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

| OCCUPANCY | SYSTEM REQUIREMENTS | COMBINED FIRE PUMP SET AND FIRE WATER TANK CAPACITIES |
|---|---|---|
| L. WARE-HOUSE<br><br>WITH CLASS I—IV MATERIALS<br><br>(IDENTIFICATION OF CLASSES OF MATERIALS SHALL BE AS PER SECTION 1.1.25 OF THIS CHAPTER) | **1. IF TOTAL BUILT-UP GROUND FLOOR AREA IS LESS THAN 230 m²**<br><br>i. Hose Reel System shall be provided throughout the building as per Section 3.3. Dry landing valves shall not be required. | **1. IF TOTAL BUILT-UP GROUND FLOOR AREA IS LESS THAN 230 m²**<br><br>ii. The fire pump capacity shall be 50 gpm at pressure of 4.5 bar available at the remote hose reel valve.<br>iii. The water tank shall have capacity of 45 minutes of operation, complete with low water level detection and instantaneous refilling arrangement. |
| | **2. IF TOTAL BUILT-UP GROUND FLOOR AREA OF THE COMPARTMENT IS 230 $m^2$—900 $m^2$**<br><br>i. Sprinklers shall be provided throughout the facility as per Section 3.5.<br>ii. The sprinkler design density shall be as per storage height and arrangement, in accordance with Table 9.7.M., 9.7.O., Table 9.7.P., Table 9.7.R., 9.7.S., 9,7.T., 9.7.U., 9.7.V. 9.7.Y., 9.7.X., 9.7.Z.a., 9.7.Z.b., 9.7.Z.c., 9.7.AA., 9.7.BB., and 9.7.CC.<br>iii. Hose Reel System shall be provided throughout the building as per Section 3.3. Dry landing valves shall not be required. | **2. IF TOTAL BUILT-UP GROUND FLOOR AREA OF THE COMPARTMENT IS 230 $m^2$—900 $m^2$**<br><br>iv. The capacity of the fire pump set shall be as per storage height and storage arrangement, in accordance with Table 9.7.M., 9.7.O., Table 9.7.P., Table 9.7.R., 9.7.S., 9,7.T., 9.7.U., 9.7.V. 9.7.Y., 9.7.X., 9.7.Z.a., 9.7.Z.b., 9.7.Z.c., 9.7.AA., 9.7.BB., and 9.7.CC. at a pressure as required to satisfy 4.5 bar at the most remote Hose reel valve.<br>v. The water tank shall have a capacity of 60 minutes of operation, complete with low water level detection and instantaneous refilling arrangement. |
| | **3. IF TOTAL BUILT-UP GROUND FLOOR AREA IS 901 $m^2$ - 3600 $m^2$**<br><br>i. Sprinklers shall be provided throughout the facility as per Section 3.5.<br>ii. The sprinkler design density shall be as per storage height and arrangement, in accordance with Table 9.7.M., 9.7.O., Table 9.7.P., Table 9.7.R., 9.7.S., 9,7.T., 9.7.U., 9.7.V. 9.7.Y., 9.7.X., 9.7.Z.a., 9.7.Z.b., 9.7.Z.c., 9.7.AA., 9.7.BB., and 9.7.CC.<br>iii. Hose Reel System shall be provided throughout the building as per Section 3.3. Dry landing valves shall not be required. | **3. IF TOTAL BUILT-UP GROUND FLOOR AREA IS 901 $m^2$ - 3600 $m^2$**<br><br>iv. The capacity of the fire pump set shall be as per storage height and storage arrangement, in accordance with Table 9.7.M., 9.7.O., Table 9.7.P., Table 9.7.R., 9.7.S., 9,7.T., 9.7.U., 9.7.V. 9.7.Y., 9.7.X., 9.7.Z.a., 9.7.Z.b., 9.7.Z.c., 9.7.AA., 9.7.BB., and 9.7.CC. at a pressure as required to satisfy 4.5 bar at the most remote hose reel valve.<br>v. The water tank shall have a capacity of 60 minutes of operation, complete with low water level detection, direct breeching inlet and instantaneous refilling arrangement. |
| | **4. IF SUM OF ALL GROUND FLOOR BUILT-UP AREAS IS MORE THAN 3600 $m^2$**<br><br>i. Sprinklers shall be provided throughout the facility as per Section 3.5.<br>ii. The sprinkler design density shall be as per storage height and arrangement, in accordance with Table 9.7.M., 9.7.O., Table 9.7.P., Table 9.7.R., 9.7.S., 9,7.T., 9.7.U., 9.7.V. 9.7.Y., 9.7.X., 9.7.Z.a., 9.7.Z.b., 9.7.Z.c., 9.7.AA., 9.7.BB., and 9.7.CC.<br>iii. Yard Fire Hydrants shall be provided as per Section 3.11., in a loop to cover the entire facility.<br>iv. Hose Reel System shall be provided throughout the building as per Section 3.3.<br>v. A dry riser and wet riser System shall not be required. | **4. IF SUM OF ALL GROUND FLOOR BUILT-UP AREAS IS MORE THAN 3600 $m^2$**<br><br>vi. The capacity of the fire pump set shall be as per storage height and storage arrangement, in accordance with Table 9.7.M., 9.7.O., Table 9.7.P., Table 9.7.R., 9.7.S., 9,7.T., 9.7.U., 9.7.V. 9.7.Y., 9.7.X., 9.7.Z.a., 9.7.Z.b., 9.7.Z.c., 9.7.AA., 9.7.BB., and 9.7.CC. at a pressure as required to satisfy 6.9 bar at the most remote Hydrant valve.<br>vii. The water tank shall have a capacity of 60 minutes of operation, complete with low water level detection, direct breeching inlet and instantaneous refilling arrangement. |