

# Use proper flue spacing in your storage area to maximize fire protection.

Key in adequate fire protection is automatic sprinkler water penetration to the seat of the fire.



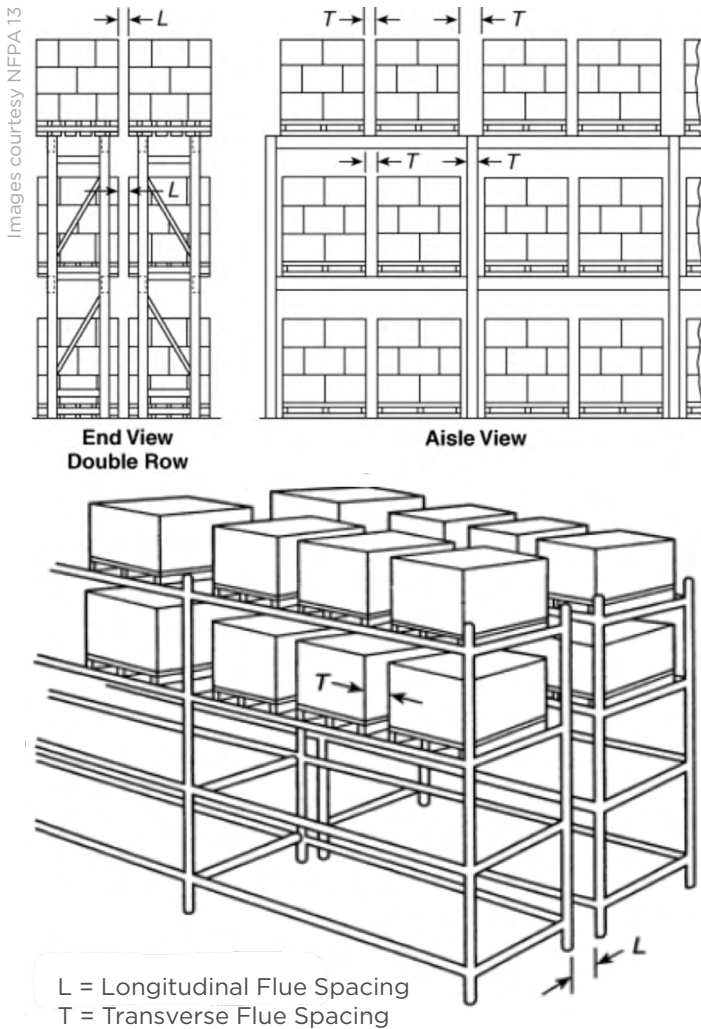
A racking storage system with adequate flue spacing is a major part of a good, proactive fire prevention plan. Sprinkler fire control may not be possible without enough water penetration down through the storage arrangements, due to obstructions created by the pallet loads or shelving. The existence of flue spaces or a lack of flue spaces can determine how effective the fire protection controls a fire. With good planning and maintenance, proper flue spacing can be achieved. Below are definitions and illustrations of transverse and longitudinal flue spaces, as well as other ways to assist in maintaining effective flue spacing.

The National Fire Protection Association (NFPA) requires that rack flue space remain clear.

- Form clear vertical lines of sight from the floor to the ceiling within rack storage areas.
- Allow fire sprinkler water to reach the base of the fire effectively.
- Allow heat from a fire to vent vertically and less horizontally.

Transverse flue spaces are always needed in rack storage arrangements regardless of storage height. When transverse flue spacing cannot be maintained, in-rack sprinklers are recommended at every storage tier.

Rack Storage Flue Spacing



There are two types of flue spaces – transverse and longitudinal.

- **Transverse:** these flues are the spaces between pallets, and between pallets and uprights, facing the storage aisle.
- **Longitudinal:** these are the spaces between rack rows perpendicular to the direction of loading with a width not exceeding 24-inches between storage.

For flue spaces with **up to 25-feet** rack storage height, maintain nominal 6-inch transverse flue spaces between loads and at rack uprights in single-row, double-row, and multiple-row racks. In double-row and multiple-row racks without solid shelves, a longitudinal (back-to-back clearance between loads) flue space is not required.

For flue spaces with storage **over 25-feet**, maintain nominal 6-inch transverse flue spaces between loads and at rack uprights in single-row, double-row, and multiple-row racks and nominal 6-inch longitudinal flue spaces in double-row racks. Random variations in the width of flue spaces or in their vertical alignment is permitted.

Employee training and daily inspections can be effective ways of maintaining adequate flue spacing. Many companies also provide products that may assist. These items include row spacers, straps, and netting that help prevent obstructions.

For more information about the benefits of proper flue spacing, contact Nationwide Loss Control Services.

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