

**Table 9.9: Automatic Pre-action Sprinkler System Requirements**

ITEMS	REQUIREMENTS
<b>9. GRIDDED SYSTEM</b>	i. The pre-action pipe sprinkler system shall not be Gridded.
<b>10. LOCATION OF PRE-ACTION SYSTEM VALVE</b>	i. The pre-action Sprinkler Valve shall not be located inside area where temperature is below 4°C. ii. An indicating-type control valve for operational testing of the system shall be provided on each sprinkler riser outside of the refrigerated space, when refrigerated spaces are protected.
<b>11. FIRE DETECTION SYSTEM</b>	i. The fire detection and alarm system for the pre-action system shall comply with <b>Chapter 8. Fire Detection and Alarm Systems</b> . ii. Detectors shall be of electric or pneumatic fixed temperature type with temperature ratings less than those of the sprinklers. iii. Detection devices shall not be rate-of-rise type.
<b>12. AIR</b>	i. Each Pre-action system shall have a dedicated and automatic air maintenance device. ii. Air, nitrogen or other approved gas pressure shall be maintained on dry pipe systems throughout the year. iii. The compressed air supply shall be from a source available at all times. iv. Air or nitrogen supply for systems shall be one of the following. a. Air from the room with the lowest temperature to reduce the moisture content. b. Air compressor/dryer package listed for the application utilizing ambient air. c. Compressed nitrogen gas from cylinders used in lieu of compressed air v. The air supply shall have a capacity capable of restoring normal air pressure in the system within 60 minutes. vi. Each supply line shall be equipped with control valves located in the warm area. vii. A check valve shall be installed in the air filling connection, and a listed or approved shutoff valve of either the renewable disc or ball valve type shall be installed on the supply side of this check valve and shall remain closed unless filling the system. viii. An approved relief valve shall be provided between the air supply and the shutoff valve and shall be set to relieve pressure no less than 10 psi (0.7 bar) in excess of system air pressure and shall not exceed the manufacturer's limitations. ix. All pre-action system shall maintain a minimum supervising air or nitrogen pressure of 7 psi (0.5 bar). x. A check valve or other positive backflow prevention device shall be installed in the air supply to each system to prevent airflow or waterflow from one system to another. xi. A low air pressure alarm to a constantly attended location shall be installed.