Ultra Low Flow AQUAMIST Nozzles
Type ULF AM29
Automatic (Closed)

General Description
TYCO Ultra Low Flow AQUAMIST Nozzles Type ULF AM29 are closed (automatic) nozzles intended for use with engineered, water mist systems. They are low-pressure nozzles that utilize a single fluid jet impinging on a diffuser to produce a spray having a range of water droplet sizes suitable for the control of Class A fires and the protection of data centers.

It is recommended that the end user be consulted with respect to the suitability of the materials of construction and finish 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.

NOTICE
The Type ULF AM29 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 water mist systems can vary considerably, depending on the characteristics and nature of the hazard and the basic purpose of the water mist system. Because of these variations, the design of water mist 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 product manufacturer with any questions.

Approvals
The TYCO Type ULF AM29 AQUAMIST Nozzle in a 57°C (135°F) temperature rating and in a Natural Brass finish is FM Approved when used as part of a wet pipe system in HC-1 applications. The TYCO Type ULF AM29 AQUAMIST Nozzle in 57°C (135°F) and 68°C (155°C) temperature ratings and in a Natural Brass finish is FM Approved when used as part of a wet pipe or single-interlock pre-action system in protection of data processing equipment rooms/halls. In particular, the FM Approval testing was performed in accordance with FM Class 5560, “Approval Standard for Water Mist Systems.”

Technical Data
Discharge Coefficient
K=8.5 lpm/bar¹/₂ (K=0.59 gpm/psi¹/₂)
Thread Connection
1/2 Inch NPT
Finishes
Natural Brass
Pure White
Signal White
Chrome Plated
Temperature Ratings
Refer to Table A

Physical Characteristics
Frame: Brass
Strainer: Copper
Orifice Insert: Bronze
Button: Bronze
Sealing Assembly: Beryllium Nickel w/TEFLON
Ejection Spring: Stainless Steel
Bulb: Glass
Diffuser: Bronze
Loading Screw: Bronze

The smallest waterway (orifice) diameter of the Orifice Insert is nominally 4.4 mm (0.172 inches). The diameter of the Inlet Strainer perforations is nominally 3.2 mm (0.125 inches).

Table A: Temperature Rating Selection

<table>
<thead>
<tr>
<th>Temperature Rating</th>
<th>Bulb Fluid Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>57°C (135°F)</td>
<td>Orange</td>
</tr>
<tr>
<td>68°C (155°F)</td>
<td>Red</td>
</tr>
<tr>
<td>79°C (175°F)</td>
<td>Yellow</td>
</tr>
<tr>
<td>93°C (200°F)</td>
<td>Green</td>
</tr>
<tr>
<td>141°C (286°F)</td>
<td>Blue</td>
</tr>
<tr>
<td>182°C (360°F)</td>
<td>Mauve</td>
</tr>
</tbody>
</table>

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.
**Design Criteria**

Obtain guidance for the design of a water-mist system that utilizes the TYCO Type ULF AM29 AQUAMIST Nozzles from the Technical Services department.

**Installation**

TYCO Type ULF AM29 AQUAMIST Nozzles must be installed in accordance with this section.

**General Instructions**

Do not install any bulb type nozzle if the bulb is cracked or there is a loss of liquid from the bulb. With the nozzle held horizontally, a small air bubble should be present. The diameter of the air bubble is approximately 1.6 mm (1/16 inch) for the 57°C (135°F) to 2.4 mm (3/32 inch) for the 182°C (360°F) temperature ratings.

A leak-tight 1/2 inch NPT nozzle joint should be obtained by applying a minimum-to-maximum torque of 9.5 to 19.0 Nm (7 to 14 ft-lbs.). Higher levels of torque can distort the nozzle inlet and cause leakage or impairment of the nozzle.

Do not attempt to compensate for insufficient adjustment in the escutcheon plate by under- or over-tightening the nozzle. Re-adjust the position of the nozzle fitting to suit.
Step D. After the ceiling has been installed or the finish coat has been applied, slide on the Style 20 Closure over the Type ULF AM29 Nozzle and push the Closure over the Mounting Plate until its flange comes in contact with the ceiling.

**Note:** Absence of a Style 20 Recessed Escutcheon, which is used to cover a clearance hole, can delay the time to nozzle operation in a fire situation.

### Care and Maintenance

TYCO Type ULF AM29 AQUAMIST Nozzles 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.

Nozzles that are found to be leaking or exhibiting visible signs of corrosion must be replaced.

Automatic nozzles must never be painted, plated, coated, or otherwise altered after leaving the factory. Modified nozzles must be replaced. Nozzles that have been exposed to corrosive products of combustion but have not operated should be replaced if they cannot be completed cleaned by wiping the nozzle with a cloth or by brushing it with a soft bristle brush.

Care must be exercised to avoid damage to the nozzles before, during, and after installation. Nozzles damaged by dropping, striking, wrench twist/slippage, or the like, must be replaced. Also replace any nozzle that has a cracked bulb or that has lost liquid from its bulb (Ref. Installation section.)

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, in addition to inspections required by the authority having jurisdiction.

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 20, 25, and 750 - in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or product manufacturer with any questions.

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

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**Limited Warranty**

For warranty terms and conditions, visit www.tyco-fire.com.

**Ordering Procedure**

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

**Type ULF AM29 AQUAMIST Nozzles**

Specify: Type ULF AM29 AQUAMIST Nozzle with (specify) finish, (specify) temperature rating, P/N (specify)

<table>
<thead>
<tr>
<th>Finish</th>
<th>Temperature Rating</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Brass</td>
<td>57°C (135°F)</td>
<td>P/N 49-029-1-135</td>
</tr>
<tr>
<td></td>
<td>68°C (155°F)</td>
<td>P/N 49-029-1-155</td>
</tr>
<tr>
<td></td>
<td>79°C (175°F)</td>
<td>P/N 49-029-1-175</td>
</tr>
<tr>
<td>Pure White</td>
<td>57°C (135°F)</td>
<td>P/N 49-029-3-135</td>
</tr>
<tr>
<td></td>
<td>68°C (155°F)</td>
<td>P/N 49-029-3-155</td>
</tr>
<tr>
<td></td>
<td>79°C (175°F)</td>
<td>P/N 49-029-3-175</td>
</tr>
<tr>
<td>Signal White</td>
<td>57°C (135°F)</td>
<td>P/N 49-029-4-135</td>
</tr>
<tr>
<td></td>
<td>68°C (155°F)</td>
<td>P/N 49-029-4-155</td>
</tr>
<tr>
<td></td>
<td>79°C (175°F)</td>
<td>P/N 49-029-4-175</td>
</tr>
<tr>
<td>Chrome Plated</td>
<td>57°C (135°F)</td>
<td>P/N 49-029-9-135</td>
</tr>
<tr>
<td></td>
<td>68°C (155°F)</td>
<td>P/N 49-029-9-155</td>
</tr>
<tr>
<td></td>
<td>79°C (175°F)</td>
<td>P/N 49-029-9-175</td>
</tr>
<tr>
<td></td>
<td>93°C (200°F)</td>
<td>P/N 49-029-9-200</td>
</tr>
<tr>
<td></td>
<td>141°C (286°F)</td>
<td>P/N 49-029-9-286</td>
</tr>
<tr>
<td></td>
<td>182°C (360°F)</td>
<td>P/N 49-029-9-360</td>
</tr>
<tr>
<td>Reccessed Escutcheon</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specify: Style 20 Recessed Escutcheon with (specify*) finish, P/N (specify*)</td>
<td></td>
</tr>
</tbody>
</table>

* * Eastern Hemisphere sales only
** Previously known as Bright White

**Sprinkler Wrenches**

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

Specify: W-Type 7 Recessed Sprinkler Wrench, P/N 56-850-4-001

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