TRIMTECK®
OPTIMUX®

OpDSH™ VFix
DESUPERHEATER
TECHNICAL BROCHURE

OpDSH™ VFix Desuperheater

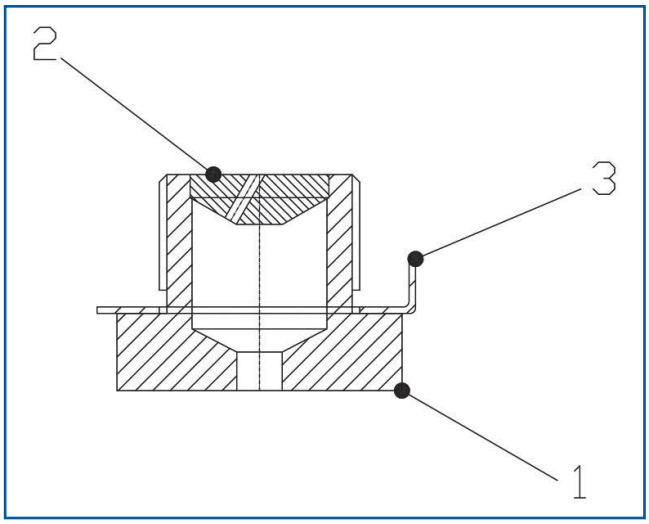
INTRODUCTION

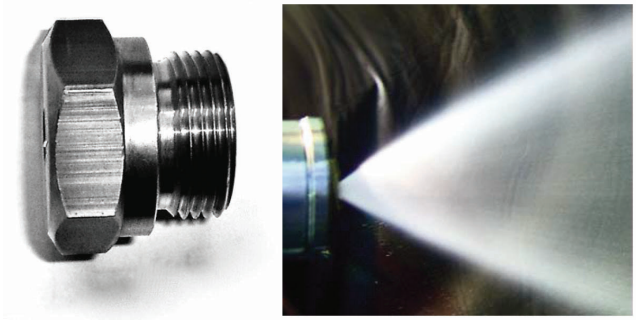
The OpDSH VFix nozzles are fixed area spraying devices, single or multiple, with an excellent atomizing characteristic due to a sophisticated internal vortex ring which ensures very small water droplet size at low differential pressures.

They are primarily intended for applications where load is nearly constant but moderate load fluctuations can be controlled with guaranteed rangeability. Maximum care is taken to keep the angle of the spray cone narrow in order to minimize the impact of water against the internal pipe wall.

Number	Item	Material
1	Nozzle Body	AISI 422
2	Vortex Ring	AISI 422
3	Locking Washer	AISI 316L

VFix Nozzle





MAIN CHARACTERISTICS

Sizes: 15 nozzles sizes are available from DF1 through DF15.

Materials: probe assembly F11/F22/F91, for nozzle materials see table page 1.

Flow Capacity: from 0.018 to 4.5 according to Cv table – when two nozzles are mounted more than 100 Cv's are available by the combination of different sizes.

Mounting: probe type with top water connection, also side connection is available on request.

Nozzle	Cv Max	Max Flowrate GPM
DF1	0.018	0.374
DF2	0.03	0.625
DF3	0.06	1.250
DF4	0.12	2.504
DF5	0.22	4.400
DF6	0.36	7.480
DF7	0.5	10.560
DF8	1.1	22.880
DF9	1.5	31.240
DF10	2.0	41.800
DF11	2.5	51.920
DF12	3.0	62.480
DF13	3.5	73.040
DF14	4.0	83.600
DF15	4.5	93.720

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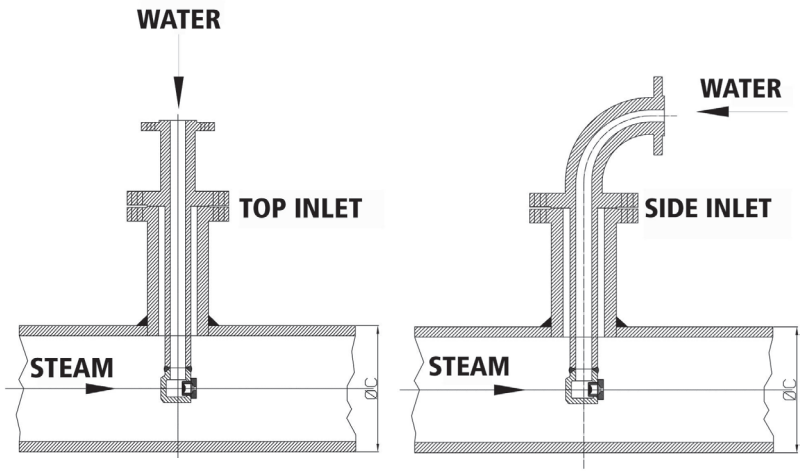
OPDSH VFIX DESUPERHEATERS PROBE ASSEMBLY

One or max two nozzles are fastened at the end of a tubular extension flanged to the pipe. The injection is performed close to the pipe axis by adjusting the probe length. A reference pin located on the desuperheater flange ensures the correct orientation of the nozzle inside the piping. Probe assembly is normally performed with the same pipe material. In the tables the combinations of water and pipe connections are listed vs. the nozzle dimensions. Steam connections can be oversized when two nozzles are mounted on the same probe.

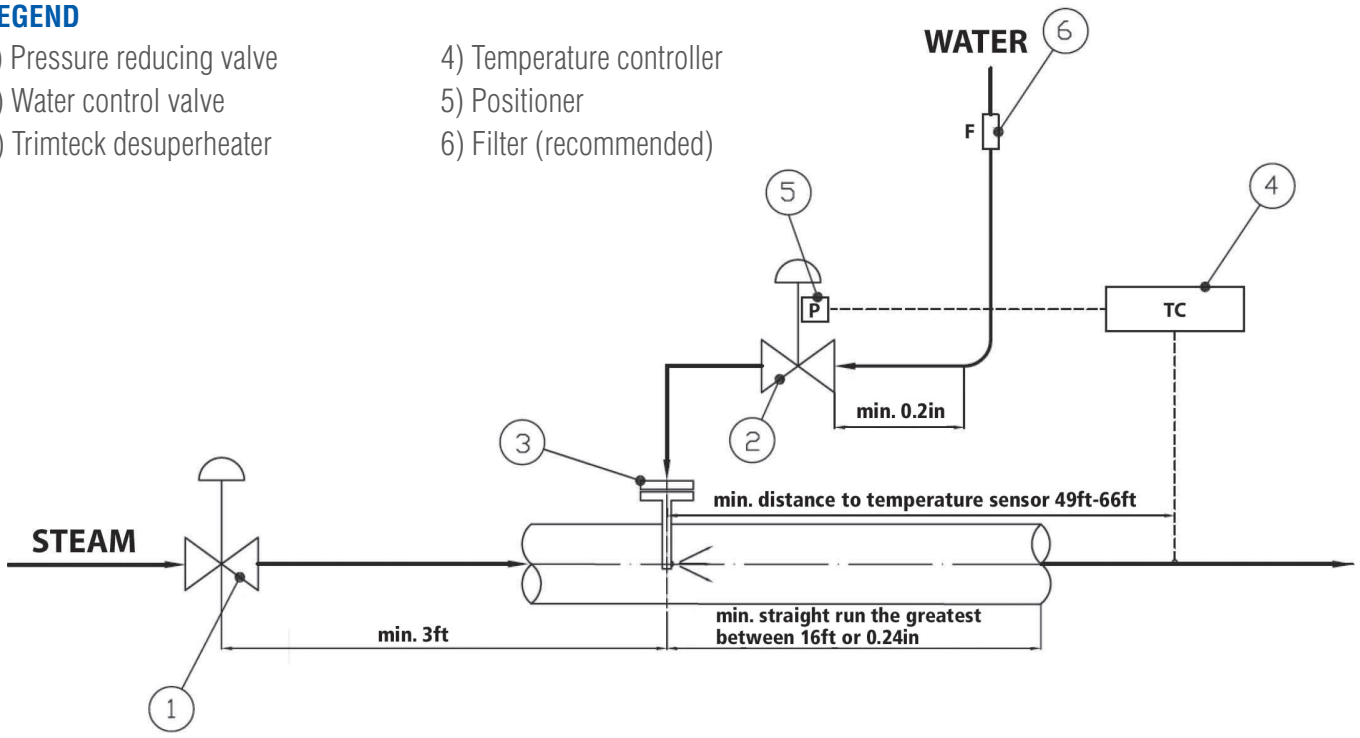


ENGINEERING PRACTICE FOR EFFICIENT DESUPERHEATING

For efficient desuperheating the arrangement of installation is shown in the following figure.

LEGEND

1) Pressure reducing valve
2) Water control valve
3) Trimteck desuperheater
4) Temperature controller
5) Positioner
6) Filter (recommended)



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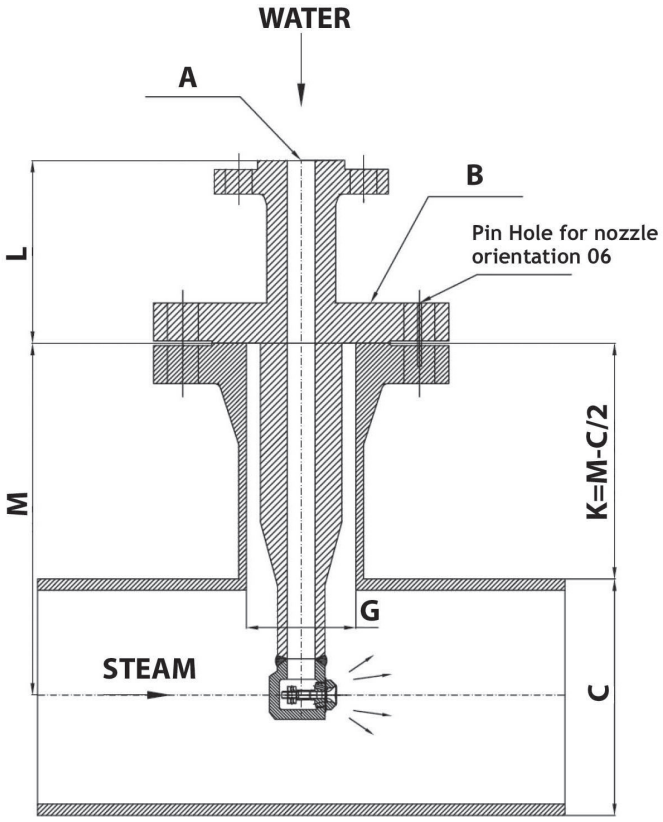
DIMENSIONS (Inches)

DN STEAM	M					
	DF1-5		DF6-10		DF11-15	
	NOZZLE NUMBER					
	1	2	1	2	1	2
4"	10.1	–	–	–	–	–
6"		10.1	12.0	–	–	–
8"				12.0	14.0	–
10"						14.0
12"						
14"	11.1					
16"	12.1					
18"	13.1		13.0			
20"	14.1		13.9		15.0	
22"	15.1		14.9		15.9	
24"	16.1		15.9		16.9	
26"	17.0		16.9		17.9	
28"to 40"	18.0		17.9		19.2	



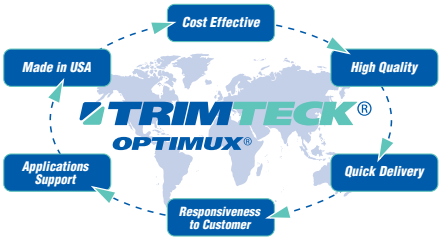
Nozzle	L	A	B	C min	G min (1)
DF1-5	5.8	1	2	4	1.9
DF6-10	7.3	1	3	6	2.9
DF11-15	8.1	1.5	4	8	3.8

Note(1): The dimensions are consistent with sch.80 thicknesses. For different design (rating & dimensions) contact the Trimteck technical department.

About Trimteck

Trimteck® is a NASA VDB-approved, ISO 9001-2016-registered U.S. company (Registration No. 2012-98243) with over thirty years of experience engineering, manufacturing, and marketing high-quality, cost-effective flow, pressure, and temperature control solutions and equipment for critical processes. Our products are currently helping customers safely improve quality, optimize throughput, and reduce emissions and energy costs across an array of industries in more than 50 countries.

We manufacture a comprehensive line of control valves – and variety of actuators, positioners, severe service trims, and other accessories – that our applications engineers and representatives use to solve even the most complex flow control problems quickly and economically.



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Products in compliance with:
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