



Reliable[®]

N-RACK-EC[®] EXTENDED COVERAGE IN-RACK SPRINKLER SYSTEM

**Innovative In-Rack Solution for a
Cost Effective Installation**

reliablesprinkler.com/n-rack-ec

NEW IN-RACK OPTIONS

Modern In-rack Sprinkler Systems

With taller storage buildings and greater recognition of high hazard commodities, a new generation of in-rack sprinkler systems has been developed. Reliable developed the N-RACK-EC® Extended Coverage In-rack Sprinkler System to substantially reduce the number of in-rack sprinklers required while maintaining a low water demand. In-rack sprinkler systems using min. K8.0 quick-response sprinklers with horizontal barriers or ESFR sprinklers as in-rack sprinklers are also available.

The “Virtual Floor”

Several modern in-rack sprinkler systems are now available that use a “Virtual Floor” concept. These in-rack sprinkler systems are designed to protect commodities stored in racks without assistance from the ceiling sprinkler system. This allows the ceiling sprinkler system to be designed independently of the in-rack sprinkler system by considering the highest level of in-rack sprinklers as a “Virtual Floor.” See the specific criteria in NFPA 13, 2019 edition, Section 25.8 and FM Data Sheet 8-9 Section 2.3.6 for complete details and limitations.

Every In-rack Sprinkler System

Reliable is your one source for every modern in-rack sprinkler system, including:

- N-RACK-EC® Extended Coverage In-rack Sprinkler System using the *Reliable Model N252EC Sprinkler*
- ESFR In-rack Sprinkler System using the *Reliable Model JL-14, JL-17, HL-22, or N25 Sprinkler*
- K8.0 (min.) with Horizontal Barrier In-rack Sprinkler System using the *Reliable Model F1FR LO, GFR K8.0, or GL112 Sprinkler*

NEW IN-RACK OPTION IN NFPA 13 [2019] SECTION 25.8.3

Rack Types

Open frame, Single, Double, and Multiple-row racks up to 15' 6" (4.7m) deep

Ceiling/Storage Height

Unlimited

Commodities

Class I-IV

Group A plastic commodity (Cartoned, Exposed, Expanded, and Nonexpanded)

Ceiling Sprinklers

Based only on commodities not protected by in-rack sprinkler system

In-rack Sprinklers

K25.2 Intermediate Temperature, Extended Coverage, Pendent Sprinklers: Reliable Model N252EC 212°F (100°C)

Max. Vertical Spacing of In-rack Levels

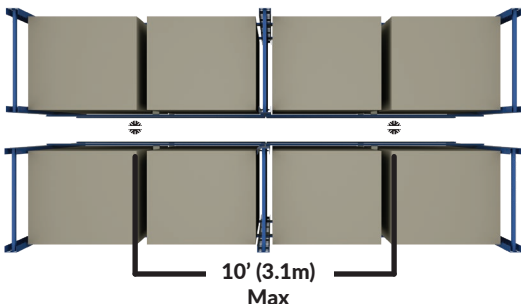
20' (6.1 m) for non-cartoned Group A plastic commodity

30' (9.1 m) for Class I-IV and cartoned Group A plastic commodity

Horizontal barriers above in-rack levels

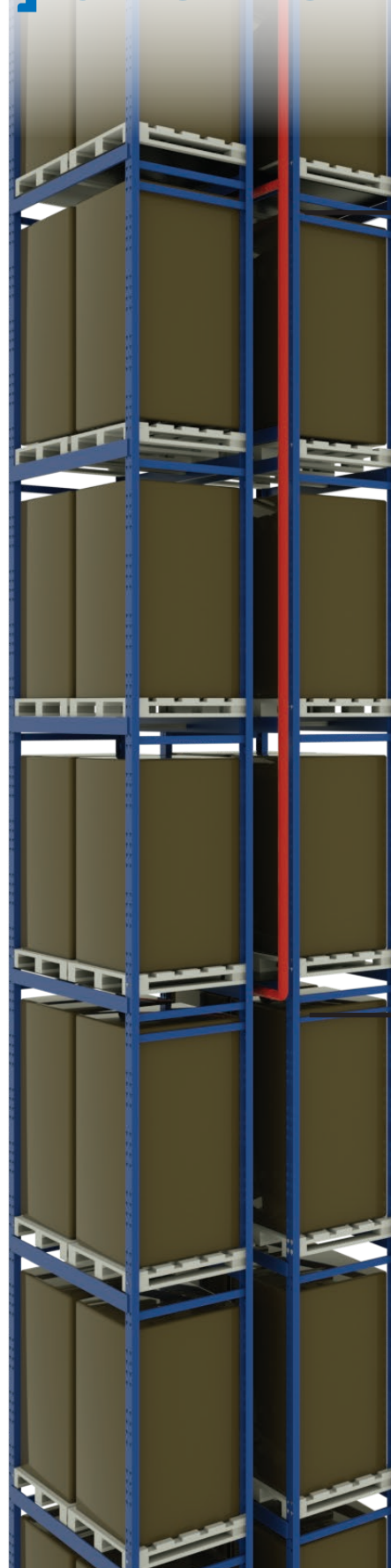
Max. Horizontal Spacing of In-rack Sprinklers

10' (3.1 m)



Plan View

Double-Row Rack Example



30' (9.1 m) Max
Class I-IV
Cartoned Group A Plastics

20' (6.1 m) Max
Exposed Group A Plastics

30' (9.1 m) Max
Class I-IV
Cartoned Group A Plastics

20' (6.1 m) Max
Exposed Group A Plastics

Elevation View

N-RACK-EC[®]

Extended Coverage In-Rack Sprinkler System

The System

Reliable developed the N-RACK-EC[®] system to bring modern sprinkler technology to in-rack sprinkler systems. The system uses the Model N252EC sprinkler in conjunction with horizontal barriers to reduce the number of in-rack sprinklers needed. Reducing the number of in-rack sprinklers required limits costs for labor and materials. In addition, the N-RACK-EC[®] system can often be installed without balancing or adding the in-rack sprinkler water demand with the water demand for the ceiling-level sprinkler system, limiting the overall water demand required.

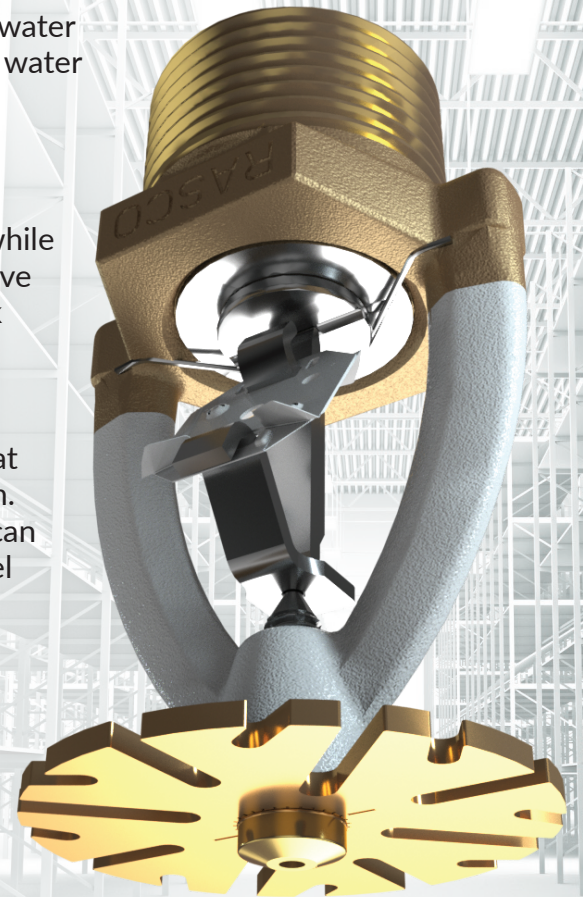
Applications

Tall storage: the N-RACK-EC[®] system can reduce the number of sprinklers and sprinkler levels needed for very tall rack storage, while limiting water demand. The N-RACK-EC[®] system is a cost-effective option for protecting modern tall storage buildings where in-rack sprinklers are needed.

High Hazard Commodities: the N-RACK-EC[®] system can be a cost-effective method of protecting high hazard commodities that are not adequately protected by the ceiling-level sprinkler system. Whether new construction or retrofit, the N-RACK-EC[®] system can protect rack storage to limit the water demand of the ceiling-level sprinkler system.

The Sprinkler

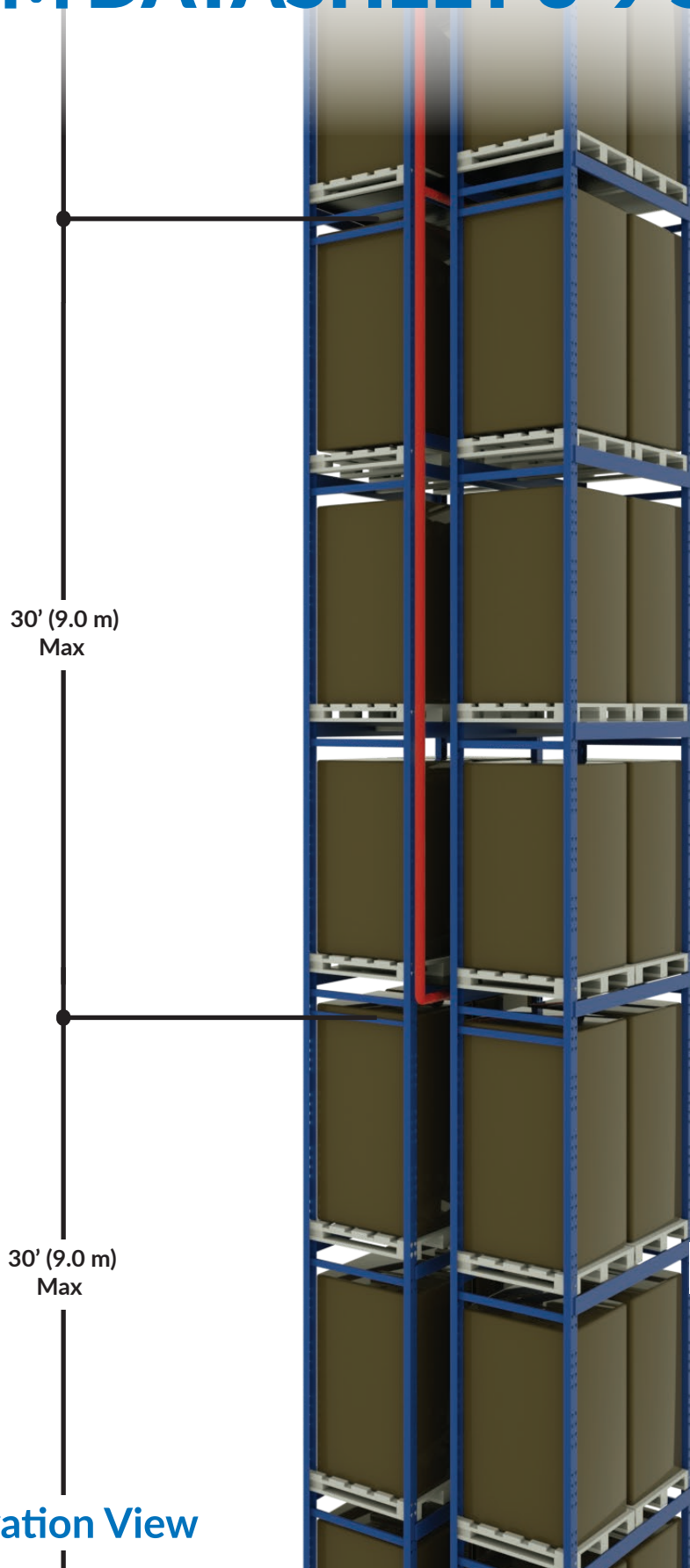
The Model N252EC sprinkler is a K25.2 (360 metric) Extended Coverage Pendent Sprinkler for storage and non-storage applications. The sprinkler is cULus Listed and FM Approved. This is the only sprinkler available for use with the N-RACK-EC[®] extended coverage in-rack sprinkler system.



****Consult NFPA 13, 2019 edition, Section 25.8.3 and FM Data Sheet 8-9 Section 2.3.6.8 for complete details and limitations****

Contact us to discuss your
challenges and our solutions.
800.557.2726
techserv@reliablesprinkler.com

NEW IN-RACK OPTION IN FM DATASHEET 8-9 SECTION 2.3.6.8



30' (9.0 m)
Max

30' (9.0 m)
Max

Elevation View

Rack Types

Open Frame Single, Double, and Multiple-row racks

Ceiling/Storage Height

Unlimited

Commodities

Class I-IV
Cartoned Unexpanded Group
A plastic commodity

Ceiling Sprinklers

Based on distance from highest in-rack level to ceiling ("Virtual Floor")

In-rack Sprinklers

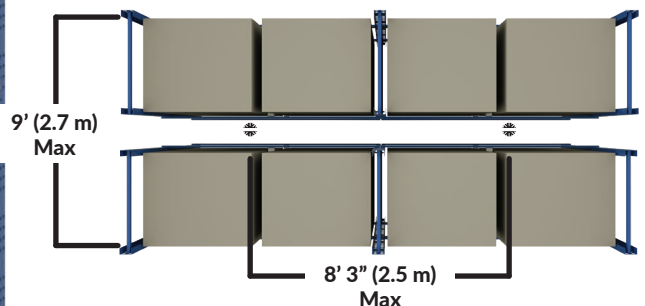
Quick Response K25.2EC Pendent
Storage Sprinklers: Reliable Model N252EC

Max. Vertical Spacing of In-rack Levels

30' (9.0 m)
Horizontal barriers above in-rack levels

Max. Horizontal Spacing of In-rack Sprinklers

8' 3" (2.5 m)



Plan View

Double-Row Rack Example



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