


# MDAV-S



  
*Engineering  
GREAT Solutions*

**Venturi-style desuperheater**

# MDAV-S

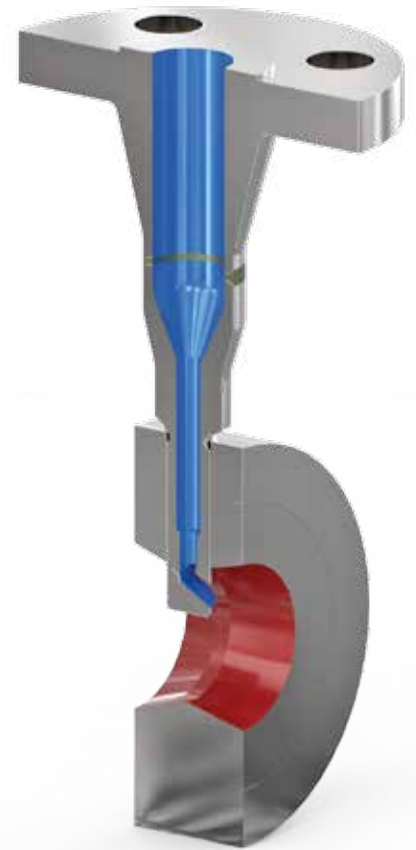
The MDAV-S desuperheater is designed for the attemperation of steam in small diameter pipelines. It features a single spray water nozzle installed into a flange, and allows - with high accuracy - control of the steam temperature down to 8°C / 15°F above saturation temperature.

## Key features

The MDAV-S is mostly used in industrial and municipal power and district heating systems as well as in the process industry. It is used for temperature control of superheated steam. Its simple design and lack of moving parts makes it very reliable, and reduces the need for service.

Spray water is controlled through an external spray water valve, and is then introduced to the superheated steam

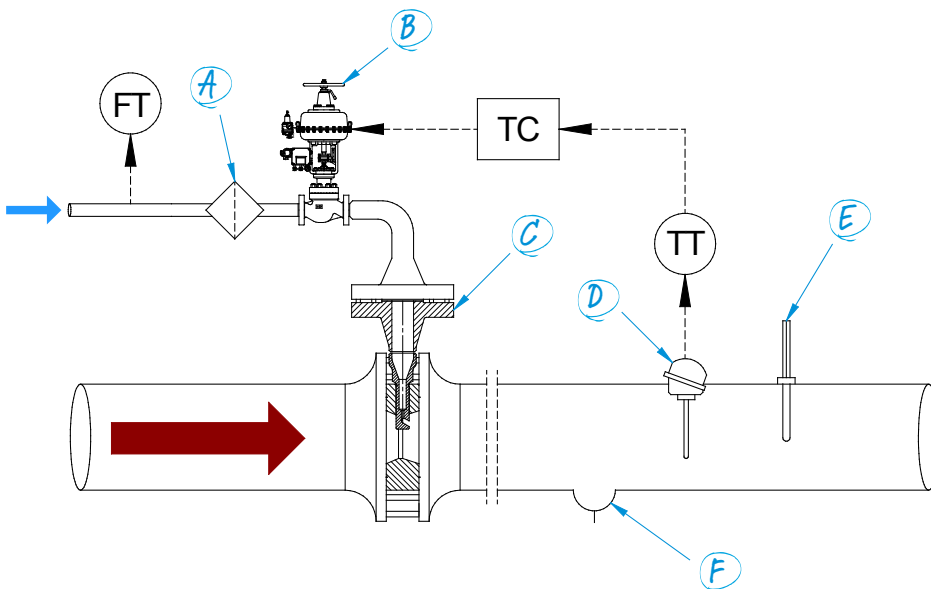
through a fixed nozzle installed in the steam flange. The venturi design, with the sharp edge against the flow, guarantees a high steam velocity at the point of water injection, which in turn improves evaporation of the spray water with a minimal risk of water impingement on the pipe wall.



## Benefits

- > Accurate temperature control - down to 8°C / 15°F above the saturation temperature
- > Requires little service - has no moving parts.
- > Fast evaporation / atomisation of the cooling water thanks to the venturi design
- > Simple and space saving installation

## Installation example

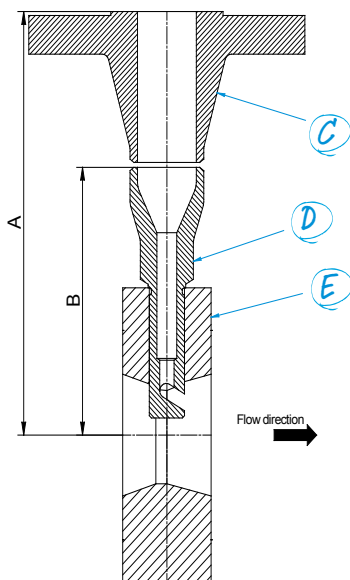


- A. Water strainer
- B. External spray water control valve
- C. MDAV-S desuperheater
- D. Temperature sensor
- E. Visual temperature instrumentation
- F. Drain
- FT. Flow transmitter
- TC. Temperature control
- TT. Temperature transmitter

## Product specification

<b>Nozzle</b>		<b>Pressure class</b>		<b>Other options</b>	
Material	EN 10222-2 11CrMo9-10 (S)A-182 F22Cl.3	ANSI 600 or 1500		The MDA-VS is a standardised product, with options limited to what is described within this document. If customised adaptations (e.g. but not limited to materials, water connections, special venturi designs, etc.) are desired, IMI CCI recommends the MDA-V.	
Rangeability	Determined by water valve	<b>Steam connection</b>			
		Flange size	2" - 4"		
		Materials	EN 10222-2 11CrMo9-10 (S)A-182 F22Cl.3		
		Pressure drop	max 5 bar / 70 psi		
<b>Design code</b>					
EN 12516-2 / PED					
ASME B16.34					
ASME B16.34 / PED					
<b>Water connection</b>					
Flange size	1"				
Material	EN 10222-2 11CrMo9-10 (S)A-182 F22Cl.3				

## Dimensions



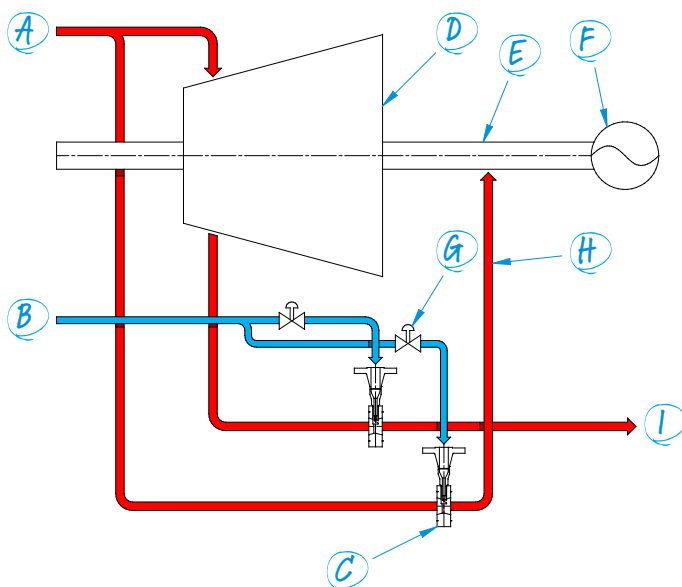
- A. See table
- B. See table
- C. Water flange
- D. Spray nozzle
- E. Steam flange

Size	l / h	US gal. / h
A0	375	99
A	750	198
B	1500	396
C	3000	792

0.6 x Steam pipe Ø
0.7 x Steam pipe Ø
0.8 x Steam pipe Ø

Steam pipe Ø	A [mm]	B [mm]
2"	202	120
2,5"	217	135
3"	227	145
4"	247	165

## Application example



- A. High pressure steam
- B. Feed water / condensate
- C. MDAV-S desuperheater
- D. Steam turbine
- E. Steam turbine shaft
- F. Generator
- G. External spray water control valve
- H. Shaft sealing steam / gland steam
- I. Turbine extraction to process steam\*

\* Suitable for steam pipe dimensions up to 4"

**IMI CCI Australia**

33 South Corporate Avenue  
Rowville  
Melbourne 3178  
Australia

Tel: +61 3 9213 0800

**IMI CCI China**

B3, 303 Xinke Road  
Qingpu  
Shanghai  
201707  
PR China

Tel: +86 21 3973 8000  
Fax: +86 21 6495 0620

**IMI CCI Korea**

14 Dangdong 2-ro  
Munsan-eup  
Paju-si  
Gyeonggi-do  
Korea 10816

Tel: +82 2 792 1877  
Fax: +82 2 792 1878

**IMI CCI SriCity**

No 900 North R-1 Sri City SEZ  
Sathyavedu Mandal  
Chittoor District  
Andhra Pradesh 517588  
India

Tel: +91 85 7639 8000  
Fax: +91 85 7639 8035

**IMI CCI Austria**

Lemböckgasse 63/1  
1230 Wien  
Austria

Tel: +43 1 869 27 40  
Fax: +43 1 865 36 03

**IMI CCI Dubai**

P.O. Box 17827  
Light Industrial Unit  
BJ04 South Zone 1  
Jebel Ali – Dubai  
United Arab Emirates

Tel: +971 4 886 1477  
Fax: +971 4 886 1476

**IMI CCI Malaysia**

K-7-5 & K-7-6  
Solaris Mont Kiara, SOHO  
Jalan Solaris, Mont Kiara  
50480 Kuala Lumpur  
Malaysia

Tel: +60 3 6412 3500  
Fax: +60 3 6412 3588

**IMI CCI Sweden**

Industrigatan 3  
661 29 Säffle  
Sweden

Tel: +46 533 689 600  
Fax: +46 533 689 601

**IMI CCI Bangalore**

6th floor Warp tower SJR i park  
Plot #13 14 & 15 EPIP Zone  
Phase 1  
Whitefield Road  
Bangalore 560066  
India

Tel: +91 80 4030 3500  
Fax: +91 80 4030 3531

**IMI CCI Houston**

4525 Kennedy Commerce Drive  
Houston  
Texas 77032  
USA

Tel: +1 832 467 7200  
Fax: +1 713 849 2948

**IMI CCI RSM**

22591 Avenida Empresa  
Rancho Santa Margarita  
California, 92688  
USA

Tel: +1 949 858 1877  
Fax: +1 949 858 1878

**IMI CCI Switzerland**

Itaslenstrasse 9  
CH-8362 Balterswil  
Switzerland

Tel: +41 52 264 9500  
Fax: +41 52 264 9501

**IMI CCI Brazil**

Rua Itapeva 286  
cj 95 to 98  
Sao Paulo  
CEP 01332-000  
Brasil

Tel: +55 11 2691 3361  
Fax: +55 11 2539 0287

**IMI CCI Italy**

Via Giacomo Leopardi 26  
20123  
Milano  
Italy

Tel: +39 02 4345 8611  
Fax: +39 02 4345 8624

**IMI CCI Singapore**

29 International Business Park  
ACER Building Tower A  
#04-01

Singapore 609923  
Tel: +65 6653 7000  
Fax: +65 6822 7001

**IMI CCI UK**

Unit A3  
Brookside Business Park  
Middleton  
Manchester  
M24 1GS

Tel: +44 (0)161 655 1680  
Fax: +44 (0)161 655 1689

**IMI CCI Brno**

K letišti 1804/3  
Štapanice 627 00  
Brno 27  
Czech Republic

Tel: +420 511 188 288  
Fax: +420 511 188 245

**IMI CCI Japan**

6-2-2 Takatsukadai  
Nishi-ku, Kobe  
Hyogo 651-2271  
Japan

Tel: +81 78 322 1220  
Fax: +81 78 322 1221

**IMI CCI South Africa**

18 Van Rensburg Avenue  
Klipfontein  
Witbank  
1035  
South Africa

Tel: +27 13 697 3305  
Fax: +27 13 697 3303

[imicci.sales@imi-critical.com](mailto:imicci.sales@imi-critical.com)

**IMI Critical Engineering**

Lakeside, Solihull Parkway  
Birmingham Business Park  
Birmingham B37 7XZ  
United Kingdom

Tel: +44 (0)121 717 3700  
Fax: +44 (0)121 717 3701

[www.imi-critical.com](http://www.imi-critical.com)