

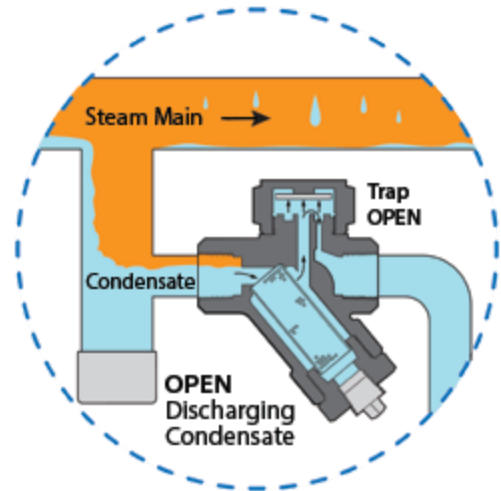
Thermodynamic | Steam Traps | Watson McDaniel

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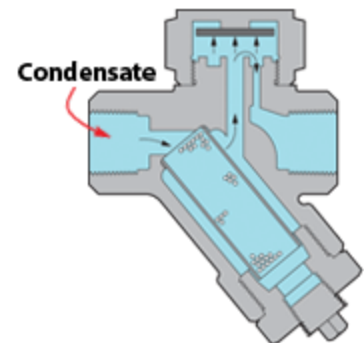
Thermodynamic Trap

Thermodynamic traps have only one moving part, the valve disc, which allows condensate to be discharged when present and closes tightly upon the arrival of steam. These traps have an inherently rugged design and are commonly used as drip traps on steam mains and supply lines. Their solid construction and single moving part make them resistant to waterhammer and are freeze-proof when installed vertically. Thermodynamic traps will only discharge small amounts of air and therefore are typically not used in process applications.



Valve Disc Open

When condensate is present, trap remains in the open position allowing condensate to discharge. Steam pressure pushes the condensate thru the trap.

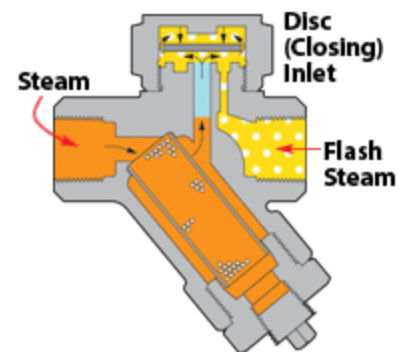


Valve Disc Starting to Close

When steam enters the trap, it creates an internal pressure above the disc that instantly forces the disc and seat to close tightly, preventing steam from escaping.

Valve Disc Closed

Steam pressure above the disc holds the disc closed, trapping steam in the system. Trap will remain closed until the steam above the disc condenses, due to heat loss through the cap.

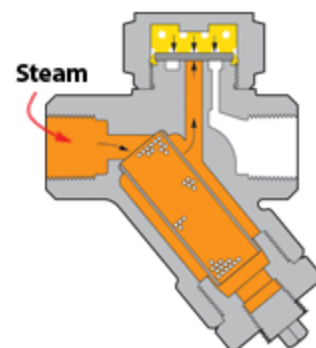


Less

TD600 - Non-Repairable

DRIP, TRACING: The TD600 is Non-Repairable and commonly used as a drip trap on steam mains and steam supply lines. Ideal for outdoor applications that are subject to freezing and for super heated steam conditions.

The TD600L is Reduced Size Discharge Orifice holes which are preferable in terms of performance, longevity, and efficiency; particularly on pressure over 150 psi





Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)
<u>TD600L-12-N</u>	1/2"	NPT	L	Stainless Steel	600	1290
<u>TD600L-13-N</u>	3/4"	NPT	L	Stainless Steel	600	2060
<u>TD600-11-N</u>	3/8"	NPT		Stainless Steel	600	1290
<u>TD600-12-N</u>	1/2"	NPT		Stainless Steel	600	2060
<u>TD600-13-N</u>	3/4"	NPT		Stainless Steel	600	3140
<u>TD600-14-N</u>	1"	NPT		Stainless Steel	600	4840



TD600S - Non-Repairable with Strainer

DRIP, TRACING: The TD600S is Non-Repairable and commonly used as a drip trap on steam mains and steam supply lines. Supplied with integral strainer and optional blowdown valve to protect trap from contamination. Ideal for outdoor applications that are subject to freezing and for super heated steam conditions. The TD600LS is Reduced Size Discharge Orifice holes which are preferable in terms of performance, longevity, and efficiency; particularly on pressure over 150 psi



Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)	 Strainer
<u>TD600LS-12-N</u>	1/2"	NPT	LS	Stainless Steel	600	1290	
<u>TD600LS-13-N</u>	3/4"	NPT	LS	Stainless Steel	600	2060	 Blowdown Valve
<u>TD600LS-14-N</u>	1"	NPT	LS	Stainless Steel	600	1290	
<u>TD600LSB-12-N</u>	1/2"	NPT	LS, Blowdown	Stainless Steel	600	1290	
<u>TD600LSB-13-N</u>	3/4"	NPT	LS, Blowdown	Stainless Steel	600	2060	
<u>TD600LSB-14-N</u>	1"	NPT	LS, Blowdown	Stainless Steel	600	1290	

TD700S/TDF700S - Repairable In-Line

DRIP, TRACING: The TD700S Thermodynamic steam trap is commonly used as a drip trap on steam mains and steam supply lines. These traps are used on tracing applications; however, thermostatic traps are normally recommended for this service. Supplied with an integral strainer and optional blow down valve to protect the trap from contamination. The internal working mechanism of the TD700S can be completely replaced while the trap body remains in line. Ideal for outdoor applications that are subject to freezing and for super heated steam conditions. **TDF700S** is forged steel with full material traceability (**MTR**) for **Petroleum Industry**.



Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)	 Strainer
<u>TD700S-12-N</u>	1/2"	NPT		Cast Steel	600	700	
<u>TD700S-13-N</u>	3/4"	NPT		Cast Steel	600	700	 Blowdown Valve
<u>TD700S-14-N</u>	1"	NPT		Cast Steel	600	700	 Repairable

Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)
<u>TD700S-12-SW</u>	1/2"	Socket Weld		Cast Steel	600	700
<u>TD700S-13-SW</u>	3/4"	Socket Weld		Cast Steel	600	700
<u>TD700S-14-SW</u>	1"	Socket Weld		Cast Steel	600	700

TD900S - High Pressure Repairable In-Line

DRIP: The TD900S Thermodynamic steam trap is primarily used as a drip trap on high pressure steam mains and steam supply lines when a repairable trap type is desired. Ideal for outdoor applications that are subject to freezing and for super heated steam conditions. The TD900LS is recommended for pressure over 300 PSI.






Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)
<u>TD900S-12-N</u>	1/2"	NPT		Cast Steel	900	968
<u>TD900S-13-N</u>	3/4"	NPT		Cast Steel	900	968
<u>TD900S-14-N</u>	1"	NPT		Cast Steel	900	968
<u>TD900S-12-SW</u>	1/2"	Socket Weld		Cast Steel	900	968
<u>TD900S-13-SW</u>	3/4"	Socket Weld		Cast Steel	900	968
<u>TD900S-14-SW</u>	1"	Socket Weld		Cast Steel	900	968



TD3600 - Ultra High Pressure Repairable In-Line

DRIP: The TD3600 Thermodynamic steam trap is commonly used as a drip trap on high-pressure steam mains and steam supply lines. Supplied with an integral strainer to protect the trap from contamination. The internal working mechanism of the TD3600 can be completely replaced while the trap body remains in line. Ideal for outdoor applications that are subject to freezing and for super heated steam conditions.



Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)	 Strainer
<u>TD3600-12-SW</u>	1/2"	Socket Weld		Forged Steel	3600	625	 Repairable
<u>TD3600-13-SW</u>	3/4"	Socket Weld		Forged Steel	3600	625	
<u>TD3600-14-SW</u>	1"	Socket Weld		Forged Steel	3600	625	 High Pressure
<u>TD3600-12-BW</u>	1/2"	Butt Weld		Forged Steel	3600	625	
<u>TD3600-13-BW</u>	3/4"	Butt Weld		Forged Steel	3600	625	
<u>TD3600-14-BW</u>	1"	Butt Weld		Forged Steel	3600	625	

Universal UTD450 (Top Mount Style)

DRIP, TRACING: Designed to work as a drip traps for the draining of condensate from steam mains and other steam supply lines, The UTD450 Thermodynamic Steam Trap Module can be used anywhere. Can also be used on tracing applications. The module mounts to any 2-bolt Universal Connector. This model is only recommended for horizontal piping installations to allow the cap to be oriented upwards.



Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)
Click on link above			see more detail please click on link above	Stainless Steel		

Universal UTD450SM & UTD600LSM (Side Mount Style)

DRIP, TRACING: Designed for drip applications for the draining of condensate from steam mains and other steam supply lines as well as for tracing applications. The UTD450SM and UTD600LSM Thermodynamic Steam Trap Modules can be used anywhere. This traps module can be used on either vertical or horizontal piping installations and can mount to any 2-bolt Universal Connector.



Model	Size	Type	Options	Body Material	Max PMO (psig)	Max Capacity @ Max PMO (lb/h)
Click on link above			see more detail please click on link above	Stainless Steel		