

spirax/sarco®

Trap Diffuser DF1, DF3 and Three Way Test Valve

Description

The **DF Series Trap Diffuser** is a compact unit designed to be fitted to the outlet of a steam or liquid drain trap. The DF Diffuser reduces noise and erosion by cushioning high velocity discharge.

Model ⇄	DF1 & DF3
Sizes	1/2" & 3/4"
Connections	NPT
Construction	Stainless Steel
Options	BSP Connection DF1 SW Inlet only DF1

Typical Applications

The DF Series Diffuser can be fitted to any trap where conditions promote blast discharge similar to that associated with balanced pressure, inverted bucket or Thermo-Dynamic® traps.

Limiting Operating Conditions

DF1 Max. Operating Pressure (PMO) 915 psig/63 barg

DF3 Max. Operating Pressure (PMO) 300 psig/21 barg

Construction Materials

No.	Part	Material
1	Case	Stainless Steel
2	End Boss Screwed Socket Weld	Stainless Steel Stainless Steel
3	Internals	Stainless Steel
4	Screen	Stainless Steel

Installation

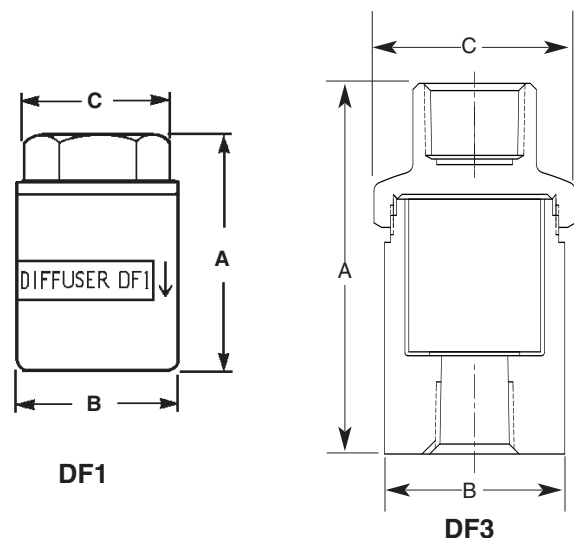
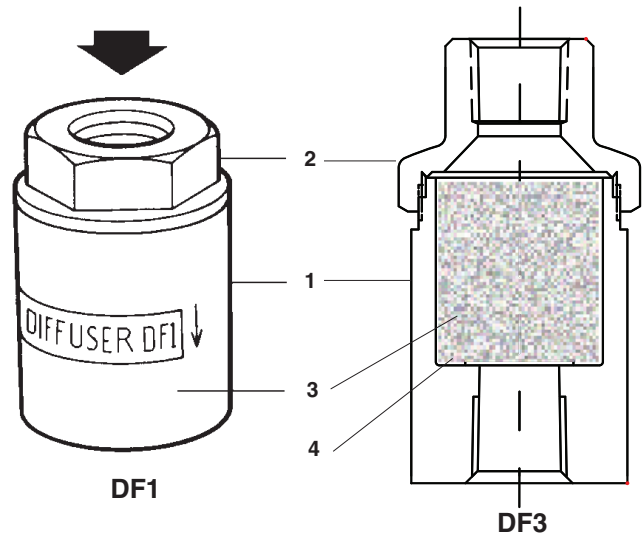
The DF Series Diffuser should be fitted on the outlet side of a steam trap or liquid drainer with a suitable fitting to ensure that the discharge of condensate is towards the ground or some safe enclosure.

Sample Specification

The trap diffuser shall be all stainless steel with a knitted and compacted wire mesh diffusing element.

Dimensions (approximate) in inches & millimeters

Size	A	B	C	Weight (DF1)
DF1 1/2"	2.3 59	1.5 40	1.1 27	.51 lb .23 kg
DF1 3/4"	2.3 60	1.5 40	1.3 32	.51 lb .23 kg
DF3 1/2"	3.8 97	1.8 46	2.1 53	1.4 lb .63 kg
DF3 3/4"	3.8 97	1.8 46	2.1 53	1.4 lb .63 kg



Trap Diffuser DF1, DF3 and Three Way Test Valve

The SE3 steam trap test valve is designed to have a combination inlet or outlet isolation/blowdown valve capability. Unit can be used with any small size steam trap typically in drip or tracer service.

Model	TWT
PMO	300 psig
Sizes	1/2" 3/4"
Connections	NPT
Construction	Stainless Steel

Limiting Operating Conditions

Max. Operating Pressure: (PMO) 300 psig (21 barg)
 Max. Operating Temperature: (TMO) 421°F (198°C)

Pressure Shell Design Conditions

PMA : 300 psig (21 barg)

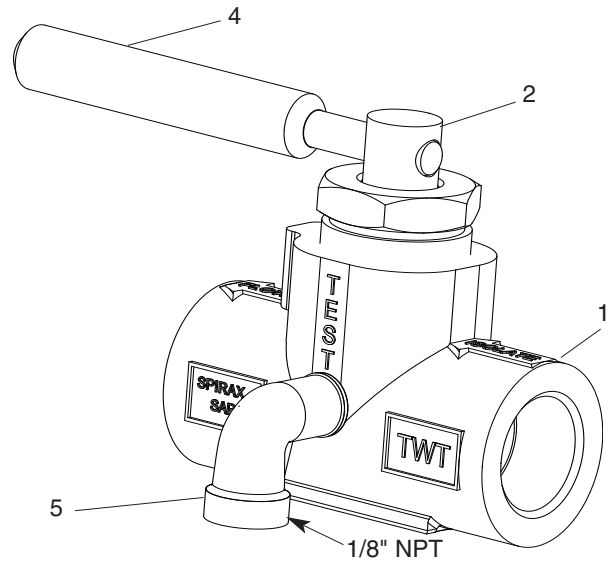
Two Valves One Upstream and Downstream of Trap

Function	Direction of Flow Handle Position	
	Inlet Valve	Outlet Valve
Normal operation	→	→
Checking line for blockage	↓	→
Trap Isolation for Maintenance	↑	↓
Visual testing of trap	→	↓
Shutdown Drainage if Steam is Off Stream	↓	↓
Start-up	↓	→
Purging	↓	→

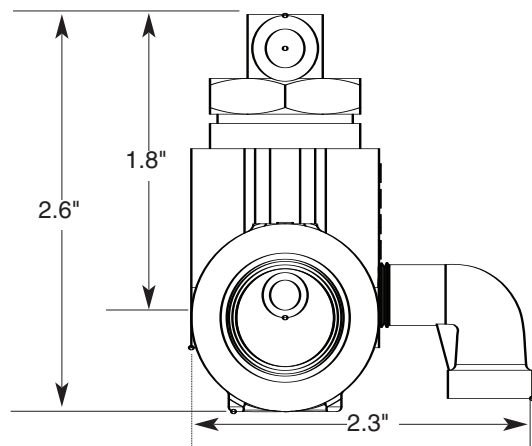
One Valve Downstream of Trap (trap outlet)

Function	Direction of Flow Handle Position
Normal Operation	→
Visual testing of trap	↓
Shut down drainage steam upstream isolated by other means	↓
Return line isolation	↑

No.	Part	Material
1	Body	Stainless Steel ASTM A351 CR CF8
2	Isolation Plug/Spindle	Stainless Steel 316L AISI 304
3	Liner	R-PTFE (internal not shown)
4	Handle	Stainless Steel
5	Vent Elbow	Stainless Steel 304 AISI 304
6	Packing	Graphite



SPARE: Valve Internal Assembly



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