ENGINEERING
TOMORROW

Data sheet

Water mist nozzles
with anti-drip



hpp.danfoss.com

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1. Introduction

This nozzle has been widely used within the humidification industry for years. It is tailored for fine water atomization in applications like comfort humidity control, open space humidification, adiabatic cooling etc.

The nozzle generates billions of very small droplets at a size of 20 micron (D90-value), depending on pressure and water quality. The nozzle has a long life expectance; due to the stainless steel design the droplet size and spraying pattern will not rapidly deteriorate.

The stainless steel design allows operating the nozzle with ordinary tap water as well as any treated water like deionized, demineralized or reverse osmosis water.

All nozzles come with a built-in check valve as standard. In connection with Danfoss' advanced 3/2-way valve technology an absolutely "dripping-free" operation of the system can be achieved.

The impeller inside the nozzle is removeable and can very easily be cleaned if necessary.

If the recommendations in the manual are not followed, Danfoss reserves the right to void the warranty.

2. Features

- Dripping-free operation can be achieved
- Suitable for ordinary tap water as well as treated water
- Long service life
- Excellent spray pattern
- Easy to clean

3. Technical data and code nos.

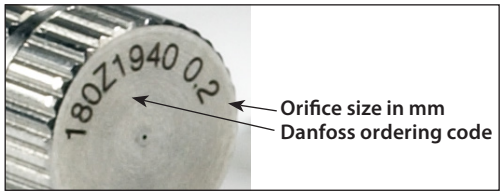
Liter per hour	Liter per min.	US Gallonen per min. (gpm)	US Pounds per hour	Orifice (mm/inch)	Spray angle	Max. pressure (barg/psig)	Nozzle thread	Code-number
2.7	0.050	0.013	6.6	0.15/0.06	60°	70/1000	12/24 UNC	180Z1939
4.0	0.067	0.018	8.9	0.20/0.008	60°	70/1000	12/24 UNC	180Z1940
4.9	0.082	0.022	10.8	0.22/0.009	60°	70/1000	12/24 UNC	180Z1941
6.8	0.113	0.030	14.9	0.30/0.012	60°	70/1000	12/24 UNC	180Z1949
8.5	0.142	0.037	18.7	0.33/0.013	60°	70/1000	12/24 UNC	180Z1944
11.0	0.172	0.045	22.7	0.40/0.016	60°	70/1000	12/24 UNC	180Z1945
11.3	0.189	0.050	25.0	0.50/0.020	60°	70/1000	12/24 UNC	180Z1948
13.8	0.230	0.061	30.0	0.60/0.023	60°	70/1000	12/24 UNC	180Z1950
16.4	0.273	0.072	36.0	0.80/0.031	60°	70/1000	12/24 UNC	180Z1951

Capacity measured at 70 barg / 1000 psig
Variation of capacity of +/- 10% may occur.

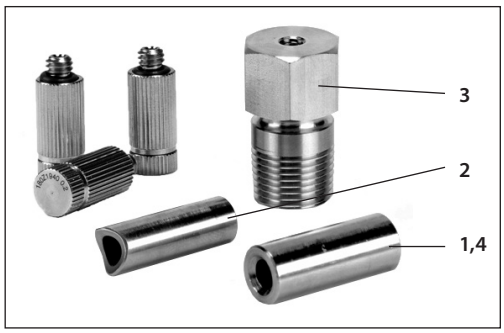
Nozzles and blind plug must be ordered in multiplum of 10 pieces.

Material	Body and spring stainless steel (AISI 303), ball and O-ring Viton
Thread	Outer thread of 10/24 or 12/24 UNC 2A, depth 4 mm/0.15 inch
Size and weight	Ø9,5mm/0.374 inch, Length 20 mm/0.78 inch; 9,0 g/0.32 oz

4. Marking on nozzles



5. Adapters



Version	Connections	Material	Weight	Lenght (mm/inch)	Code-number
1	12/24 UNC 2B (female) to Ø12 mm / 0.47 inch pipe (male)	AISI 303	20 g/0.7 oz.	30/1.18	180Z0022
2	12/24 UNC 2B (female) to Ø10 mm / 0.39 inch pipe (male)	AISI 303	12 g/0.4 oz.	30/1.18	180Z0023
3	12/24 UNC 2B (female) to 3⁄8 inch NPT (male)	AISI 303	55 g/1.94 oz.	34/1.34	180Z0029
4	12/24 UNC 2B (female) to Ø9,525 mm / 3⁄8 inch pipe (male)	AISI 303	12 g/0.4 oz.	30/1.18	180Z0047

Adapter no. 2 is suitable to be welded on a stainless steel pipe.

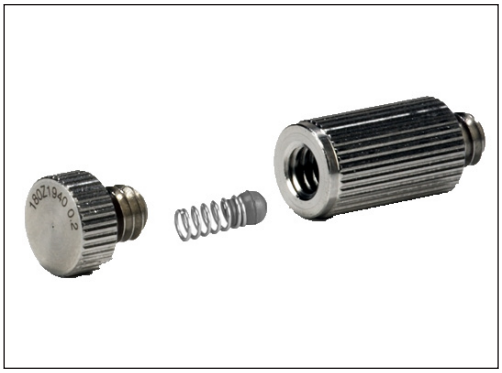
7. No dripping operation

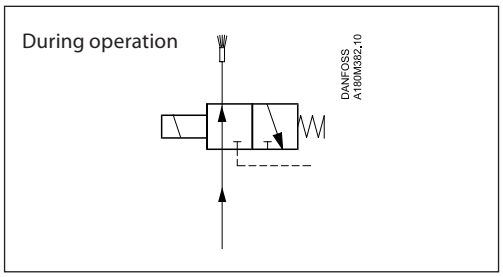
The integrated spring loaded check valve closes at a pressure of approx. 5 barg / 70 psig preventing water from dripping when the nozzle is shut down.

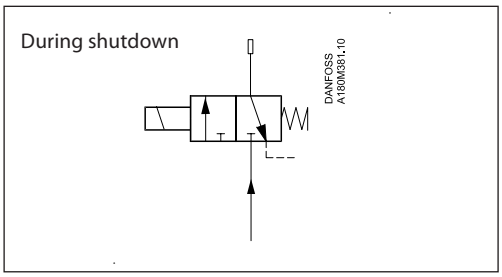
To achieve the optimum performance, the supply line pressure should be relieved rapidly the moment the nozzle is shut down.

Danfoss 3/2-way valves allow relieving the pressure instantaneously to atmosphere.

In tap water applications, calfication of the nozzles can thus be widely avoided.

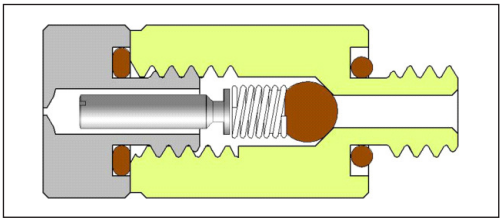






7. Cleaning

For cleaning purposes, the nozzle can very easily be taken apart and the impeller can be removed.



8. Filtration

Generally, good filtration of the water increases the service-life of the nozzle and reduces the risk of clogging.

9. Mounting

The nozzle is easy to install; it is hand tightened and comes with an O-ring seal, by means no other sealing materials like Loclite or Teflon tape are needed for installation.

To prevent particles from entering into the system and clogging the nozzles the following procedure must be followed:

- Deburr and clean pipes and fittings prior to installation
- Flush the system with water after assembling and before the nozzles are mounted.

10. Blind plug

	Codenumber
Blind plug for 12/24 UNC	180Z1938



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