

**Table 9.7: Automatic Sprinkler System Requirements**

ITEMS	REQUIREMENTS
<b>37. DESIGN CRITERIA FOR CLASS I TO IV STORED IN MULTIPLE ROW RACKS OF 4.9 M DEPTH AND AISLES 2.4 M OR WIDER WITH STORAGE HEIGHT OF 3.7 M TO 6.1 M.</b>	<p>i. The automatic Sprinkler Design Criteria for Class I to IV stored in Multiple row racks of 4.9 m depth and aisles 2.4 m or wider with storage height of 3.7 m to 6.1 m shall be as per <b>Table 9.7.R. with Area of sprinkler operation of 2000 ft<sup>2</sup> (186m<sup>2</sup>).</b></p> <p>ii. <b>Figure 9.22</b> is applicable for all design criteria in Table 9.7.R. except for Class IV non encapsulated commodity till 4.6 m storage height.</p> <p>iii. The fire pump capacities indicated is for high temperature ceiling sprinkler for 4.6 m and 6.1 m storage height (with respect to the maximum storage height indicated)</p>

**Table 9.7.R: Class I-Class IV stored on racks of 4.9 m depth, aisle 2.4 m or wider, height of 3.7 m-6.1 m**

HEIGHT	COM-MODITY CLASS	ENCAPSULATION	IN RACK SPRINKLERS	CEILING SPRINKLER DESIGN DENSITY , Gpm/ft <sup>2</sup> (mm/min)					
				WITH IN RACK SPRINKLERS		WITHOUT IN RACK SPRINKLERS			
				MULTIPLE ROW RACKS		MULTIPLE ROW RACKS			
				HIGH TEMPERATURE CEILING SPRINKLER & ORDINARY TEMPERATURE RACK SPRINKLER	ORDINARY TEMPERATURE CEILING SPRINKLER & ORDINARY TEMPERATURE RACK SPRINKLER	HIGH TEMPERATURE CEILING SPRINKLERS	ORDINARY TEMPERATURE CEILING SPRINKLERS	PUMP CAPACITY WITH HOSE DEMAND	PUMP CAPACITY WITH YDRANTS
<b>Over 12 ft. (3.7 m) up to 15 ft. (4.6 m)</b>	I	No	No Need			0.37 (15.1)	0.41 (16.7)	500 gpm	1000 gpm
		Yes				0.46 (18.8)	0.51 (20.8)	750 gpm	1000 gpm
	II	No	No Need			0.42 (17.1)	0.47 (19.1)	500 gpm	1000 gpm
		Yes				0.52 (21.4)	0.59 (23.9)	750 gpm	1250 gpm
	III	No	No Need			0.47 (19.1)	0.52 (21.4)	750 gpm	1000 gpm
		Yes	1 Level	0.36 (14.6)	0.41 (16.7)	N/A	N/A	750 gpm	1000 gpm
	IV	No	No Need			0.39 (15.7)	0.44 (17.9)	750 gpm	1250 gpm
		Yes	1 Level	0.48 (19.5)	0.56 (22.6)	N/A	N/A	1000 gpm	1250 gpm
<b>Over 15 ft. (4.6 m) up to 20 ft. (6.1 m)</b>	I	No	No Need			0.37 (15.1)	0.41 (16.7)	750 gpm	1250 gpm
		Yes				0.46 (18.8)	0.51 (20.8)	1000 gpm	1500 gpm
	II	No	No Need			0.42 (17.1)	0.47 (19.1)	1000 gpm	1250 gpm
		Yes				0.52 (21.4)	0.59 (23.9)	1250 gpm	1500 gpm
	III	No	No Need			0.47 (19.1)	0.52 (21.4)	1000 gpm	1500 gpm
		Yes	1 Level	0.36 (14.6)	0.41 (16.7)	N/A	N/A	1000 gpm	1500 gpm
	IV	No	1 Level	0.39 (15.7)	0.44 (17.9)				
		Yes		0.48 (19.5)	0.56 (22.6)				