

## Type AM31 AQUAMIST Nozzle Non-Automatic (Open)

### General Description

The TYCO Type AM31 AQUAMIST Nozzle is a stainless steel, open (non-automatic) pendent nozzle intended for use with engineered, watermist deluge systems. It is an intermediate pressure nozzle which utilizes a single fluid jet impinging on a diffuser to produce a spray having a range of water droplet sizes suitable for the extinguishment of Class K fires within industrial frying equipment.

The Type AM31 Nozzle may be installed in exposed pendent applications using standard pipe and threaded fittings. They may also be installed in recessed pendent applications using a unique threaded or socket-weld fitting with integrated tethered cap assembly. The cap conceals the nozzle, separating during system discharge but remaining attached by a sturdy length of chain. Refer to Technical Data Sheet TFP2242 for further details on the TYCO Threaded or Socket-Weld Fittings.

It is recommended that the end user be consulted with respect to the suitability of the materials of construction for any given corrosive environment. The effects of ambient temperature, concentration of chemicals, and gas/chemical velocity should be considered, at a minimum, along with the corrosive nature to which the nozzles may be exposed.

#### IMPORTANT

Refer to Technical Data Sheet TFP2300 for warnings pertaining to regulatory and health information.

Always refer to Technical Data Sheet TFP700 for the "INSTALLER WARNING" that provides cautions with respect to handling and installation of sprinkler systems and components. Improper handling and installation can permanently damage a sprinkler system or its components and cause the sprinkler to fail to operate in a fire situation or cause it to operate prematurely.

#### NOTICE

The TYCO Type AM31 AQUAMIST Nozzles described herein must be installed and maintained in compliance with this document and with the applicable standards of the NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), in addition to the standards of any authorities having jurisdiction. Failure to do so may impair the performance of these devices.

The design of individual watermist systems can vary considerably, depending on the characteristics and nature of the hazard and the basic purpose of the watermist system. Because of these variations, the design of watermist systems for fire protection must only be performed by experienced designers who thoroughly understand the limitations as well as capabilities of such systems.

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. Contact the installing contractor or sprinkler manufacturer with any questions.

### Technical Data

**Minimum Working Pressure**  
See specific application data sheet

**Maximum Working Pressure**  
250 psi (17,2 bar)

**Discharge Coefficient**  
K = 0.30 GPM/psi<sup>1/2</sup>  
(K = 4,3 LPM/bar<sup>1/2</sup>)

**Thread Connection**  
1/2 inch NPT

**Finish**  
Stainless Steel

Physical Characteristics	
Frame .....	Stainless Steel
Strainer .....	Stainless Steel
Orifice Insert .....	Stainless Steel
Diffuser .....	Stainless Steel
Dust Cap .....	Fluorosilicone

The smallest waterway (orifice) diameter of the Orifice Insert is nominally 0.130 inches (3,3 mm). The diameter of the Inlet Strainer perforations is nominally 0.059 inches (1,5 mm).



### Design Criteria

Obtain guidance for the design of a watermist system that utilizes the TYCO Type AM31 AQUAMIST Nozzle from the Technical Services Department.

The Type AM31 AQUAMIST Nozzle can be installed in the pendent or angular position.

### Installation

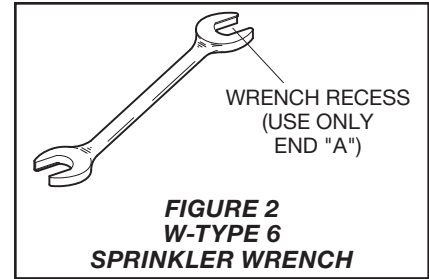
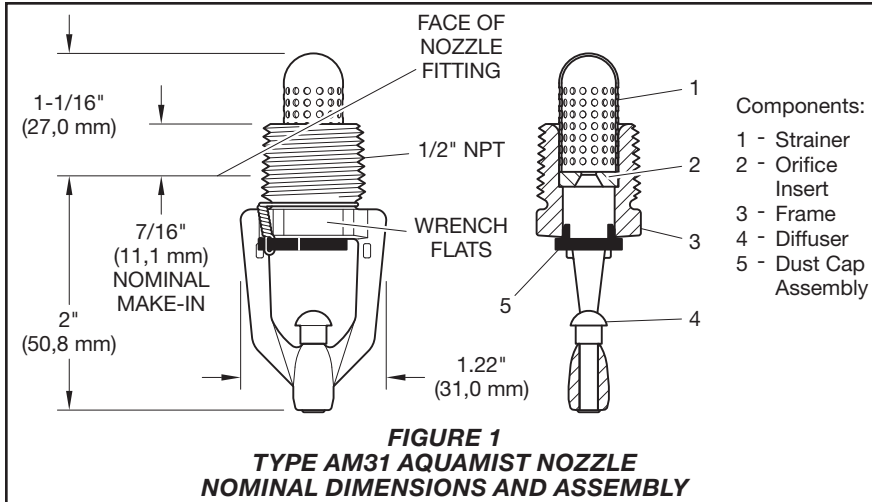
The TYCO Type AM31 AQUAMIST Nozzle must be installed in accordance with this section.

#### General Instructions

A leak-tight 1/2 inch NPT Nozzle joint should be obtained by applying a minimum-to-maximum torque of 7 to 14 ft.-lbs. (9,5 to 19,0 Nm). Higher levels of torque can distort the nozzle inlet and cause leakage or impairment of the nozzle.

**Step 1.** With TEFLON paste sealant applied to Nozzle threads, hand tighten Nozzle into nozzle fitting.

**Step 2.** Tighten nozzle into 1/2 inch NPT nozzle fitting using only W-Type 6 Wrench (Figure 2). With reference to Figure 1, W-Type 6 Wrench is to be applied only to Wrench Flats.



## Care and Maintenance

The TYCO AQUAMIST Nozzle Type AM31 must be maintained and serviced in accordance with this section.

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection system from the proper authorities and notify all personnel who may be affected by this action.

Type AM31 AQUAMIST Nozzle must never be painted, plated, coated or altered in any way after leaving the factory; otherwise, the spray performance may be impaired.

Care must be exercised to avoid damage to the nozzles -before, during, and after installation. Nozzles damaged by dropping, striking, wrench twist/slip-page, or the like, must be replaced.

Frequent visual inspections are recommended to be initially performed for nozzles installed in potentially corrosive atmospheres to verify the integrity of the materials of construction and finish as they may be affected by the corrosive conditions present for a given installation. Thereafter, annual inspections per NFPA 25 are required.

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the NATIONAL FIRE PROTECTION ASSOCIATION, for example, NFPA 25, in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or sprinkler manufacturer with any questions.

Water spray fixed systems should be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes

## Limited Warranty

For warranty terms and conditions, visit [www.tyco-fire.com](http://www.tyco-fire.com).

## Ordering Procedure

Contact your local distributor for availability. When placing an order, indicate the full product name and Part Number (P/N).

**Type AM31 AQUAMIST Nozzle**  
 Specify: Type AM31 AQUAMIST Nozzle, Stainless Steel finish, P/N 28229

**Type AM31 AQUAMIST Nozzle with Dust Cap**  
 Specify: Type AM31 AQUAMIST Nozzle, Stainless Steel, with Fluorosilicone Dust Cap, P/N 28250

**Replacement Parts Dust Cap Assembly**  
 Specify: Model F885 Dust Cap Assembly, Fluorosilicone, with Stainless Steel Wire,\* P/N 28247

\* Refer to Technical Data Sheet TFP2299 for installation instructions.

**Sprinkler Wrench**  
 Specify: W-Type 6 Wrench, P/N 56-000-6-387