

Table 9.7: Automatic Sprinkler System Requirements

ITEMS	REQUIREMENTS
31. A. DESIGN CRITERIA BASED ON HAZARDS	<p>i. All the design criteria for Automatic Sprinkler Systems provided in this code are based on Single Point Design Density Selections.</p> <p>ii. The automatic Sprinkler Design criteria based on the hazard category shall be as per Table 9.7.F.</p>

Table 9.7.F: Automatic Sprinkler Design Criteria based on Hazard Categories

CRITERIA	1. LIGHT HAZARD	2. ORDINARY HAZARD GROUP 1	3. ORDINARY HAZARD GROUP 2	4. EXTRA HAZARD GROUP 1	5. EXTRA HAZARD GROUP 2
Design Density (mm/min) gpm/ft ²	(4.1) 0.10	(6.1) 0.15	(8.1) 0.20	(12.2) 0.30	(16.3) 0.40
Area of Operation (m ²) Ft ²	(139) 1500	(139) 1500	(139) 1500	(232) 2500	(232) 2500
Hose Stream Allowance, gpm	50 gpm	50 gpm	50 gpm	50 gpm	50 gpm
Total Water Demand, Gal.	250 Gal.	300 gpm	350 gpm	800 gpm	1050 gpm
Pump Capacity, without yard hydrant gpm	250 gpm	300 gpm	350 gpm	750 gpm	1000 gpm
Pump Capacity, with yard hydrant gpm	750 gpm	750 gpm	750 gpm	1250 gpm	1500 gpm
Standard Sprinkler Maximum Coverage Area	20.9 m ²	12.1 m ²	12.1 m ²	9.3 m ²	9.3 m ²
Standard Sprinkler Maximum Spacing	4.6 m	4.6 m	4.6 m	3.7 m	3.7 m
Extended Coverage Standard Sprinkler Maximum Coverage Area	37 m ²	30 m ²	30 m ²	18.2 m ²	13.4 m ²
Extended Coverage Standard Sprinkler Maximum Spacing	6.1 m	5.5 m	5.5 m	4.3 m	4.6 m
Sidewall Standard Sprinkler Maximum Coverage Area	18.2 m ²	9.3 m ²	9.3 m ²	Not allowed	Not allowed
Sidewall Standard Sprinkler Maximum distance along wall (S)	4.3 m	3 m	3 m	-	-
Sidewall Standard Sprinkler Maximum Room width (L)	11.1 m	9.3 m	9.3 m	-	-
Extended Coverage Sidewall Sprinkler Maximum Coverage Area	37 m ²	37 m ²	37 m ²	Not allowed	Not allowed
Extended Coverage Sidewall Sprinkler Maximum Spacing	8.5 m	7.3 m	7.3 m		
ESFR (Early Suppression Fast Response) For ceiling height up to 9 m Maximum Coverage Area	9.3 m ²	9.3 m ²	9.3 m ²	9.3 m ²	9.3 m ²
ESFR (Early Suppression Fast Response) For ceiling height up to 9 m Maximum Spacing	3.7 m	3.7 m	3.7 m	3.7 m	3.7 m
ESFR (Early Suppression Fast Response) For ceiling height more than 9 m Maximum Coverage Area	9.3 m ²	9.3 m ²	9.3 m ²	9.3 m ²	9.3 m ²
ESFR (Early Suppression Fast Response) For ceiling height more than 9 m Maximum Spacing	3 m	3 m	3 m	3 m	3 m