



## FIRE EXTINGUISHER LOCATION AND PLACEMENT

Code officials are charged with ensuring that occupancies are properly outfitted with fire extinguishers and that they are placed in the right locations. This resource identifies which occupancies require extinguishers and where they should be placed within them. It also outlines related fire extinguisher requirements in NFPA® 10, *Standard for Portable Fire Extinguishers* (2022).

### Occupancy Requirements

Fire extinguishers **are required** in the following occupancy types:

Ambulatory health care	Hotel and dormitory	Health care
Apartments	Industrial	Educational
Assemblies	Lodging and rooming	Storage
Businesses	Mercantile	Detention and correctional
Day care	Occupancies in special structures	Residential board and care

Fire extinguishers **are not required** in one- and two-family dwellings. For more information on occupancy requirements, see Table 13.6.1.2 of NFPA 1, *Fire Code* (2021).

### Where and How Should Extinguishers Be Located?

Fire extinguishers that are placed correctly can be accessed more quickly to help control a fire until the fire department arrives. Fire extinguishers are not intended to be a substitute for evacuating the building safely and quickly. Two key factors for locating extinguishers are that they should be accessible and visible.

#### Accessible

Extinguishers should be placed where they are readily accessible in the event of a fire, which typically includes normal paths of travel.

#### Visible

If visual obstructions cannot be avoided, then arrows, lights, or signs are needed to help indicate where a fire extinguisher is located.

If extinguisher weighs  
**more than 40 lb (18.14 kg) ...**

- ▶ **Top of extinguisher** cannot be more than **3.5 ft (1.07 m)** from the ground
- ▶ **Bottom of extinguisher** must be at least **4 in. (102 mm)** off the ground



If extinguisher weighs  
**less than 40 lb (18.14 kg) ...**

- ▶ **Top of extinguisher** cannot be more than **5 ft (1.53 m)** from the ground
- ▶ **Bottom of extinguisher** must be at least **4 in. (102 mm)** off the ground





**In both cases, this includes extinguishers in cabinets, but it does not include wheeled extinguishers.**

FIRE EXTINGUISHER LOCATION AND PLACEMENT *CONTINUED***Class A, B, C, D, and K Extinguisher Requirements**

A portable extinguisher must match the fire that is being fought. There are five classes of fires. Extinguishers are labeled with letters and symbols for the classes of fires they can put out. While these requirements apply to all portable fire

extinguishers, different location requirements exist for Class A, B, C, D, and K extinguishers. See Figure B.1.1 of NFPA 10 for a recommended marking system that can be used to illustrate the uses and nonuses of fire extinguishers on a single label.

**Extinguisher Requirements Table**

Extinguisher Class and Letter-Shaped Symbol Markings	Extinguisher Use	Location Requirements
<p>Ordinary</p> <p><b>A</b></p>  <p>Combustibles</p>	<ul style="list-style-type: none"> <li>▶ Required anywhere ordinary combustibles are present.</li> <li>▶ Fires involve materials such as wood, cloth, and paper.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Requirements for fire extinguisher size and spacing based on your hazard level are located in Table 6.2.1.1 of NFPA 10.</li> <li>▶ To determine the minimum number of extinguishers needed, divide the total floor area by the maximum floor area to be protected per extinguisher.</li> <li>▶ Travel distance to the extinguisher can't be more than 75 ft (22.9 m).</li> </ul>
<p>Flammable</p> <p><b>B</b></p>  <p>Liquids</p>	<ul style="list-style-type: none"> <li>▶ Required for locations where there is the potential for flammable liquid fires.</li> <li>▶ Fires involve flammable liquids such as gasoline, oil, and some paints and solvents.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Table 6.3.1.1 in NFPA 10 includes information about the maximum travel distance to extinguishers based on the type of hazard (light, ordinary, or extra) and the extinguisher rating.</li> <li>▶ Travel distance to the extinguisher cannot be more than 30 ft to 50 ft (9.1 m to 15.25 m), depending on the type of hazard and extinguisher rating.</li> </ul>
<p>Electrical</p> <p><b>C</b></p>  <p>Equipment</p>	<ul style="list-style-type: none"> <li>▶ Required in areas where energized electrical equipment may be encountered.</li> <li>▶ Fires involve energized electrical equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▶ A Class C rating is only put on extinguishers that already have a Class A or Class B rating.</li> <li>▶ A Class A, Class B, or Class A &amp; B extinguisher gets measured to see if it conducts electricity and if it doesn't, then it gets a Class C rating.</li> </ul>
<p>Combustible</p> <p><b>D</b></p>  <p>Metals</p>	<ul style="list-style-type: none"> <li>▶ Required in areas where there is a potential for fires involving combustible metals.</li> <li>▶ Fires involve combustible metals, such as magnesium and sodium.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Should not be placed more than 75 ft (22.9 m) of travel distance from a potential hazard.</li> </ul>
<p><b>K</b></p> <p>N/A</p>	<ul style="list-style-type: none"> <li>▶ Used where there is a potential for fires involving combustible cooking components.</li> <li>▶ Fires involve cooking oils used in commercial cooking equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Should not be located further than 30 ft (9.1 m) from the hazard.</li> </ul>

**For More Information** Visit [nfpa.org/10](https://www.nfpa.org/10).



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This material contains some basic information about NFPA® 10, *Standard for Portable Fire Extinguishers*. It identifies some of the requirements in these documents as of the date of publication. This material is not the official position of any NFPA technical committee on any referenced topic which is represented solely by the NFPA documents on such topic in their entirety. For free access to the complete and most current version of all NFPA documents, please go to [nfpa.org/docinfo](https://www.nfpa.org/docinfo). References to "Related Regulations" or "Code/Standard for Reference" is not intended to be a comprehensive list. NFPA makes no warranty or guaranty of the completeness of the information in this material and disclaims liability for personal injury, property and other damages of any nature whatsoever, from the use of or reliance on this information. In using this information, you should rely on your independent judgment and, when appropriate, consult a competent professional.










# GRAB it & USE it!

A fire extinguisher technician has installed the appropriate fire extinguisher based on the fire hazards present so that in the event of a fire emergency you can be sure that the closest fire extinguisher is the proper size, class and rating to use. All you need to do is “grab it and use it!”



















## FIRE EQUIPMENT MANUFACTURERS’ ASSOCIATION

Saving Lives, Protecting Property.

### TYPES OF EXTINGUISHERS

ABC Dry Chemical	BC Dry Chemical	Clean Agent	Class K Wet Chemical	Water	Water Mist	Foam	Carbon Dioxide	Class D Dry Powder
								

### SUITABLE FOR THESE CLASSES OF FIRES

  	 	  	 		 	 	 	
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### WHERE YOU’D FIND THESE EXTINGUISHERS

<ul style="list-style-type: none"><li>• General Building Protection</li><li>• Office Buildings</li><li>• Retail Stores</li><li>• Warehouses</li><li>• Woodworking Shops</li></ul>	<ul style="list-style-type: none"><li>• Fuel Storage</li><li>• Oil-Based Paint Storage</li><li>• Paint Spray Booths</li><li>• Auto Repair Shops</li><li>• Aviation Tugs and Fueling Carts</li></ul>	<ul style="list-style-type: none"><li>• Computer Server Rooms</li><li>• Telecommunication</li><li>• Manufacturing Facilities</li><li>• Aviation Flightlines and Maintenance Facilities</li><li>• Offices</li></ul>	<ul style="list-style-type: none"><li>• Restaurant Kitchens</li><li>• Cafeteria Kitchens</li><li>• Food Trucks</li></ul>	<ul style="list-style-type: none"><li>• Office Buildings</li><li>• Auditoriums</li><li>• Convention Halls</li><li>• Oxidizer Storage</li><li>• Pool Chemical Storage</li></ul>	<ul style="list-style-type: none"><li>• Hospitals</li><li>• Museums</li><li>• Libraries</li><li>• Telecommunications</li><li>• Computer Rooms</li><li>• Server Rooms</li><li>• Clean Rooms</li></ul>	<ul style="list-style-type: none"><li>• Fuel Storage</li><li>• Oil-based Paint Storage</li><li>• Dip Tanks</li></ul>	<ul style="list-style-type: none"><li>• Welding Shops</li><li>• Auto Repair Shops</li><li>• Manufacturing Facilities</li></ul>	<ul style="list-style-type: none"><li>• Machine Shops</li><li>• Foundries</li><li>• Metal Fabrication Shops</li><li>• Heavy Industries</li></ul>
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