2.3.3.2.7 Use dry-pendent ceiling-level sprinklers in wet-pipe or anti-freeze solution systems only. Design and installation requirements for dry-pendent sprinklers are based on those for a wet system using ceiling-level sprinklers having the same K-factor, RTI rating, sprinkler spacing coverage and temperature rating as the dry-pendent sprinkler.

2.3.3.3 Spacing of Ceiling-Level Storage Sprinklers

2.3.3.3.1 Install ceiling-level Storage sprinklers under unobstructed ceiling construction in accordance with the linear and area spacing guidelines in Table 1, unless indicated otherwise in this data sheet. See Data Sheet 2-0, *Installation Guidelines for Automatic Sprinklers*, for ceiling-level sprinkler spacing guidelines under obstructed ceiling construction.

Table 1. Spacing of Ceiling-Level Storage Sprinklers Under Unobstructed Ceiling Construction

Ceiling Height, ft (m)	*Sprinkler K-Factor*	*Sprinkler Orientation*	*Sprinkler Response*	*Sprinkler Linear Spacing, ft (m)*		*Sprinkler Area Spacing, ft^2 (m^2)*	
				Min.	Max.	Min.	Max.
Up to 30 (9.0)	11.2 (160)	Pendent or Upright	Quick or Standard	8 (2.4)	12 (3.6)	80 (7.5)	100 (9.0)
	14.0 (200), 16.8 (240), 19.6 (280), 22.4 (320), 25.2 (360), 33.6 (480)	Pendent	Quick or Standard	8 (2.4)	12 (3.6)	64 (6.0)	100 (9.0)
		Upright	Quick	8 (2.4)	12 (3.6)	64 (6.0)	100 (9.0)
			Standard	8 (2.4)	12 (3.6)	80 (7.5)	100 (9.0)
	25.2EC (360EC)	Pendent or Upright	Quick	10 (3.0)	14 (4.2)	100 (9.0)	196 (18.0)
Over 30 (9.0)	11.2 (160)	Pendent or Upright	Quick or Standard	8 (2.4)	10 (3.0)	80 (7.5)	100 (9.0)
	14.0 (200), 16.8 (240), 19.6 (280), 22.4 (320), 25.2 (360), 33.6 (480)	Pendent or Upright	Quick	8 (2.4)	10 (3.0)	64 (6.0)	100 (9.0)
			Standard	8 (2.4)	10 (3.0)	80 (7.5)	100 (9.0)
	25.2EC (360EC)	Pendent or Upright	Quick	10 (3.0)	14 (4.2)	100 (9.0)	196 (18.0)

2.3.3.4 Minimum Recommended Pressures for Ceiling-Level Storage Sprinklers

The sprinkler system designs in this data sheet for ceiling-level sprinklers are based on an indicated minimum operating pressure for a given sprinkler K-factor. As a result, base the minimum required ceiling-level sprinkler pressure on the value indicated in the applicable protection table for the commodity hazard, storage arrangement, and ceiling height involved.

2.3.3.5 Extension of Hydraulic Design

Extend the hydraulic design for storage occupancies at least 15 ft (4.5 m) beyond all edges of the storage, or to a wall, whenever there is mixed-use occupancy. Whenever two adjacent storage occupancies are protected differently, extend the design for the higher hazard 15 ft (4.5 m) into the lower hazard area.

2.3.3.6 Mixing Different Ceiling-Level Storage Sprinklers Within the Same Protected Area

2.3.3.6.1 For a sprinkler system protecting a storage occupancy, install ceiling-level Storage sprinklers having the same K-factor, orientation, response time index (RTI) rating, and temperature rating throughout the sprinkler system, whenever possible.

2.3.3.6.2 Do not mix different types of sprinklers (e.g., Storage and Non-Storage sprinklers) on the same ceiling-level sprinkler system within the same protected area unless indicated otherwise by this data sheet.

2.3.3.6.3 Do not mix sprinklers having different K-factors on the same ceiling-level sprinkler system within the same protected area unless indicated otherwise by this data sheet.