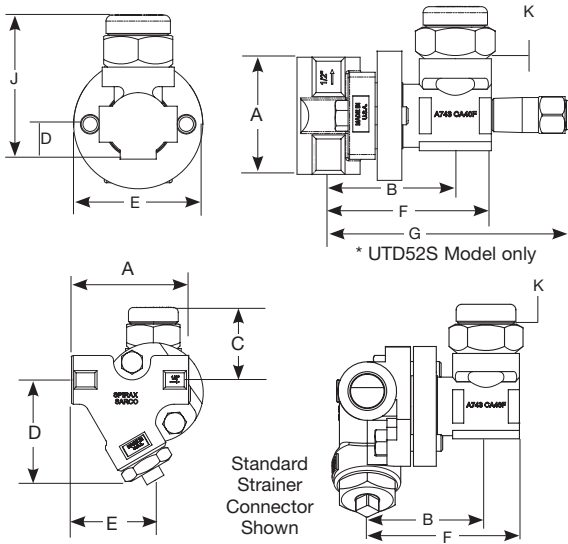
### Construction Materials

No.	Part	Material	
1	Body	Stainless Steel	ASTM A743 Gr.CA40
2	Cap	Stainless Steel	ASTM A743 Gr.CA40
3	Insulator	Ceramic	
4	Cover/Nameplate		
5	Disc	Stainless Steel	
6	Flange	Stainless Steel	
7	Inner Gasket	Stainless Steel & Exfoliated Graphite Filler	
8	Outer Gasket	Stainless Steel & Exfoliated Graphite Filler	
9	Connector Screws	Alloy Steel (Plated)	ASTM A193 Gr.B7
<b>Standard Connector</b>			
10	Connector	Stainless Steel	ASTM A351Gr.CF8
<b>Strainer Connector</b>			
11	Connector	Stainless Steel	ASTM A351 Gr.CF8
12	Strainer Screen	Strainer Screen (.031 perf)	
13	Strainer Cap	Stainless Steel	AISI 303
<b>Strainer Connector or UTD52S</b>			
14	Blowdown Ball Head (Internal)	Stainless Steel	AISI 440
15	Blowdown Valve Stem	Stainless Steel	AISI 431
16	Blowdown Valve Body	Stainless Steel	AISI 303

\* Consult factory for material specifications in carbon steel connectors.

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.  
In the interests of development and improvement of the product, we reserve the right to change the specification.

# UTD52 Series Universal Thermodynamic Steam Trap (for use with Universal Connector)



Dimensions (nominal) in inches and millimeters														
Size	Standard Straight Connector UTD52 or UTD52S Models											Weight		
	A	B(L)	B(H)	C(L)	C(H)	D	E	F(L)	F(H)	G(L)*	G(H)*		K(L)	K(H)
1/2"	2.4	2.7	3.0	2.4	2.5	0.7	2.6	3.3	3.8	5.1	5.4	0.4	0.4	3.3 lb
	61	69	76.2	61	63.3	17.8	66	84	97			10.2	10.2	1.5 kg
3/4"	2.9	2.7	3.0	2.4	2.5	0.7	2.6	3.3	3.8	5.1	5.4	0.4	0.5	3.3 lb
	74	69	76.2	61	63.3	17.8	66	84	97			12.7		1.5 kg
1"	3.5	2.7	3.0	2.4	2.5	0.7	2.6	3.3	3.8	5.1	5.4	0.4	0.5	3.7 lb
	90.4	69	76.2	61	63.3	17.8	66	84	97			10.2	12.7	1.7 kg

\* UTD52S Model only

Dimensions (nominal) in inches and millimeters												
Size	Standard and Left Hand Connector											Weight
	A	B(L)	B(H)	C(L)	C(H)	D	E	F(L)	F(H)	K(L)	K(H)	
1/2"	3.2	2.7	3.0	2	2.1	2.9	2.3	3.3	3.8	0.4	0.4	3.8 lb
	81.3	69	76.2	50.8	53.3	73.7	58.4	84	97	10.2	12.7	1.7 kg
3/4"	3.5	2.7	3.0	1.8	1.9	3	2.5	3.3	3.8	0.4	0.5	4.2 lb
	88.9	69	76.2	45.7	38.1	76.2	63.5	84	97	10.2	12.7	1.9 kg
1"	3.9	2.7	3.0	1.6	1.7	3.1	2.7	3.4	3.8	0.4	0.5	4.5 lb
	99.1	69	76.2	40.6	43.2	78.7	68.6	84	97	10.2	12.7	2.0 kg

## Sample Specification

Steam trap shall be supplied with a pipeline connector which, once installed, remains in the line permanently. Trap shall be attached to the connector by two bolts to enable simple and rapid installation and replacement. The connection is designed to allow installation on pipework that is vertical, horizontal, or any angle in between. Operation shall be on/off discharge with tight shut off and no bleed or "controlled" leak, with back pressures up to 80% of inlet pressure. When specified, the connector shall be provided with integral "Y" pattern strainer with or without integral blowdown valve, standard or left hand pattern. The trap itself shall be Thermodynamic disc type of stainless steel construction and integral seat design with hardened disc and seating surface. Cap to have integral ceramic insulator with stainless steel cover.

**Determining whether you need Standard Strainer Connector or Left Hand** — Because of location or space constraints, when straddling the pipe facing in the direction of flow the standard strainer connector with the trap body facing the left side with bolt on the right. The left hand connector will have the trap body on right with the bolts on the left.

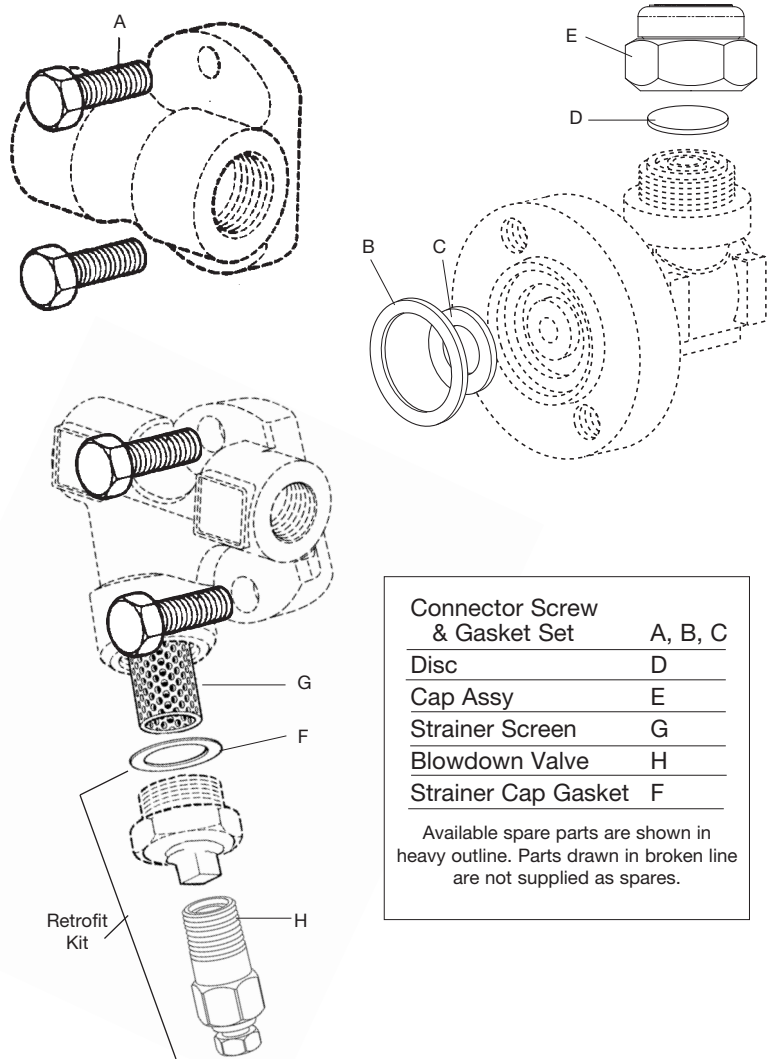
## Installation

The connector can be installed in horizontal or vertical lines. The connector face must be in a vertical plane. The trap should be fitted to the connector with its cap uppermost. Full-port isolating valves should be installed upstream and downstream of the connector.

## Maintenance

The trap can be removed for repair or replacement without disturbing the connector piping connections. Complete isolation of the connector from both supply and return line is required before the trap is removed. The trap should be removed from the connector and disassembled periodically for inspection and cleaning of the disc and seat. **Complete installation and maintenance instructions are given in the IM-2-5161-US, which accompanies the product.**

## Spare Parts



Connector Screw & Gasket Set	A, B, C
Disc	D
Cap Assy	E
Strainer Screen	G
Blowdown Valve	H
Strainer Cap Gasket	F

Available spare parts are shown in heavy outline. Parts drawn in broken line are not supplied as spares.