Model N28T6 & N28T3 Pendent Sprinklers
ESFR / QR Storage

K28.0 (400)

Features

- cULus Listed Specific Application ESFR Sprinkler permitting reduced aisle widths and transverse flue spaces
- FM Approved Quick Response Storage Sprinkler
- Robust fusible link operating element

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

Reliable Model N28T6 and N28T3 ESFR sprinklers with an intermediate temperature rating (212°F /100°C) have a cULus Specific Application Listing for the protection of Class I-IV and Cartoned Unexpanded Group A Plastic commodity stored in accordance with the guidelines in Table B. This includes palletized, solid piled, and open frame single-, double-, and multiple-row and portable rack arrangements in accordance with NFPA 13. The cULus Listed Specific Application Design criteria is for protection of storage up to 43 ft (13.1 m) under ceiling heights up to 48 ft (14.6 m). A minimum aisle width of 4 ft (1.2 m) is permitted.

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

Reliable Model N28T6 with an ordinary temperature rating (165°F /74°C) or intermediate temperature rating (212°F /100°C), and the N28T3 sprinklers with intermediate temperature rating (212°F /100°C) are FM Approved as Quick Response Storage sprinkler. These sprinklers are Approved for protection of storage up to 50 ft (15.2 m) under ceiling heights up to 55 ft (16.8 m) when installed in accordance with FM Property Loss Prevention Data Sheet 8-9.

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.



Model N28T6
ESFR Sprinkler



Model N28T3
ESFR Sprinkler

Models N28T6 and N28T3 Pendent Sprinkler — **Table A**

Model	Nominal K-factor gpm/psi$^{1/2}$ (L/min/bar$^{1/2}$)	Approvals	Sprinkler Identificaiton Number (SIN)
N28T6	28.0 (400)	cULus, FM, CE	R603
N28T3		cULus, FM, CE	R604

Model N28T6 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)

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 Finishes
- Standard (Brass Only)

Sensitivity
- Fast-Response
- Quick-Response (FM)

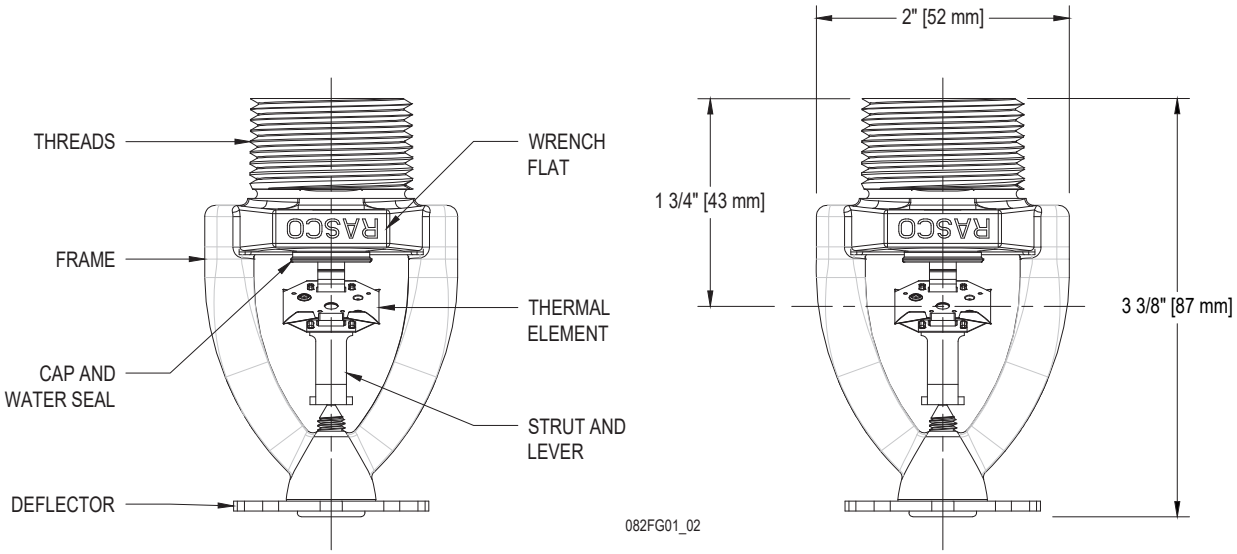
Temperature Rating
- Ordinary: 165°F (74°C)
- Intermediate: 212°F (100°C)

Sprinkler Wrench
- Model W5

Listings and Approvals
- cULus (212°F [100°C] only)
- FM
- CE



Model N28T6 Sprinkler Components and Dimensions — **Figure 1**



Model N28T3 — 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)

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 Finishes
- Standard (Brass Only)

Sensitivity
- Fast-Response
- Quick-Response (FM)

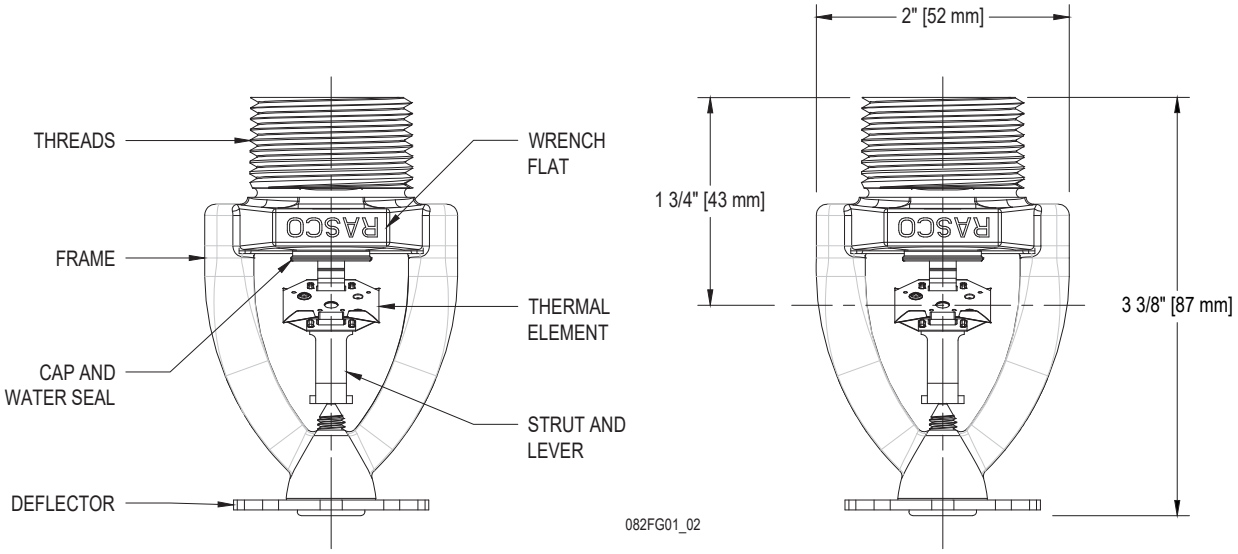
Temperature Rating
- Intermediate: 212°F (100°C)

Sprinkler Wrench
- Model W5

Listings and Approvals
- cULus
- FM
- CE



Model N28T3 Sprinkler Components and Dimensions — **Figure 2**



Model N28 Sprinklers cULus Specific Application Listing Criteria **Table B**

Specification	N28T6	N28T3
Sprinkler Identification Number (SIN)	R603	R604
Response Type	ESFR	ESFR
Orientation	Pendent	Pendent
Operating Pressure psi (bar)	35 (2.4)	35 (2.4)
Nominal K-factor, gpm/ psi1/2 (L/min/bar1/2)	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

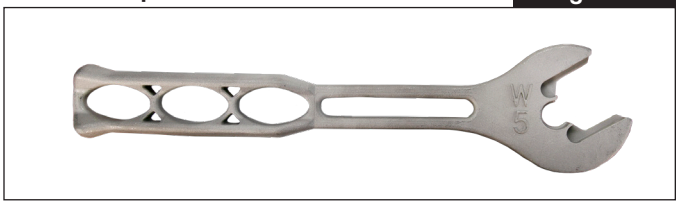
Models N28T6 and N28T3 sprinklers are intended for installation in accordance with NFPA 13 and/or any applicable FM Global Loss Prevention Data Sheets as well as the requirements of any Authorities Having Jurisdiction. See Table B for information on specific application and installation criteria for 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.

Model W5 Sprinkler Wrench **Figure 3**



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.

Ordering Information

Specify:

Sprinkler
- N28T6
- N28T3

Temperature Rating
- 165°F (74°C)
- 212°F (100°C)

Note: 165°F (74°C) sprinklers are not cULus Listed.

End Connection
- 1” NPT
- ISO7 R-1

Sprinkler Wrench
- W5

P/N 9999970665