Reliable®

Model TNL280 Pendent Spray Nozzle

Designed primarily for use in tunnel fire protection

K28.0 (400 metric)
cULus Listed

Features

- cULus Corrosion Resistant Nozzle
- Distribution criteria for coverage up to 324 ft² (30.25 m²) per nozzle

Important! Reliable fire sprinklers must be handled, stored, and installed in accordance with the guidelines in Caution Sheet 310 and this bulletin. Failure to follow these instructions may result in unintended operation or nonoperation of the fire protection system.

Product Description

The Reliable Model TNL280 is a cULus Listed nonautomatic (open) spray nozzle for use in fixed fire protection systems. The Model TNL280 nozzle is intended for installation in the pendent position. The nozzle is provided with RASCO500 ceramic coating finish and is cULus Listed as corrosion resistant. Verify compatibility with the environment where the nozzle will be located prior to installation.



Model TNL280 Sprinkler

Application

The Model TNL280 nozzle is intended to be installed in accordance with NFPA 15. cULus Listed spray distribution and water spray density information are provided in Figure 3 and Table A, respectively, of this Bulletin. Water spray systems, including those used as tunnel fire protection systems, should only be designed by experienced fire protection system designers who understand the characteristics and limitations of all products used as part of the water spray system. The fire protection system designer should consider factors that may impact the performance of the water spray system, including, but not limited to, the fire hazard, surrounding construction, nozzle location, obstructions, and the effect of natural or mechanical ventilation.

Obstructions shall be addressed based on an engineering analysis of the impact of the obstruction on achieving the performance objectives of the fire protection system. The requirements of NFPA 13 for Obstructions to Sprinkler Discharge for Extended Coverage Pendent Spray Sprinklers may be used for guidance along with Figure 2. Fire protection system designers should ensure that the use of these guidelines on obstructions is consistent with the performance criteria for the fire protection system.

Listings and Approvals

Listed by Underwriters Laboratories, Inc. and UL Certified for Canada (cULus)
ActivFire Listed (Certificate afp-3198)

UL Listing Category

Nozzles, Spray Type, Fixed

UL Guide Number

VGYZ

Listed Water Spray Density for Installation for Coverage Area of 18' x 18' (5.5m x 5.5m) — **Table A**

Max. Nozzle Height Above Finished Floor ft (m)	Average Water Spray Density over the Coverage Area* gpm/ft² (mm/min)	Flow Rate gpm (L/min)	Operating Pressure psi (bar)
20 (6.1)	0.217 (8.8)	75 (285)	7 (0.5)
	0.37 (15.0)	125 (475)	20 (1.4)
35 (10.7)	0.176 (7.2)	75 (285)	7 (0.5)
	0.27 (11.0)	125 (475)	20 (1.4)

***Note:** Listed to provide +/- 15% of the Average Water Spray Density over the Coverage Area under test conditions specified in UL 2351.

Model TNL280 Spray Nozzle

Technical Specifications
Style: Pendent, Open Nozzle
Threads: 1" NPT or ISO7-1R1
Nominal K-Factor: 28.0 (400 metric)
Max. Working Pressure: 175 psi (12 bar)
Min. Working Pressure: 7 psi (0.48 bar)

Material Specifications
Nozzle Frame: Brass Alloy
Deflector Screw Retainer: Bronze Alloy
Deflector: Bronze Alloy

Nozzle Finish
RASCO500 Ceramic Coating(1)
- Blackout (Black)
- Titanium (Gray)

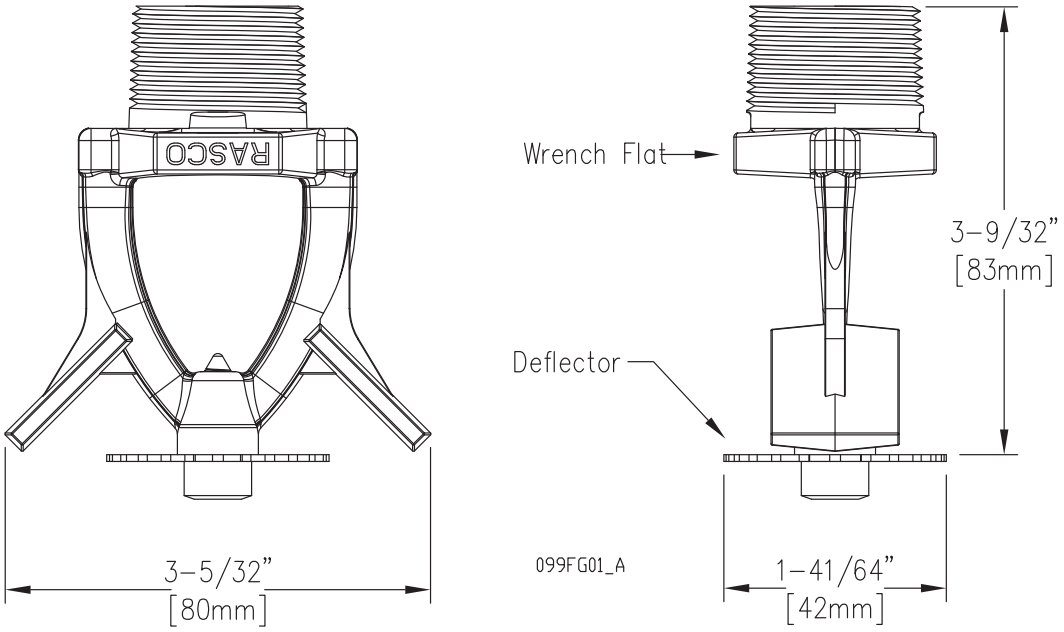
Wrench
Model W5

Listings and Approvals
cULus Listed

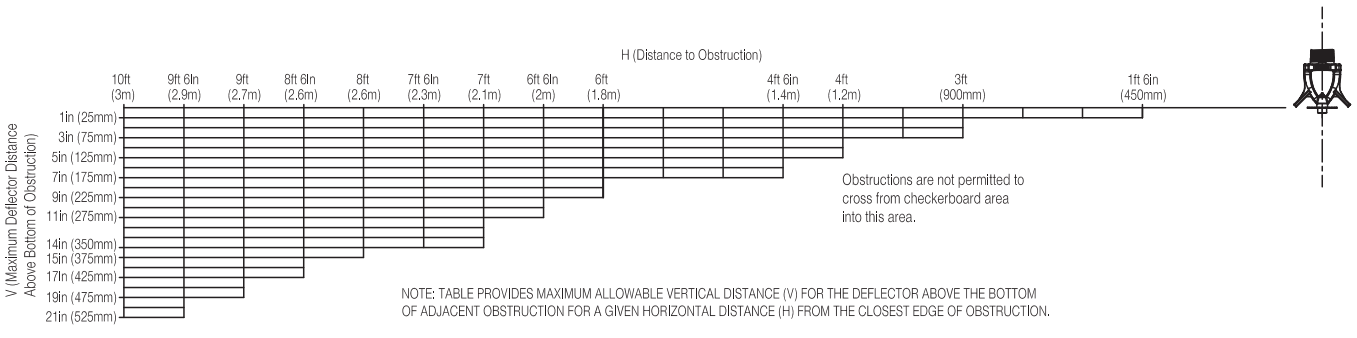


Notes:
1. cULus Listed as Corrosion Resistant

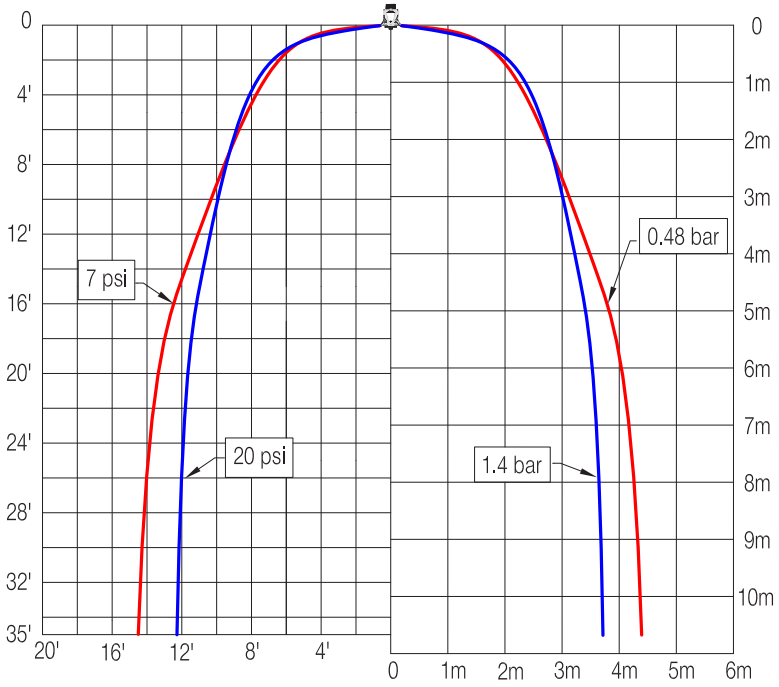
Model TNL280 Pendent Spray Open Nozzle Components and Dimensions — Figure 1



Model TNL280 Lateral Obstruction Criteria — Figure 2



Model TNL280 Pendent Spray Pattern Graph **Figure 3**



Model W5 Wrench



Installation

Model TNL280 nozzles are intended to be installed in accordance with NFPA 15, as well as the requirements of applicable Authorities Having Jurisdiction. Model TNL280 nozzles must be handled carefully. Nozzles should be stored in the original packaging until installed. Handle nozzles only by the frame and not by the deflector. Nozzles that are visibly damaged should not be installed.

Install the Model TNL280 nozzle by applying PTFE-based thread sealant to the male threads of the nozzle. Thread the nozzle into the sprinkler system fitting by hand, then tighten the nozzle using only the Reliable Model W5 wrench. The Reliable Model W5 wrench is designed to engage the nozzle's wrench flats; do not wrench any other part of the nozzle.

Recommended installation torque is 22 to 30 ft/lb (30 to 40 N/m). Do not exceed the maximum recommended torque. Exceeding the maximum torque may damage and impair the performance of the nozzle.

Maintenance

Reliable Model TNL280 should be inspected and the system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

It is recommended that the water spray system be inspected by an authorized technical personnel. The nozzle must be checked for physical damage, corrosion, external and internal obstruction, and blockage if any. The nozzle should be cleared or replaced if required.

The owner is solely responsible for maintaining the water spray system and components therein, so that it performs properly in actual conditions.

Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Patents

Patent Pending

Ordering Information

Specify the following when ordering:

Nozzle
- Model TNL280

Threads
- NPT
- ISO 7-1

Finish

RASCO500 Ceramic Coating[1]
- Blackout (Black)
- Titanium (Gray)

Wrench
- Model W5

P/N 9999970518