

Data sheet

# ANTI-DRIP SPRAY NOZZLES Type HX-AD

**General data sheet**

For specific information on this product, please contact Danfoss A/S.

**Application**



With the HX-AD anti-drip nozzles, operators can achieve fluid cut-off near the orifice while maintaining pressure within the nozzle supply system. The HX-AD nozzle emits a finely atomized spray mist suitable for nearly all humidifying, light wetting, and evaporative cooling application.

The finer and more uniform the water mist, the greater the potential for adhesion between water and the surrounding particles. With our technology we can achieve humidification and cooling without wetting.

**Application and features**

- Adiabatic cooling
- Humidification
- Disinfection
- Dust control
- Cleaning
- Green houses
- Field proven performance for over 40 years
- Accurate, flow rate and spray angle
- Produces a finely atomized mist

**Availability**

- Standard flow rate: 0.30 – 1.35 GPH
- Spray angle: 80°
- Spray pattern: hollow or solid

Many nozzles are satisfactory for spraying liquids, but for a positive cut-off ask for the Danfoss Type HX-AD nozzle.

Our exclusive design produces a precisely controlled flow rate and spray angle and includes a liquid cut-off near the orifice. This can be very important in situations where excessive after drip can damage or destroy things located beneath the nozzle.

Chemicals, technical water, and even tap water, if allowed to drip, can foul the environment, or injure industrial materials.

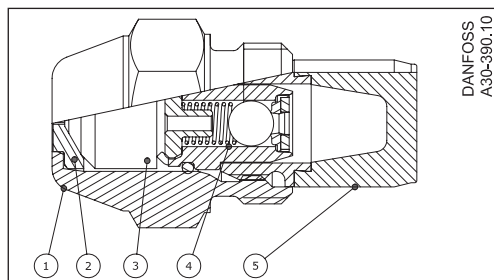
**Identification**

As an example nozzles are marked with the following.

Danfoss		HX-AD		0.50	80° H
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HX-AD	HX nozzle design with anti-drip valve
	Batch code
0.50	Flow rate (USgal/h)
80° H	Spray angle and spray pattern

**Design**

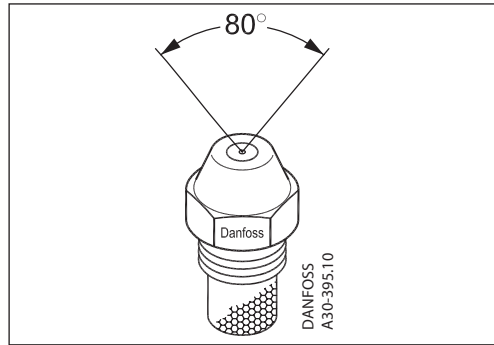


- 1: Nozzle housing
- 2: Disc
- 3: Cone
- 4: Anti-drip valve
- 5: HX screw

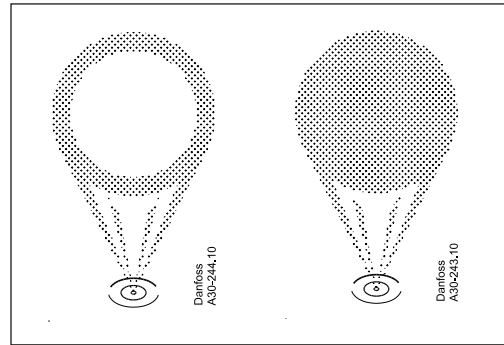
Data sheet

Anti-drip spray nozzles type HX-AD

Spray angle and spray pattern



80° spray angle



Hollow spray

Solid spray

Technical data

Material and construction

The nozzle housing and screw are tin/nickel plated brass. This coating is tight and extremely hard which gives a valuable corrosion resistance. Nickel silver is a trade name for a non-magnetic copper nickel alloy and used for the disc and cone. The material is very popular due to its corrosion resistance in water applications. The part in the cut-off valve are made of stainless steel and the O-ring and valve seat are FKM.

Cut-off valve

The cut-off valve has a closing pressure between 60-90 psi (~ 4 to 6 bar).

Flow rates

Flow rates at various operating pressures (Available in future) (GPH - water)

Nozzles with HX valve Flow rate USgal/h	10 bar	35 bar	50 bar	70 bar
0.30 gph 80°				
0.40 gph 80°				
0.50 gph 80°				
0.55 gph 80°				
0.60 gph 80°				
0.65 gph 80°				
0.75 gph 80°				
0.85 gph 80°				
1.00 gph 80°				
1.10 gph 80°				
1.25 gph 80°				
1.35 gph 80°				

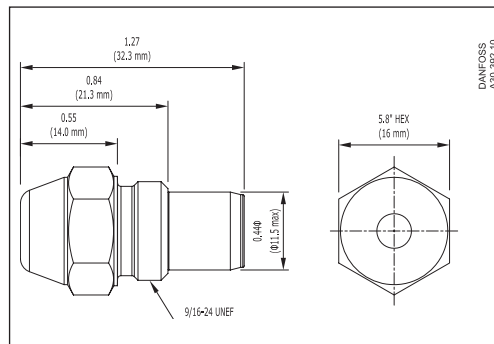
Tightening torque

Recommended tightening torque	130 to 180 lbs-in
	(15 to 20 Nm)
Maximum tightening torque	180 lbs-in
	(20 Nm)

Performance

Minimum recommended operation pressure is 145 psi (10 bar).  
Maximum current operation pressure: 85 psi (40 bar).  
Future maximum operation pressure: 1015 psi (70 bar).

Dimensions



Nozzle type HX-AD:

Current standard program

Reference capacity USgal/h	Spray angels & patterns						
	30°		45°		60°		80°
	Solid	Hollow	Solid	Hollow	Solid	Hollow	Solid
0.30 gph			+	+	+	+	S
0.40 gph			+	+	+	+	H
0.50 gph	+		+	+	+	+	H
0.55 gph	+		+	+	+	+	H
0.60 gph	+		+	+	+	+	H
0.65 gph	+		+	+	+	+	H
0.75 gph	+		+	+	+	+	+
0.85 gph	+		+	+	+	+	+
1.00 gph	+		+	+	+	+	H
1.10 gph	+		+	+	+	+	H
1.25 gph	+		+	+	+	+	+
1.35 gph	+		+	+	+	+	+

+ available on request

Danfoss A/S

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