

FLOATING DISC STEAM TRAPS

ALL STAINLESS STEEL • PRESSURES FROM 5 TO 600 PSI

SERIES FD STEAM TRAPS ALLOW FAST REMOVAL OF AIR AND CONDENSATE

Available In $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ " And 1" Pipe Sizes For In-Line Installation

Clark-Reliance FD traps are specially designed to accept wide variations between start-up and operating loads. Shock loading and vibration will not affect performance. System pressures range from 5 to 600 PSI at 750°F. No pressure adjustments are required.

FD steam traps operate with only one moving part, the internal hardened stainless steel disc, which accounts for the trap's exceptional service life and minimal maintenance requirements.

Installation and inspection are quick and easy. The seat and disc are replaceable without removing the trap body from the line.

When FD traps are used in vertical installations with outlets in the down position, the traps are self-draining and non-freezing.

SERIES SFD STEAM TRAPS FEATURE INTEGRAL STRAINER WITH BLOW-OFF CONNECTION

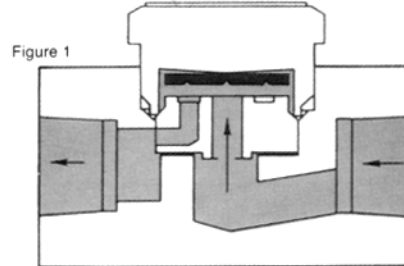
The SFD Series incorporates all FD design and performance features and adds the strainer/blow-down connection.

The strainer features a leak-proof monel seat gasket. Strainer screen is 40-mesh stainless steel and can be replaced without removing the trap body from the line.

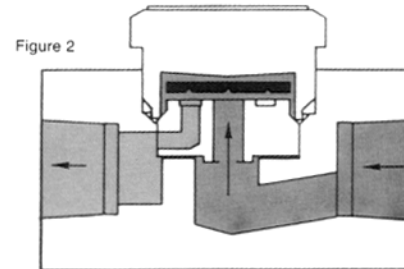
A $\frac{3}{8}$ " globe valve is available at additional cost for fast and safe strainer blow-down.

OPTIMUM RATIOS – BETWEEN INLET PORT, DISC AREA, CAP VOLUME AND DISCHARGE PORT – HAVE ALL BEEN CAREFULLY RESEARCHED TO ASSURE CONSISTENT OPERATION OVER THE COMPLETE PRESSURE RANGE.

FLOATING DISC OPERATION DELIVERS RELIABILITY AND EXTENDED SERVICE LIFE

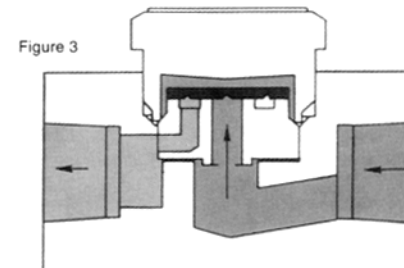


As pressure raises the disc, entering air and condensate are immediately discharged.



As condensate nears steam temperature, three events occur:

- The condensate flashes, choking the flow through the outlet port.
- Flashing, combined with the kinetic energy of entering high-velocity steam, lowers pressure below the disc.
- A low-pressure area is then created in the control chamber below the disc, forcing the disc tightly against the seat.



The pressure exerted on the large upper area of the disc holds the trap closed against the system pressure on the smaller area of the seat inlet.

As pressure in the upper chamber decreases, the disc rises and the cycle is repeated. (The force of the Inlet Area, multiplied by Inlet Pressure – becomes greater than the larger Upper Area, multiplied by Internal Chamber Pressure.)

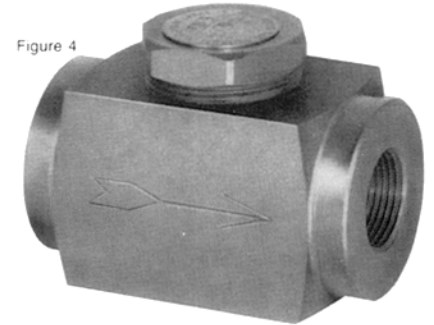


Figure 4
SERIES FD STEAM TRAPS FOR IN-LINE INSTALLATION

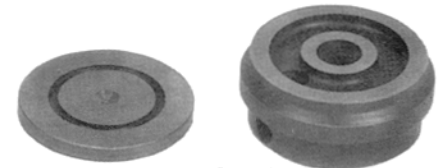


Figure 5
STAINLESS STEEL DISC IS THE ONLY MOVING PART AND IS REPLACEABLE

Figure 6
HARDENED STAINLESS STEEL SEAT IS SELF-POSITIONING AND REPLACEABLE. GRAFOIL® GASKET FOR LEAK-FREE SERVICE.

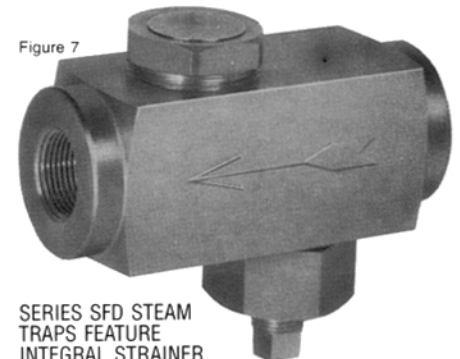


Figure 7
SERIES SFD STEAM TRAPS FEATURE INTEGRAL STRAINER WITH BLOW-DOWN CONNECTION

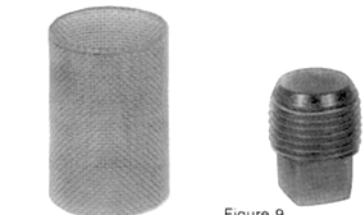


Figure 8
STAINLESS STEEL SCREEN

Figure 9
BLOW-DOWN PLUG (OPTIONAL $\frac{3}{8}$ " GLOBE VALVE AVAILABLE)

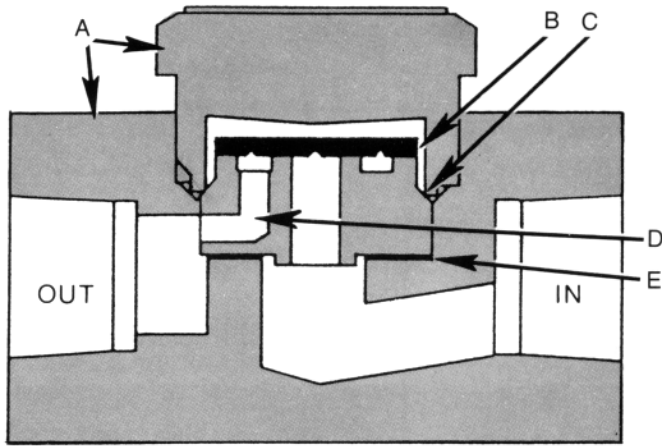


Figure 10

QUALITY MATERIALS PLUS CONVENIENT IN-LINE RENEWABILITY

- A. Stainless Steel body and cap
- B. Hardened stainless steel disc and seat is easily accessible through removable cap.
- C. Metal-to-metal seal is achieved with precision-machined, ground and lapped surfaces for tight, leak-free closure.
- D. A single port discharges directly into the return line. Vertical installations are self-draining and non-freezing.
- E. Grafoil® seat gasket is replaced with trap in line.

SERIES FD AND SFD DIMENSIONS (Inches)

	SERIES FD MODELS					SERIES SFD MODELS				
	FD-0	FD-1	FD-2	FD-3	FD-4	SFD-0	SFD-1	SFD-2	SFD-3	SFD-4
PIPE CONNECTION	3/8	1/2	1/2	3/4	1	3/8	1/2	1/2	3/4	1
HEIGHT	1 ⁹ / ₁₆	1 ⁹ / ₁₆	1 ¹³ / ₁₆	2 ³ / ₈	2 ¹⁵ / ₁₆	3 ³ / ₁₆	3 ³ / ₁₆	3 ¹ / ₈	3 ⁷ / ₈	4 ⁵ / ₁₆
LENGTH	2 ¹ / ₄	2 ⁵ / ₈	2 ⁷ / ₈	3 ⁵ / ₈	4 ¹ / ₈	3	3 ³ / ₈	3 ³ / ₄	5	5 ⁹ / ₁₆
WIDTH	1 ¹ / ₈	1 ¹ / ₈	1 ³ / ₈	2	2 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ³ / ₈	2	2 ¹ / ₈
WEIGHT	3/4	7/8	1 ¹ / ₄	3	5	1 ¹ / ₂	1 ³ / ₄	2 ¹ / ₄	5	7

SERIES FD AND SFD CONTINUOUS DISCHARGE CAPACITIES

In Pounds-Per-Hour At Indicated Pressure: Lighter Numbers Are At Saturated Steam Temperatures – Bolder Numbers Are At 30° Below Steam Temperatures.

MODEL NO.	5 psi	10 psi	20 psi	30 psi	50 psi	75 psi	100 psi	125 psi	150 psi	200 psi	250 psi	300 psi	400 psi	500 psi	600 psi
FD-0 = 3/8"	190	220	280	320	390	440	490	540	575	650	720	760	830	860	880
FD-1 = 1/2"	305	340	425	490	600	680	750	800	850	940	1010	1070	1180	1225	1260
FD-2 = 1/2"	420	480	600	680	840	990	1100	1220	1320	1500	1620	1740	1920	2070	2190
	525	600	750	880	1080	1240	1370	1490	1590	1760	1920	2040	2270	2460	2630
FD-3 = 3/4"	750	875	1100	1300	1510	1770	1910	2050	2210	2440	2580	2700	2880	3000	3060
	1000	1200	1370	1540	1820	2100	2375	2480	2620	2800	2950	3000	3180	3350	3500
FD-4 = 1"	840	1170	1850	2210	2760	3340	3750	3970	4125	4350	4530	4730	5020	5310	5600
	1600	2000	2800	3300	4000	4700	5200	5400	5600	5800	6000	6200	6480	6750	7000

SERIES FD/SFD TRAPS WILL OPERATE WITH BACK PRESSURES UP TO 80% OF INITIAL PRESSURES

ISO-9001 CERTIFIED

For additional information,
contact your local Clark-Reliance
representative

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NOTE: Clark-Reliance shall not be liable for damages of any kind resulting in part from failure to install its products in accordance with all applicable codes and/or state and local regulations, improper application and/or maintenance.