TRIMTECK®
OPTIMUX®

OpDSH™ VSpray
DESUPERHEATER
TECHNICAL BROCHURE

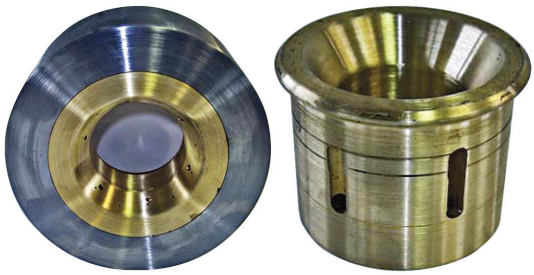
OpDSH™ VSpray Desuperheater

INTRODUCTION

OpDSH VSpray nozzles are fixed area spraying devices which inject water in the outlet a of a venturi-shaped section combined with a swirling pattern of nozzles for an excellent and rapid atomizing of sprayed water.

Low-velocity steam flows can be thoroughly handled as well with a minimum approach temperature of 42.8°F over saturation.

They are primarily intended for very low capacity processes with moderate load changes and where an accurate temperature control is essential.



WAFER SOLUTION NOZZLE

MAIN CHARACTERISTICS

Steam pipe size: 1-1⁄2", 2", 3", 4"

Water connections: 1⁄2", 3⁄4", 1"

Ratings: up to ANSI 600

Connection types: **steam:** SW-BW-wafer | **water:** RF - other on request nozzle sizes: four nozzles sizes are available DY1, DY2, DY3, DY4

Flow capacity: from one to eight nozzle assemblies can be provided for each nozzle size and more than 25 combined Cv's are available from 0.0145 through 0.928 (see Cv table)

Mounting: straight-in-line with top water connection

Materials: see part list table

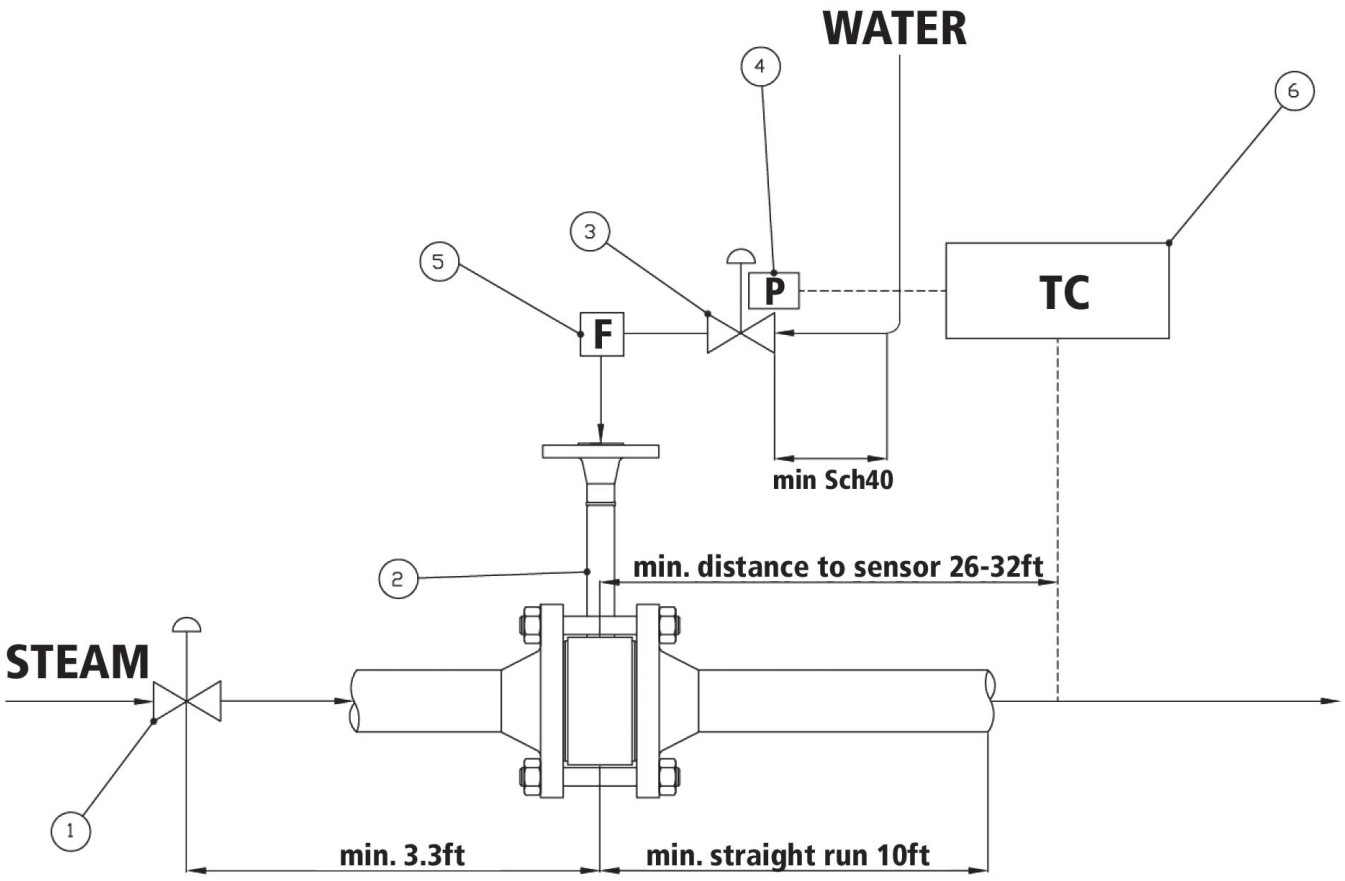
Main applications

- turbine shaft sealing - heat exchangers
- ejectors
- house facilities
- tire vulcanizing processes
- drum dryers
- general purpose cooking kettles

Body Size	Nozzle Size	CV of Nozzle Assembly							CVs of Steam Flow Passage
		Number of Nozzles							
		1	2	3	4	5	6	8	
1.5"	DY1	0.0145	0.029	0.0435	0.058	0.0725	0.087	–	35
2"	DY2	0.029	0.058	0.087	0.116	0.145	0.174	–	60
3"	DY3	0.058	0.116	0.174	0.232	0.29	0.348	0.464	130
4"	DY4	0.116	0.232	0.348	0.464	0.58	0.696	0.928	235

ENGINEERING PRACTICE FOR EFFICIENT DESUPERHEATING

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



LEGEND

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

Filter is strongly recommended. The mesh of the sieve must be not less than 30 DY1, 20 for DY2, 25 for DY3 and 16 for DY4.

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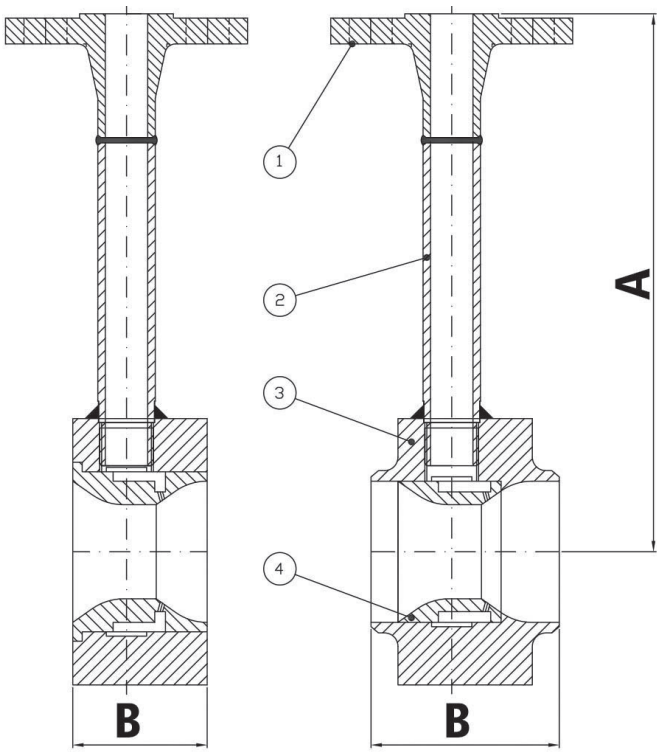
DIMENSIONS (Inches)

Nozzle	Water Connection		Steam Connection		A	B
	SIZE	RATING	SIZE	RATING		
DY 1	0.5"	150 RF	1.5"	RF	7.7	1.6
		300 RF		BW sch40		2.8
		600 RF		BW sc80		2.8
DY 2	0.5"	150 RF	2.0"	RF	8.1	2.0
		300 RF		BW sch40		3.0
		600 RF		BW sc80		3.0
DY 3	0.75"	150 RF	3.0"	RF	8.9	2.4
		300 RF		BW sch40		3.7
		600 RF		BW sc80		3.7
DY 4	1.0"	150 RF	4.0"	RF	8.9	2.4
		300 RF		BW sch40		3.9
		600 RF		BW sc80		3.9

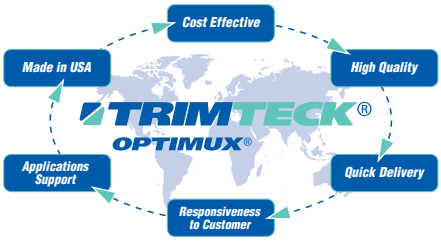


Number	Item	Material
1	Flange	Carbon, Cr-Mo Steels
2	Pipe	Carbon, Cr-Mo Steels
3	Body	Carbon, Cr-Mo Steels
4	Nozzle	AISI 422

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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