



## Inspection, Maintenance, Hydro testing and recharging periods of Fire extinguishers as per Indian Standard

USAFE has organized the following information to serve as a timetable for any inspection, maintenance, recharging, and testing of portable fire extinguishers. All of the following information and procedures are found in IS 2190:2010, Selection, Installation & Maintenance Manual of Fire Extinguishers.

| Sr. Nos. | Ext type                          | Inspection                          | Maintenance                                       | Recharging*                                             | Hydrostatic Testing                                           |
|----------|-----------------------------------|-------------------------------------|---------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|
| 1        | Water type (Stored Pressure)      | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 2 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 2        | Mechanical Foam (Stored Pressure) | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 2 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 3        | Dry Chemical (Stored Pressure)    | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 3 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 4        | Water type (Cartridge)            | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 5 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 5        | Mechanical Foam (Cartridge)       | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 5 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 6        | Water type 50 ltr.                | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 5 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 7        | Mechanical Foam 50 ltr.           | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 5 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 3 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |
| 8        | CO2 Portable and Trolley Mounted  | 30 days (Cl. 11.11 of IS 2190:2010) | Quarterly or Annually (Cl. 11.14 of IS 2190:2010) | 5 Years (Annexure D- Cl. 11.4.1 & 12.3 of IS 2190:2010) | 5 years (Annexure E- Cl. 12.2.1 & 12.2.2 (g) of IS 2190:2010) |

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|    |                                       |                                                  |                                                            |                                                                  |                                                                     |
|----|---------------------------------------|--------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------|
|    |                                       | o)                                               |                                                            |                                                                  |                                                                     |
| 9  | Wet Chemical<br>for Kitchen<br>fires. | 30 days (Cl.<br>11.11 of<br>IS<br>2190:201<br>o) | Quarterly or<br>Annually (Cl.<br>11.14 of IS<br>2190:2010) | 2 Years<br>(Annexure D-<br>Cl. 11.4.1 & 12.3<br>of IS 2190:2010) | 3 years (Annexure E- Cl.<br>12.2.1 & 12.2.2 (g) of IS<br>2190:2010) |
| 10 | Clean Agent                           | 30 days (Cl.<br>11.11 of<br>IS<br>2190:201<br>o) | Quarterly or<br>Annually (Cl.<br>11.14 of IS<br>2190:2010) | 5 Years<br>(Annexure D-<br>Cl. 11.4.1 & 12.3<br>of IS 2190:2010) | 3 years (Annexure E- Cl.<br>12.2.1 & 12.2.2 (g) of IS<br>2190:2010) |

**\* Recharging is also required to take place after every use and if the need is identified during maintenance or inspection.**

**Inspection:** Periodic inspection of fire extinguishers shall include a check of at least the following items

1. Location in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate legible and facing outward.
4. Safety seal and tamper indicators not broken or missing.
5. Fullness determined by weighing or “hefting.”
6. Examinations for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Pressure gauge reading or indicator in the operable range or position.
8. Condition of tires, wheels, carriage, hose, and nozzle checked (for wheel units).
9. Label in place.

**Maintenance:** Procedures shall include a thorough examination of the basic elements of a fire extinguisher:

1. Mechanical parts of all fire extinguishers.
2. Extinguishing agent of cartridge or cylinder-operated dry chemical, stored pressure and pump tank fire extinguishers.
3. Expelling means of all fire extinguishers.

Internal examination during annual maintenance is not required for non-rechargeable fire extinguishers, carbon dioxide fire extinguishers, or stored pressure fire extinguishers. These fire extinguishers are to be thoroughly examined externally in accordance with the applicable items of IS 2190:2010.

As per IS 2190:2010 Stored pressure types containing a loaded stream agent shall be disassembled on an annual basis and subjected to complete maintenance. Prior to assembly, the fire extinguisher shall be fully discharged to check the operation of the discharge valve and pressure gauge. The loaded stream charge shall be permitted to be recovered and re-used provided it is subjected to agent analysis in accordance with the manufacturer’s instructions.



## **Inspection, Maintenance, Hydro testing and recharging periods of Fire extinguishers as per Indian Standard**

Maintenance is to be performed by a trained person who has undergone the instructions necessary to reliably perform maintenance and has the manufacturer's service manual.

Maintenance, servicing, and recharging, are to be performed by trained persons having available the appropriate servicing manual(s), the proper types of tools, recharging materials, lubricants, and manufacturer's recommended replacement parts or parts specifically listed for use in the fire extinguishers.

Maintenance is to be performed in full compliance with the maintenance requirements of IS 2190:2010.

During the time period that fire extinguishers are removed from service for maintenance or recharge a replacement fire extinguisher suitable for the type of hazard being protected and of at least equal rating is to be provided.