

**Table 9.27.: Storage, Warehouse and Industrial Fire Protection Systems**

OCCUPANCY	SYSTEM REQUIREMENTS	COMBINED FIRE PUMP SET AND FIRE WATER TANK CAPACITIES
<b>R. WAREHOUSE FOR INDOOR STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS AND AEROSOLS</b>	<b><u>1. IF TOTAL BUILT-UP FLOOR AREA OF THE COMPARTMENT IS LESS THAN 230 m<sup>2</sup></u></b> i. Hose Reel System shall be provided throughout the building as per <b>Section 3.3.</b> ii. Dry landing valves and risers shall not be required.	<b><u>1. IF TOTAL BUILT-UP FLOOR AREA OF THE COMPARTMENT IS LESS THAN 230 m<sup>2</sup></u></b> ii. The fire pump capacity shall be 50 gpm at pressure of 4.5 bar available at the most remote hose reel valve. iii. The water tank shall have capacity of 45 minutes of operation, complete with low water level detection and instantaneous refilling arrangement.
	<b><u>2. IF TOTAL BUILT-UP FLOOR AREA OF THE COMPARTMENT IS 231 m<sup>2</sup>—900 m<sup>2</sup></u></b> i. Sprinklers shall be provided throughout the facility as per <b>Section 3.5.</b> or Foam Sprinklers shall be provided throughout as per <b>Section 3.9.</b> ii. The design criteria shall be as per storage height and storage arrangement, in accordance with <b>Table 9.7.HH, 9.7.II, 9.7.JJ, 9.11.B,</b> and in-rack arrangement as per <b>Table 9.7.KK</b> iii. Hose Reel System shall be provided throughout the building as per <b>Section 3.3.</b> Dry landing valves shall not be required.	<b><u>2. IF TOTAL BUILT-UP FLOOR AREA OF THE COMPARTMENT IS 231 m<sup>2</sup>—900 m<sup>2</sup></u></b> iv. The capacity of the fire pump set shall be as per storage configuration and storage arrangement, in accordance with <b>9.7.HH. 9.7.II. 9.7.JJ. and 9.11.B.,</b> at a pressure as required to satisfy 4.5 bar at the most remote Hose reel valve. v. The water tank shall have a capacity of 120 minutes of operation, complete with low water level detection, direct breeching inlet and instantaneous re-filling arrangement. vi. The foam solution reserve shall be for 15 minutes operation.
	<b><u>3. IF TOTAL BUILT-UP FLOOR AREA IS 901 m<sup>2</sup> - 3600 m<sup>2</sup></u></b> i. Sprinklers shall be provided throughout the facility as per <b>Section 3.5.</b> or foam sprinkler shall be provided throughout as per <b>Section 3.9.</b> ii. The design criteria shall be as per storage height and storage arrangement, in accordance with <b>Table 9.7.HH, 9.7.II, 9.7.JJ, 9.11.B.,</b> and in-rack arrangement as per <b>Table 9.7.KK</b> iii. Hose Reel System shall be provided throughout the building as per <b>Section 3.3.</b> Dry landing valves shall not be required.	<b><u>3. IF TOTAL BUILT-UP FLOOR AREA IS 901 m<sup>2</sup> - 3600 m<sup>2</sup></u></b> iv. The capacity of the fire pump set shall be as per storage configuration and storage arrangement, in accordance with <b>9.7.HH. 9.7.II. 9.7.JJ. 9.11.B.,</b> at a pressure as required to satisfy 6.9 bar at the most remote hose reel valve. v. The water tank shall have a capacity of 120 minutes of operation, complete with low water level detection, direct breeching inlet and instantaneous re-filling arrangement. vi. The foam solution reserve shall be for 15 minutes operation.
	<b><u>4. IF SUM OF ALL GROUND FLOOR BUILT-UP AREAS IS MORE THAN 3600 m<sup>2</sup></u></b> i. Sprinklers shall be provided throughout the facility as per <b>Section 3.5.</b> or Foam Sprinkler shall be provided throughout as per <b>Section 3.9.</b> ii. The design criteria shall be as per storage height and storage arrangement, in accordance with <b>Table 9.7.HH, 9.7.II, 9.7.JJ, 9.11.B., 9.</b> and in-rack arrangement as per <b>Table 9.7.KK</b> iii. Yard Fire Hydrants shall be provided as per <b>Section 3.11.,</b> in a loop to cover the entire facility. Where foam sprinklers are provided, hydrant system shall also incorporate foam discharge. iv. Hose Reel System shall be provided throughout the building as per <b>Section 3.3.</b> v. A dry riser and wet riser System shall not be required.	<b><u>4. IF SUM OF ALL GROUND FLOOR BUILT-UP AREAS IS MORE THAN 3600 m<sup>2</sup></u></b> vi. The capacity of the fire pump set shall be as per storage configuration and storage arrangement, in accordance with <b>9.7.HH. 9.7.II. 9.7.JJ. 9.11.B.,</b> at a pressure as required to satisfy 6.9 bar at the most remote Hydrant Valve. vii. The water tank shall have a capacity of 120 minutes of operation, complete with low water level detection, direct breeching inlet and instantaneous re-filling arrangement. viii. The foam solution reserve shall be for 15 minutes operation.