

## Nessie® Water Mist Nozzles



### Applications

The nozzles are tailored to atomize water in high pressure water mist systems. The nozzles are very suitable for applications within e.g.:

- Humidification
- Lumber drying
- Fire fighting

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.

For even and far-reaching atomization of the water, relatively many nozzles with smaller capacity are superior to few nozzles with large capacity.

### Benefits

- Suitable for ordinary tap water as well as treated water
- Long service life
- Excellent spray pattern

### Filtration

The stainless steel nozzles have a built-in strainer. The strainer is 140 mesh based on 920 micron thread and 130 × 130 gaps.

The brass nozzles are delivered without strainer, prefiltration is however highly recommended.

It is a general rule that the better the filtration of the water, the higher the expected service life of the nozzles, and the less risk of clogging.

Technical data and code numbers

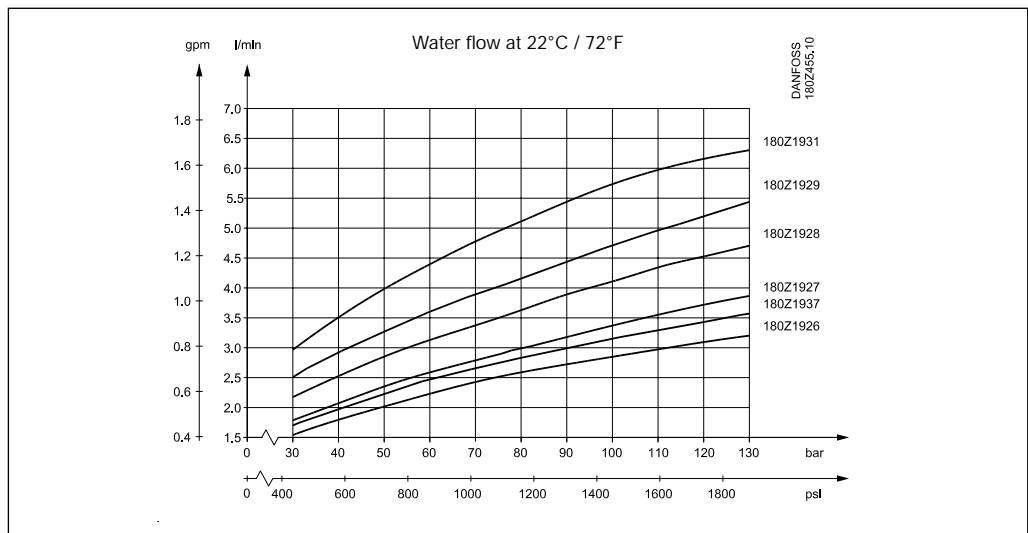
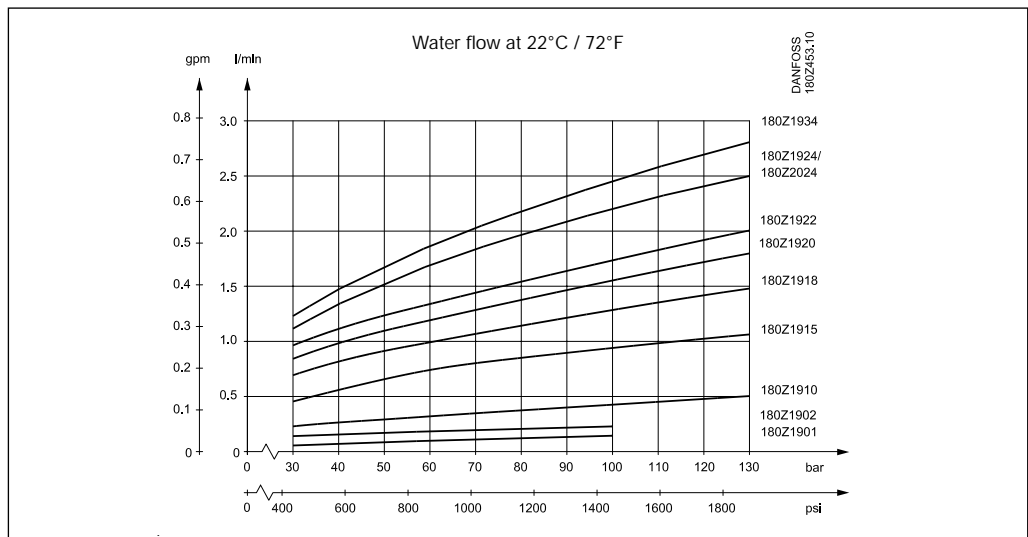
Litre per hour	Litre per min.	US Gallon per hour	US Gallon per min.	Spray angle	Max. pressure (bar / psi)	Material	Nozzle thread	Code number
10.92	0.18	2.9	0.048	60°	100 / 1450	Brass	9/16" 24UNEF	180Z1901
17.04	0.28	4.5	0.075	60°	100 / 1450	Brass	9/16" 24UNEF	180Z1902
25.2	0.42	6.6	0.11	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1910
55.2	0.92	14.4	0.24	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1915
75.0	1.25	19.8	0.33	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1918
93.0	1.55	24.5	0.41	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1920 *
105	1.75	27.7	0.46	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1922 *
130	2.18	42.0	0.70	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1924
143	2.39	37.8	0.63	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1934 *
172	2.87	45.6	0.76	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1926
188	3.13	49.8	0.83	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1937
202	3.36	53.4	0.89	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1927
246	4.11	65.1	1.08	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1928 *
282	4.7	74.5	1.24	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1929 *
344	5.74	91.2	1.52	60°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z1931
130	2.18	42.0	0.70	80°	130 / 1900	AISI 304 / 316	M13 x 1 mm	180Z2024

Capacities are measured at 100 bar / 1450 psi operation pressure.

The nozzles are delivered in packages of 10 pcs., and must therefore be ordered in multiplum of 10 pcs

\* Not available from stock

Flow characteristics



**Drop size by various pressure**

The drop size is depending on the pressure. The distribution of droplets shown below is based on average measurements from different nozzle inserts:

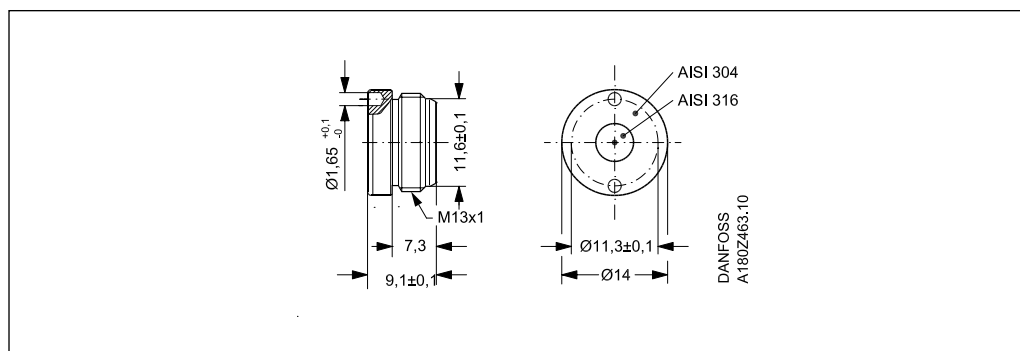
100 bar / 1450 psi:

Drop size diameter	Distribution of droplets
0 - 25 micron meter	13%
25 - 50 micron meter	85%
50 - 80 micron meter	2%

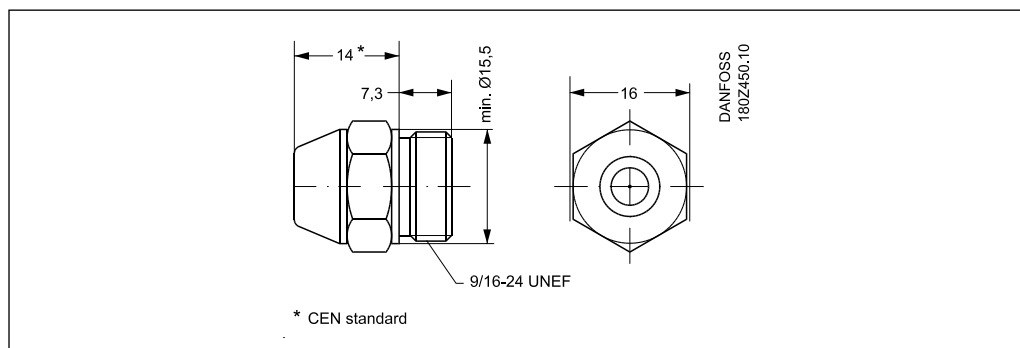
80 bar / 1160 psi:

Drop size diameter	Distribution of droplets
0 - 25 micron meter	5%
25 - 50 micron meter	80%
50 - 80 micron meter	15%

**Dimensions (mm)  
Stainless steel nozzles**

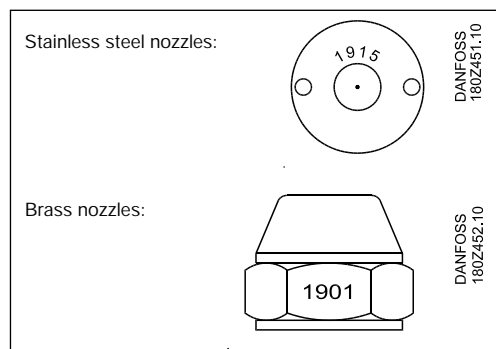


**Dimensions (mm)  
Brass nozzles**

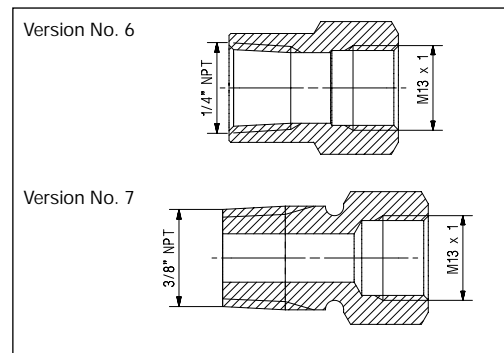
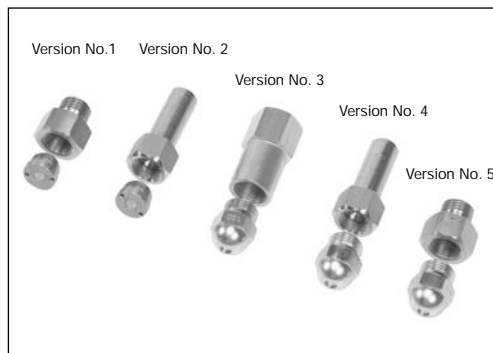


**Marking on the nozzle**

The nozzles are marked with the four last digits of the code number for easy reordering:



Nozzle adapters



Version No.	Nozzle	Adaptor version	Material	Code number
1	M13 x 1	G 1/4", outer thread	AISI 316	180Z0016
2	M13 x 1	12 mm pipe	AISI 316	180Z0009
3	9/16" 24 UNEF	G 1/4", inner thread	Brass	To be advised
4	9/16" 24 UNEF	12 mm pipe	AISI 316	180Z0017
5	9/16" 24 UNEF	G 1/4", outer thread	AISI 316	180Z0018
6	M13 x 1	1/4" NPT inner thread	AISI 316	180Z0027
7	M13 x 1	3/8" NPT outer thread	AISI 316	180Z0028

The adapters are delivered in packages of 10 pcs, and must therefore be ordered in multiplum of 10 pcs.

Nozzle and adapter connection

To avoid corrosion, high pressure stainless steel pipes and fittings must be used.

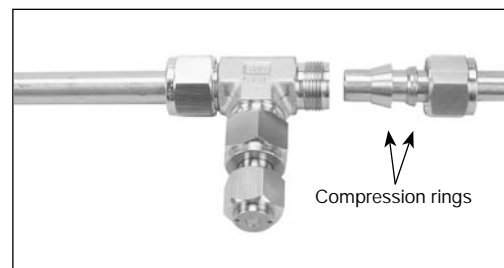
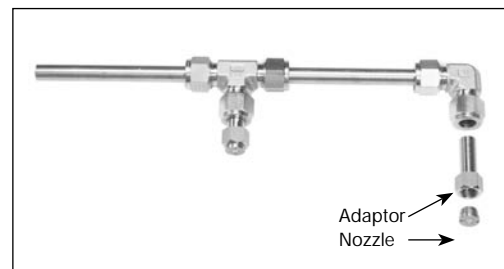
*Recommended high pressure pipe:*  
 Seamless stainless steel pipe according to standard ASTM 269 TP 316L / DIN2391 – C.  
 12 x 1.5 mm  
 Working pressure: 381 bar / 5525 psi  
 Burst pressure: 1514 bar / 21950 psi

*Recommended fittings:*  
 Stainless steel twin ferrule compression ring fittings.

*Recommended Tight gel:*  
 Tight gel must be used between the nozzle and the adaptor.  
 Danfoss recommends Loctite 542 hydraulic thread tight gel.  
 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 the installation.
- Flush the system with water after assembling and before the nozzles are mounted.

**Tool**  
 For easy mounting and dismounting of the stainless steel nozzles, Danfoss offers a handy tool: Code number 180Z0021.



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