



FIGURE 1 - PERMITTED SINGLE, DOUBLE OR MULTIPLE ROW RACKING

⊗ FM 8-9 DOES NOT REQUIRE FLUE SPACES IN THE DOUBLE ROW RACKS - SEE 2.2.3.1.2 BELOW

FIGURE 2 - MULTIPLE ROW RACKING FOR DRIVE OR FLOW THROUGH PALLET STORAGE WHERE PALLET PLACEMENT BLOCKS FLUE SPACES ⊗

DISCUSSION - ESRF CEILING PROTECTION ONLY

Typically racking arrangements are limited to single or double row racks where FM Global Data Sheet does not require the provision of longitudinal flue spaces in double row racks as shown in Figure 1. Multiple row racks are allowable as long as the longitudinal flue spaces are maintained as shown in Figure 1

Recent full scale fire testing by FM Global has revealed that where pallet placement in drive and flow through racking cannot be guaranteed to properly align with the required longitudinal flue spaces as shown in Figure 2, the racking must be treated as having solid shelves and therefore be provided with in rack sprinklers.

Fire and Security Consulting Services advises Clients that unless pallet placement can be guaranteed to maintain the required flue spaces, racking arrangements should be limited to single and double row racks as shown in Figure 1.

EXTRACT FROM FM GLOBAL DATA SHEET 8-9 2010

2.2.3.1 Flue Spaces for Rack Storage Protected by Ceiling-Level Sprinklers Only

2.2.3.1.1 Maintain all transverse flue spaces at a minimum net width of 3 in. (75 mm) throughout the vertical height of the rack. Provide transverse flue spaces a maximum of every 4-½ ft (1.4 m) horizontally when their net width is less than 6 in. (150 mm) or when their vertical alignment cannot be maintained. The maximum horizontal distance between well-maintained, vertically aligned transverse flue spaces can be increased to 9 ft (2.7 m) when their net width is 6 in. (150 mm) or greater.

2.2.3.1.2 Longitudinal flue spaces are not required in double-row racks; however, if they are provided, maintain a minimum net width of 3 in. (75 mm) throughout the vertical height of the rack. Provide net 6 in. (150 mm) wide longitudinal flue spaces within multiple-row racks a maximum of every 16 ft (4.8 m) horizontally.

2.2.3.1.3 Ensure rolled or similar types of commodities stored in racks are arranged so they cannot bulge into or encroach over flue spaces. If adequate flue spaces are difficult to maintain (e.g., loading of racks becomes haphazard during peak production), provide wire mesh and/or other physical means to ensure adequate flue spaces are always maintained.

2.2.3.1.4 Treat storage racks not having flue spaces as described in Sections 2.2.3.1.1 through 2.2.3.1.3 as racks with solid shelves. Base the size of the shelf area on the presence of well-maintained, vertically aligned flue spaces having a minimum net width of 3 in. (75 mm). If well-maintained, vertically aligned flue spaces having a minimum net width of 3 in. (75 mm) cannot be provided, protect the racks based on the presence of solid shelves greater than 64 ft² (6.0 m²) in area.

LONGITUDINAL FLUE

