

Reliable®

Model N28T6 & N28T3 Specific Application ESFR Pendent Sprinklers

175 psi (12 bar) rated

Features

- cULus Listed Specific Application ESFR Sprinklers for protection of storage under ceiling heights up to 48 ft (14.6 m)
- Allows 4 ft (1.2 m) aisles and multiple-row racks in accordance with the 2022 edition of NFPA 13
- Model N28T3 allows transverse flue spaces as small as 3 in (75 mm)

Product Description

The Reliable Model N28T6 and N28T3 sprinklers are Early Suppression Fast Response (ESFR) sprinklers with a nominal K-factor of 28.0 (400 metric). The sprinklers use a fusible alloy solder link with a 212°F (100°C) temperature rating.

Model N28T6 and N28T3 sprinklers are cULus Listed Specific Application sprinklers for the protection of Class I-IV commodity and cartoned unexpanded Group A plastic storage in accordance with the guidelines in Table D. This includes palletized, solid piled, and open frame single-, double-, and multiple-row and portable rack arrangements in accordance with the 2022 edition of NFPA 13. The cULus Listed Specific Application Design criteria is for protection of storage up to 43 ft (13.1 m) tall under ceiling heights up to 48 ft (14.6 m). A minimum aisle width as narrow as 4 ft (1.2 m) is permitted.

In addition, the cULus Specific Application Listing for the Model N28T3 sprinkler permits open frame single- and double-row rack storage having transverse flue spaces with a minimum width of 3 in (75 mm).

To further the development of environmentally compatible and more sustainable construction methods, Reliable has developed and ASTM International has published an [Environmental Product Declarations \(EPD\) for the Model N28T6 and N28T3 sprinklers](#).

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.



Model N28T6
ESFR Sprinkler



Model N28T3
ESFR Sprinkler

Models N28T6 and N28T3 ESFR Pendent Sprinkler

Table A

Model	Nominal K-factor gpm/psi ^{1/2} (L/min/bar ^{1/2})	Min. Transverse Flue Space Width	Approvals	Sprinkler Identificaiton Number (SIN)
N28T6	28.0 (400)	6" (150mm)	cULus	R603
N28T3		3" (75mm)	cULus	R604

Model N28T6 Specific Application ESFR Sprinkler

SIN R603

Technical Specifications

Style: Pendent
Connection: 1" NPT or ISO7 R-1 threads
Nominal K-Factor: 28.0 (400)
Max. Working Pressure: 175 psi (12 bar)

Sensitivity

Fast-Response

Temperature Rating

212°F (100°C)

Material Specifications

Thermal Sensor: Nickel Alloy Solder Link
Sprinkler Frame: Brass Casting
Button: Copper Alloy
Sealing Assembly: Nickel with PTFE
Load Screw: Stainless Steel
Deflector: Bronze
Levers: Stainless Steel
Ejection Spring: Stainless Steel

Sprinkler Wrench

Model W5

Listings and Approvals

cULus

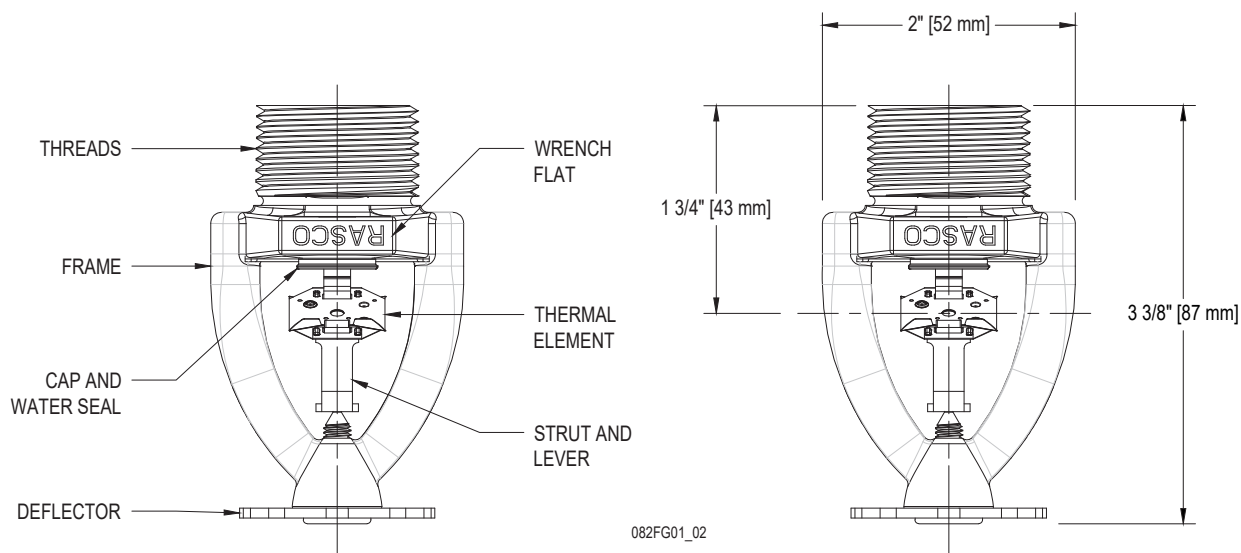
Sprinkler Finishes

Standard (Brass Only)



Model N28T6 Sprinkler Components and Dimensions

Figure 1



Model N28T6 Sprinkler Hydraulic Design Criteria

Table B

Max. Ceiling Height ft (m)	Min. Operating Pressure psi (bar)
10 (3.0)	35 (2.4)
20 (6.1)	
30 (9.1)	
40 (12.0)	
48 (14.6)	

Model N28T3 Specific Application ESRF Sprinkler

SIN R604

Technical Specifications

Style: Pendent
Connection: 1" NPT or ISO7 R-1 threads
Nominal K-Factor: 28.0 (400)
Max. Working Pressure: 175 psi (12 bar)

Sensitivity

Fast-Response

Temperature Rating

212°F (100°C)

Material Specifications

Thermal Sensor: Nickel Alloy Solder Link
Sprinkler Frame: Brass Casting
Button: Copper Alloy
Sealing Assembly: Nickel with PTFE
Load Screw: Stainless Steel
Deflector: Bronze with Nickel Plating
Levers: Stainless Steel
Ejection Spring: Stainless Steel

Sprinkler Wrench

Model W5

Listings and Approvals

cULus

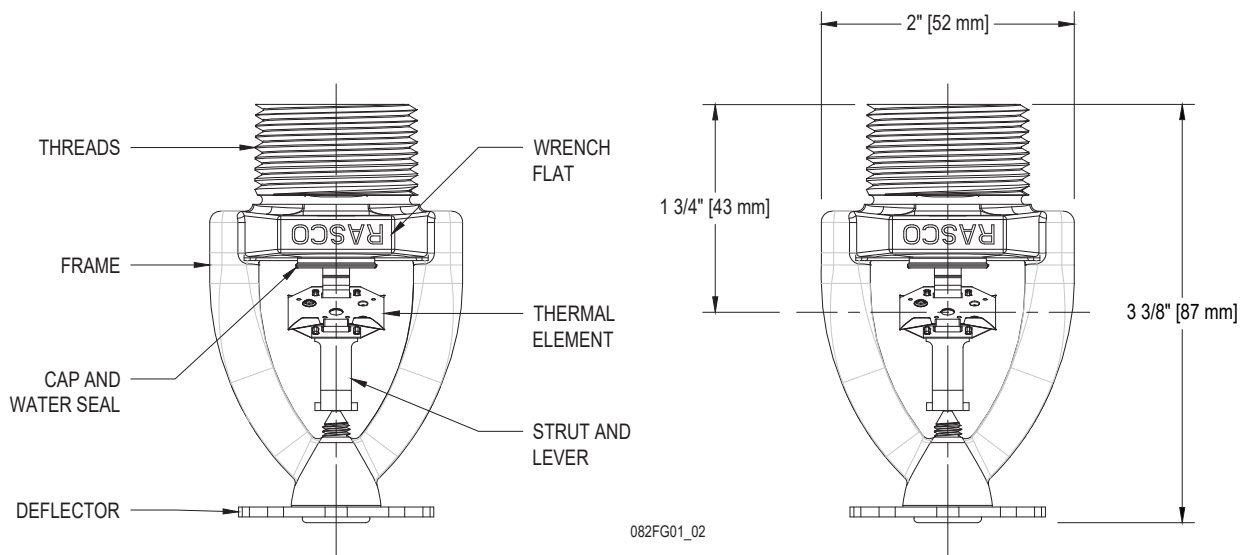
Sprinkler Finishes

Standard (Brass Only)



Model N28T3 Sprinkler Components and Dimensions

Figure 2



Model N28T3 Sprinkler Hydraulic Design Criteria

Table C

Max. Ceiling Height ft (m)	Min. Operating Pressure psi (bar)
10 (3.0)	35 (2.4)
20 (6.1)	
30 (9.1)	
40 (12.0)	
48 (14.6)	

Model N28 Sprinklers Specific Application Listing
Table D

Specification	N28T6	N28T3
Sprinkler Identification Number (SIN)	R603	R604
Response Type	ESFR	ESFR
Orientation	Pendent	Pendent
Nominal K-factor, gpm/ psi ^{1/2} (L/min/bar ^{1/2})	28.0 (400)	28.0 (400)
Temperature Rating °F (°C)	212 (100)	212 (100)
System Type	Wet Pipe	Wet Pipe
Max. Ceiling Slope, rise:run	2:12	2:12
Max. Sprinkler Spacing, ft (m)	10 (3.0)	10 (3.0)
Min. Sprinkler Spacing, ft (m)	8 (2.4)	8 (2.4)
Max. Area of Coverage, ft ² (m ²)	100 (9.3)	100 (9.3)
Min. Area of Coverage, ft ² (m ²)	64 (5.9)	64 (5.9)
Min. Deflector Distance from Walls, in. (mm)	4 (100)	4 (100)
Max. Deflector to Ceiling Distance, in. (mm)	14 (350)	14 (350)
Min. Deflector to Ceiling Distance	Per NFPA 13	Per NFPA 13
Min. Deflector to Top of Storage Distance, in. (mm)	36 (900)	36 (900)
Obstruction Criteria	Per NFPA 13	Per NFPA 13
Max. Ceiling Height, ft (m)	48 (14.6)	48 (14.6)
Max. Storage Height, ft (m)	43 (13.1)	43 (13.1)
Storage Arrangement	Palletized, solid piled; Open frame single-, double-, and multiple-row and portable rack arrangement in accordance with the 2022 edition of NFPA 13	Palletized, solid piled; Open frame single-, double-, and multiple-row and portable rack arrangement in accordance with the 2022 edition of NFPA 13
Min. Aisle Width, ft (m)	4 (1.2)	4 (1.2)
Flue Spaces	Per NFPA 13	Per NFPA 13, except that min. 3 in. (75 mm) transverse flue spaces are permitted in single- and double-row racks
Commodity	Class I-IV commodities encapsulated and unencapsulated; and cartoned unexpanded Group A plastic commodities	Class I-IV commodities encapsulated and unencapsulated; and cartoned unexpanded Group A plastic commodities
Sprinkler System Design	NFPA 13 for ESFR sprinklers based upon 35 psi (2.4 bar) min. design pressure with 12 sprinkler remote area	NFPA 13 for ESFR sprinklers based upon 35 psi (2.4 bar) min. design pressure with 12 sprinkler remote area
Hose Stream Allowance, gpm (L/min)	250 (950)	250 (950)
Water Supply Duration, minutes	60	60

Installation

Models N28T6 and N28T3 sprinklers are intended for installation in accordance with NFPA 13 as well as the requirements of any Authorities Having Jurisdiction. See Table B for information on specific application and installation criteria for N28T6 and N28T3 sprinklers.

Use the Model W5 sprinkler wrench for removal and installation (Figure 3). Any other type of wrench may damage the sprinkler.

Model N28T6 and N28T3 sprinklers should be tightened between 22- 30 lbs-ft (30 - 40 N·m) torque. Do not tighten sprinklers over the maximum recommended torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinklers.

Caution: When handling sprinklers, hold sprinklers only by the frame arms and do not apply any force on the link assembly. Damaged sprinklers must be replaced immediately.

Maintenance

Reliable Models N28T6 and N28T3 sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Prior to installation, sprinklers should remain in the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that could cause improper operation or non-operation.

Do not clean sprinklers with soap and water, ammonia liquid or any other cleaning fluids. Remove dust by gentle vacuuming without touching the sprinkler.

Replace any sprinkler which has been painted (other than factory applied). A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers.

Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

Guarantee

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

Model W5 Sprinkler Wrench

Figure 3



Ordering Information

Specify:

Sprinkler

- N28T6
- N28T3

End Connection

- 1" NPT
- ISO7 R-1

Sprinkler Wrench

- W5