

DM
VARIBULL[®]

DESUPERHEATER
VARIABLE AREA
SPRING ASSISTED



VALTEK[™]
SULAMERICANA

Introduction

The DM VariBull® Desuperheater consists of a collecting tube mounted on the main steam pipe. Robust and compact, it is used in numerous applications with efficient cooling performance of superheated vapors at the desired control point.

The DM VariBull® Desuperheater can be built with different nozzles location configurations, as well as with different intrinsic flow capacities that provide a high and efficient system performance. The arrangement and location of the nozzles are strategically carried out to achieve an optimal combination that provides a rapid vaporization of the cooling water injected by the nozzles.

The interconnection between the different nozzles is made by an external piping with a single flanged inlet for the cooling water. This interconnection piping of different nozzles is built in parallel to the collector tube, moderating the thermal stresses due to different temperatures between the superheated steam and the collector tube.

When the cooling system is exposed to high cycles of thermal stress, high vapor velocity and vibration-inducing flows, the collector tube can be supplied with an inner diffuser that protects it from the generated thermal shocks.

General Features

Collector Tube Construction: Carbon Steel ASTM A105

Chrome-molybdenum steel ASTM A182 F22 or F91 (depending on the operating temperature and according to the main steam pipe)

Collector Nominal Diameter: 8" to 40" - larger sizes on request

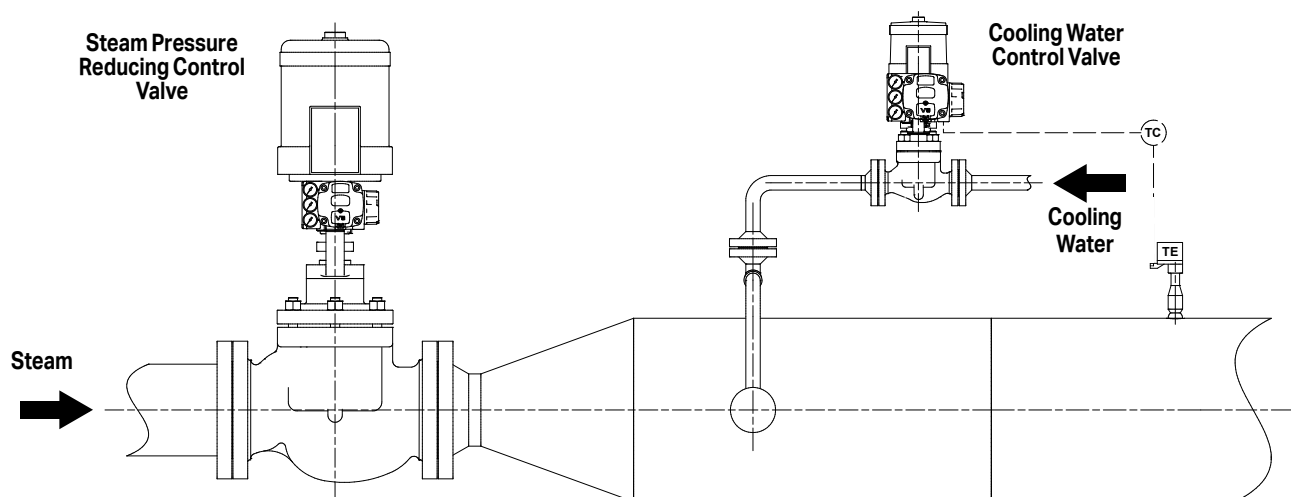
Water Collector Nominal Diameter: 1" to 4"

Pressure Class: ANSI 150-1500

Inherent Rangeability: 50:1

Number of Standard Nozzles: 1, 2, 4 or 8 nozzles; 12 nozzles on request

Typical Control Loop



Flow Coefficients: C_v - Dimensions

Flow Coefficients: C_v

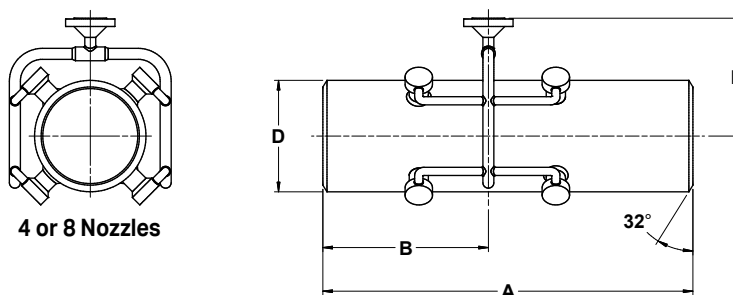
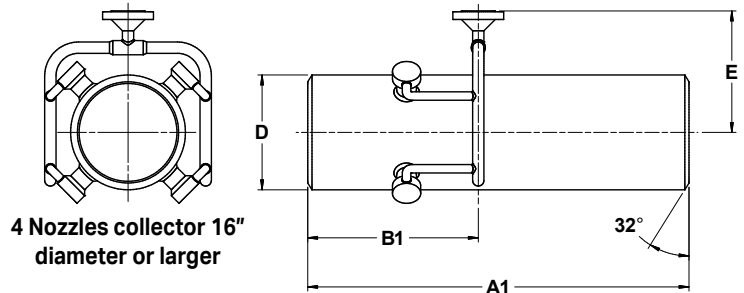
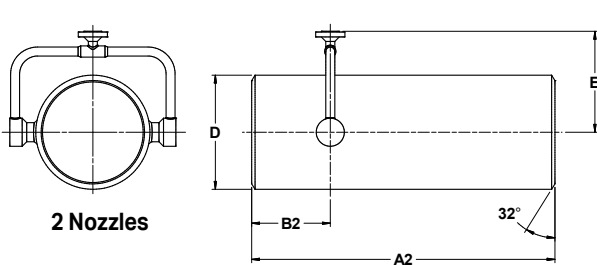
Nozzles Code	N° of Nozzles				
	1	2	4	8	12
DM 4	0.9	1.7			
DM 8	1.8	3.5	7		
DM 12	2.8	5.4	11		
DM 25	5.7	10	20	41	
DM 40	9.7	17	35	70	
DM 65	14	26	52	104	150



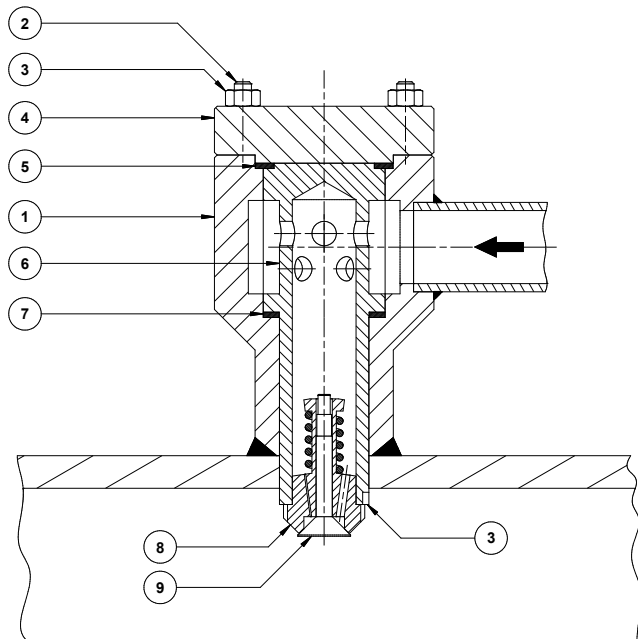
Multiple collector with four nozzles DM 25

Dimensions (in.)

Collector Nominal Diameter D (in.)	A	B	A1	B1	A2	B2	E
8	33.5	11.8			19.7	7.9	15.7
10	35.4	11.8			19.7	7.9	15.7
12	39.4	15.7			19.7	7.9	15.7
14	41.3	15.7			23.6	7.9	15.7
16	45.3	17.7	27.6	17.7	23.6	7.9	15.7
18	49.2	17.7	27.6	17.7	23.6	7.9	23.6
20	53.1	19.7	31.5	19.7	27.6	7.9	23.6
22	57.1	19.7	31.5	19.7			23.6
24	61.0	21.6	31.5	21.6			27.6
26	65.0	21.6	35.4	21.6			27.6
28	68.9	23.6	35.4	23.6			27.6
32	72.8	23.6	39.4	23.6			31.5
36	76.8	27.6	39.4	27.6			31.5
40	82.7	27.6	43.3	27.6			35.4



Construction Materials



Nozzle DM Detail

Item	Part	Material
1	Body	ASTM A 105 ASTM A182 F11 / F22 /F91
2	Bolts	ASTM A 193 Gr. B7
3	Nuts	ASTM A 194-2H
4	Body Flange	ASTM A 105 ASTM A182 F11 / F22 /F91
5	Body Gaskets	AISI 316 + Graphite
6	Injector Retainer	ASTM A 182 F6NM
7	Retainer Gasket	AISI 316 + Graphite
8	Injector Nozzle	AISI 422
9	Plug	AISI 17-4 PH H1100
10	Spring	Inconel X750

The information and specifications contained in this bulletin are believed to be accurate. However, they are for information purposes only and should not be considered as certified. Valtek Sulamericana products are continuously improved and the specifications, dimensions and information contained herein may change without prior notice. For additional information or confirmation, consult your Valtek Sulamericana representative.

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Quality Management System



ISO 9001-2015

Certificate N° 311001 QM 15

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