ENGINEERING
TOMORROW

Data sheet

Water mist nozzles

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1. Introduction

Application
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.

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

Features:

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

Filtration
The stainless steel nozzles have a built-in strainer.

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.
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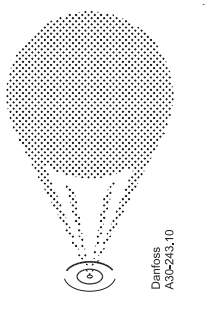
Spray pattern:



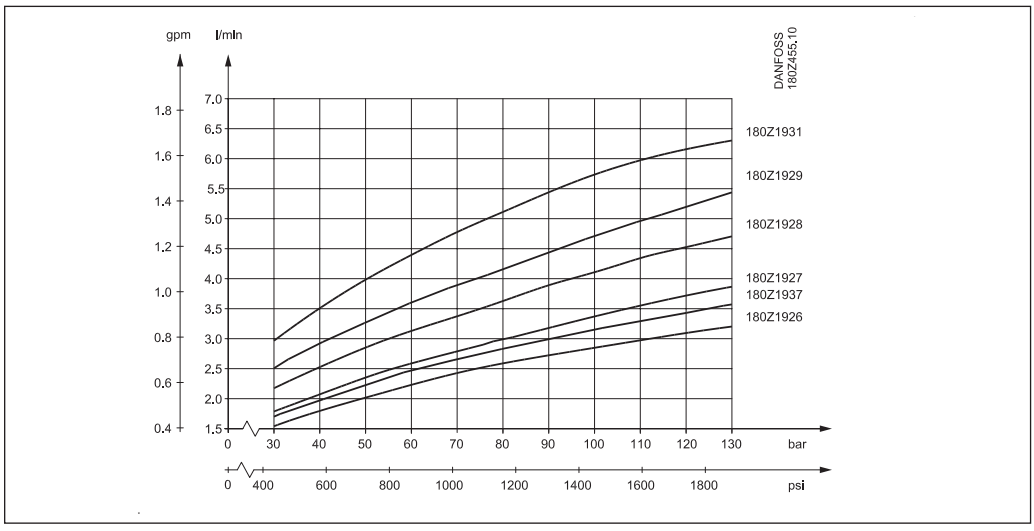
Full cone spray nozzles.

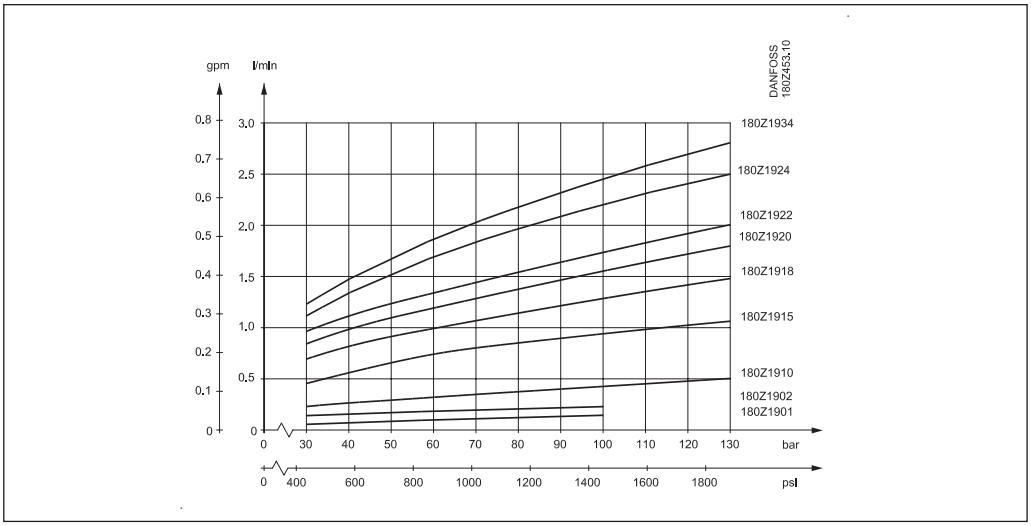
2. Technical data (Low version nozzle)

Litre per hour	Litre per min.	US Gallon per hour	US Gallon per min.	Spray angle	Operating pressure / Max. pressure bar (psi)	Nozzle / house Material	Nozzle thread	Code number
25.2	0.42	6.6	0.1	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1910
55.2	0.92	14.4	0.24	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1915
75.0	1.25	19.8	0.33	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1918
93.0	1.55	24.5	0.41	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1920
105	1.75	27.7	0.46	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1922
130	2.18	34..3	0.58	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1924
143	2.39	37.8	0.63	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1934
172	2.87	45.6	0.76	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1926
188	3.13	49.8	0.83	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1937
202	3.36	53.4	0.89	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1927
246	4.11	65.1	1.08	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1928
282	4.7	74.5	1.24	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1929
344	5.74	91.2	1.52	60°	100 / 130 (1450 / 1900)	AISI316 / 430	M13 × 1 mm	180Z1931

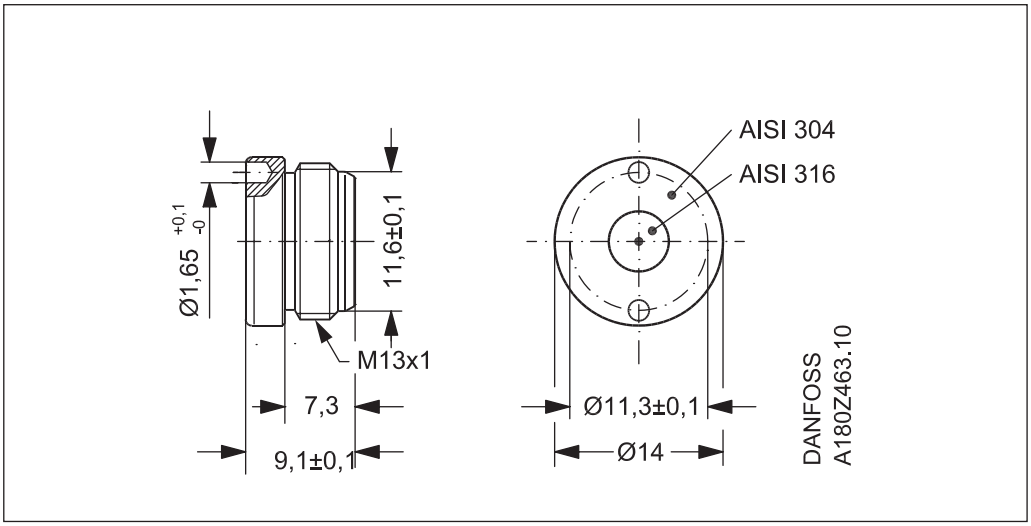
The nozzles are delivered in packages of 12 pcs., and must therefore be ordered in multiplum of 12 pcs

3. Flow characteristics (Low version nozzle)





4. Dimensions (Low version nozzle)

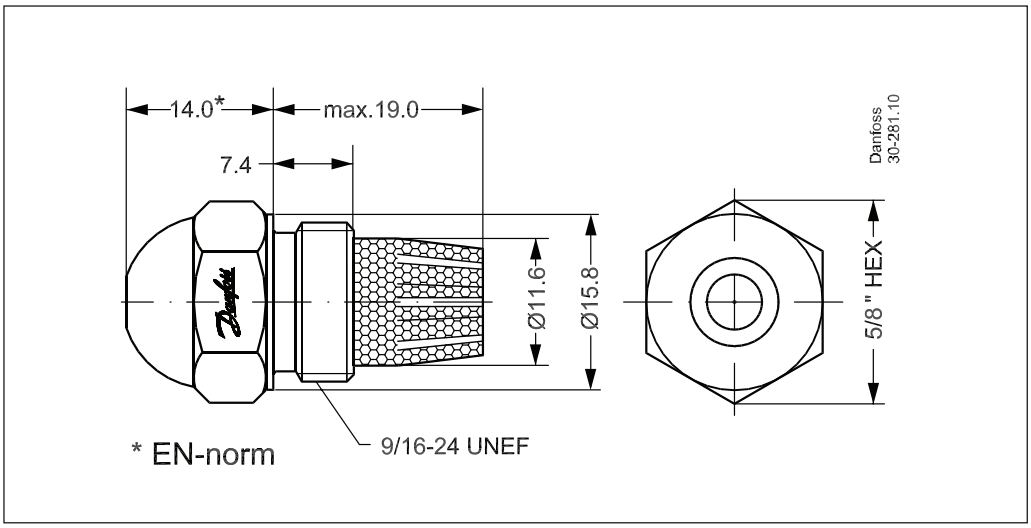


5. Technical data (High version nozzle)

Litre per hour	Litre per min.	US Gallon per hour	US Gallon per min.	Spray angle	Operating pressure / Max. pressure bar (psi)	House Material	Nozzle thread	Code number
3.0	0.05	0.79	0.013	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4750
5.0	0.08	1.32	0.022	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4754
7.5	0.13	1.97	0.033	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4760
10.0	0.17	2.63	0.044	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4764
12.5	0.21	3.29	0.055	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4767
15.0	0.25	3.95	0.066	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4769
17.5	0.29	4.61	0.077	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4741
20.0	0.33	5.26	0.088	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4742
25.0	0.42	6.58	0.110	60°	70 / 100 (1015 / 1450)	AISI 416	9/16-24 UNEF	030L4744

The nozzles are delivered in packages of 12 pcs., and must therefore be ordered in multiplum of 12 pcs.
Tightening torque: 15 to 20 Nm (1.5 to 2.0 kpm). Max. tightening torque: 25 Nm (2.5 kpm).

6. Dimensions (High version nozzle)



7. Drop size by various pressure (Both versions)

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]:

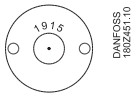
Drop size diameter	Distribution of droplets
0 - 25 micron meter	5%
25 - 50 micron meter	80%
50 - 80 micron meter	15%

8. Marking on the nozzle (Both versions)

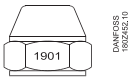
The nozzles are marked with the four last digits of the code number for easy reordering:

Other marking is only for internal use

Stainless steel nozzles:



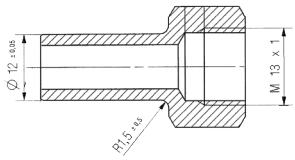
0.30 equals 3.0 l/h (at 70 bar)



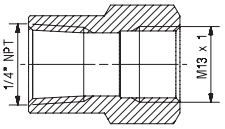
8. Accessories (Both versions)

8.1 Nozzle adaptors

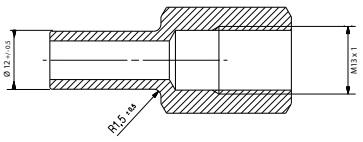
Type 1



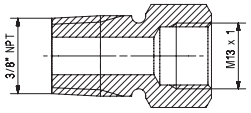
Type 3



Type 2



Type 4



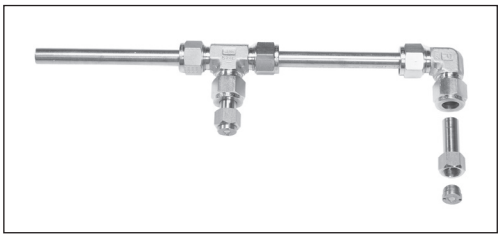
Type	Nozzle	Adaptor version	Material	Code number
1	M13 × 1	12 mm pipe	AISI 316	180Z0009
2	9/16" 24 UNEF	12 mm pipe	AISI 316	180Z0017
3	M13 × 1	¼" NPT inner thread	AISI 316	180Z0027
4	M13 × 1	⅜" NPT outer thread	AISI 316	180Z0028

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

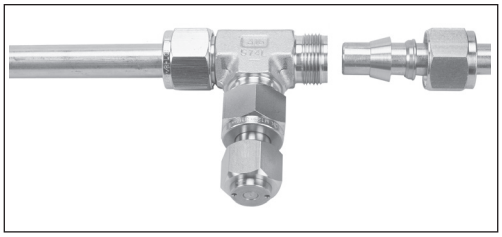
8.2 Nozzle and adaptor connection

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 × 1.5 mm
Working pressure: 381 bar [5525 psi]
Burst pressure: 1514 bar [21950 psi]

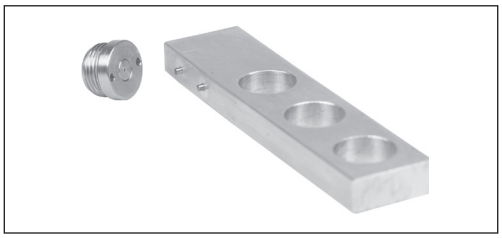


Recommended fittings:
Stainless steel twin ferrule compression ring fittings.



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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