BUREAU OF INDIAN STANDARDS
(Central Marks Department – III)

Our ref: CMD-III/16: 15683

26 09 2012
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Subject: Comments on Modified Scheme of Testing and Inspection as per IS 15683:2006 for the product "Portable Fire extinguisher- Performance & Construction" reg:-

A draft STI as per IS 15683:2006 has been prepared in view of issuance of Amendment No 4, August 2012 to IS 15683:2006.
In the draft STI, the following changes are proposed

a) In clause 4.2 of STI i.e. In Marking clause, a new sentence "Name of Clean agent to be marked on the label of fire extinguisher." is added at the end of clause 4.2(n).
b) In Table 1(Levels of control) i.e. for clean agents testing requirement, Manufacturer/supplier certificate shall be accepted and cross reference to IS 15493 has been removed.
c) In Serial No 5, under Retention of charge, name of "Long term Leakage test" has been changed to "Leakage test".
d) Number of samples to be tested in external corrosion test as per clause 7.6.1 has been changed to one sample and cross reference to IS 11864 has been added.
e) Number of samples to be tested in Pressure cyclic test as per clause 9.2.5 has been changed to one sample.

All ROs/BOs are requested to examine the draft STI along with Amendment No 4 attached herewith and to inform CMD-III their comments/views (if any) regarding draft STI with in 15 days in order to consider implementation of the same. ROs/BOs are also requested to intimate CMD-III, the date of implementation of revised STI and Amd. No. 4.

Dr.Seebai.T)
Sc B (CMD-III)

Sc F & H(CMD-III)

28/9/12

To All ROs/BOs

AMENDMENT NO. 4 AUGUST 2012
TO
IS 15683 : 2006 PORTABLE FIRE EXTINGUISHERS — PERFORMANCE AND CONSTRUCTION — SPECIFICATION

(*Page* 1, *clause* **3.1.3**) — Add the following at the end:

'Fires which are non-conductive to live electric circuit shall also be tested under Class C.'

(*Page* 2, *clause* **5.1.2**) — Substitute the following for the existing:

'**5.1.2** *Clean Agents*

For clean agents, certificate of manufacturer/supplier shall be made available. Further name of the clean agent be marked on the label of extinguisher.'

(*Page* 2, *clause* **5.3.1**, *line* 2) — Substitute '0.667 kg/l' *for* '0.75 kg/l'.

[*Page* 2, *clause* **5.3.2** (a), (c) *and* (d)] — Substitute the following for the existing:

'a)	Water-foam based	:	± 5 percent by volume
c)	Clean agent	:	± 5 percent by mass
d)	CO_2	:	± 5 percent by mass

(*Page* 2, *clause* **5.3.2**) — Insert 'Note' at the end of clause:

'NOTE — In no case, it shall exceed fill density.'

(*Page* 2, *clause* **5.3.3**) — Substitute the following for the existing:

'**5.3.3** *Capacities*

The capacities for fire extinguishers shall be as follows:

a) Water : 2, 6, 9 litre

Price Group 2

b) Foam : 2, 4, 6, 9 litre
c) Dry Powder : 1, 2, 4, 6, 9 kg
d) CO_2 : 2, 3, 4.5 kg
e) Clean Agent : 2, 4, 6 kg'

(*Page* 3, *clause* **6.1**, *line* 2) — Substitute '3.5 MPa (35 bar)' *for* '2 MPa (20 bar)'.

[*Page* 3, *clause* **7.3.1** (c)] — Substitute the following for the existing:

'c) Retention of all charge at 55 °C discharge shall be maximum 10 percent and at minimum temperature discharge shall be maximum 20 percent '

(*Page* 3, *clause* **7.3.2**) — Substitute the following for the existing:

'7.3.2 *Test Method*

Subject two (one) extinguishers to the temperature cycles given in Table 2, one extinguisher to each cycle.'

(*Page* 4, *clause* **7.4.3**) — Substitute the title as follows:

'*Leakage Test*'

(*Page* 4, *clause* **7.4.3.3**) — Substitute the following for the existing:

'7.4.3.3 *Test method*

The charge extinguisher including valve assembly after being covered by inverted glass-transparent-jar shall be dipped in suitable water tank filled with water, to the level more than the height of extinguisher for 12 h, there shall not be any collection of even a single bubble on the inside top of the inverted glass jar after a lapse of 12 h. For production test, manufacturer shall devise the method such as soap solution test on each extinguisher.'

(*Page* 5, *clause* **7.5.2.5.2**) — Substitute the following at the end:

'Duration : 2h (Axis of orientation – horizontal and vertical axis)'

(*Page* 5, *clause* **7.5.2.5.3**) — Add the following Note at the end:

'NOTE — This test shall be performed for vehicle extinguishers only'.

(*Page* 6, *clause* **7.6**) — Insert the following Note under clause:

'NOTE — Resistance to corrosion tests are not required for CO_2 extinguishers.'

(*Page* 6, *clause* **7.6.1**, *sentence* 1) — Insert the following after first sentence:

'The test solution shall be prepared by dissolving 50 ± 5 g of sodium chloride per litre of water. Salt spray test apparatus covered in IS 11864 shall be alternate test to the test specified in Amendment 2.'

(*Page* 6, *clause* **7.6.1**, *line* 6) — Substitute 'Test one sample' *for* 'Test two samples.'

(*Page* 6, *clause* **7.6.2**) — Substitute the following for the existing:

'**7.6.2** *Internal Corrosion Test for Extinguishers Using Water-Based Media (Type Test) and Gaseous Extinguishers*

Keep one charged extinguisher at elevated temperature of 55 + 5°C for 7 days in an oven. Bring back then to 27 ± 5°C for 24 h and thereafter discharge the extinguisher and then cut it to examine. There shall be no visible signs of corrosion of the metal or detachment, cracking or bubbling.

(*Page* 7, Table 4) — Substitute the following for the existing table:

Table 4 Minimum Class A Fire Ratings
(*Clause* 8.1.1)

Sl No. (1)	Type of Extinguisher (2)	Capacity (3)	Class A (4)
i)	ABC dry powder	1 and 2 kg	1 A
		4 kg	1 A
		6 kg	2 A
		9 kg	3 A
	NOTE — For BC dry powder, there shall be no Class A rating.		
ii)	CO_2	2 kg	—
		3 kg	—
		4.5 kg	—
iii)	Clean agent	2 kg	—
		4 kg	1 A
		6 kg	2 A
iv)	Foam	2 litre	1 A
		4 litre	1 A
		6 litre	2 A
		9 litre	3 A
v)	Water	2 litre	—
		6 litre	2 A
		9 litre	3 A

(*Page* 7, *clause* **8.1.3**, *line* 4) — Substitute the following for the existing:

'for Class BC or Class ABC powder, CO_2, clean agent extinguires.'

(*Page* 10, Table 5) — Substitute the following for the existing table:

Table 5 Minimum Class B Fire Ratings
(*Clause* 8.1.2)

Sl No. (1)	Type of Extinguisher (2)	Capacity (3)	Class B (4)
i)	ABC dry powder	1 and 2 kg	8 B
		4 kg	13 B
		6 kg	21 B
		9 kg	34 B
	NOTE — For BC dry powder, Class B rating shall be same as given for ABC dry powder.		
ii)	CO_2	2 kg	8 B
		3 kg	13 B
		4.5 kg	13 B
iii)	Clean Agent	2 kg	8 B
		4 kg	13 B
		6 kg	21 B
iv)	Foam	2 litre	8 B
		4 litre	13 B
		6 litre	21 B
		9 litre	34 B

NOTE — Manufacturer shall declare fire ratings of their extinguisher. They may claim for one class or more than one class rating according to the extinguishing media. Testing and certification shall be based on the declaration and results obtained. If declared for Class ABC and in case sample fails either for Class A or Class B, it shall not be considered for certification.

(*Page* 10, *clause* **8.2.4**) — Add the following Note at the end:

'NOTE — The basic schedule of testing is set of two fires (not three) for each class A and B rating. If fire is extinguished by first, second test is not done. If first fails repeat is allowed.'

(*Page* 12, *clause* **8.3.3**, *para* 2) — Insert the following at the end:

'A sensor may be fitted to the weighing platform to note reduction in mass.'

(*Page* 12, *clause* **8.4.4.5**) — Substitute the following for the existing:

'Before operating the extinguisher, permit the fuel to burn freely as follows:

Ambient Temperature of Testing °C	*Pre-Burn Time Required* s
≤ 30	45
> 30	30

(*Page* 17, *clause* **9.2.5**, *line* 1) — Substitute 'one cylinder' *for* 'two cylinders'.

(*Page* 17, *clause* **9.2.5**, *line* 3) — Substitute '500 cycles' *for* '5 000 cycles'.

[*Page* 17, *clause* **9.2.5**, (*see also* Amendment No. 2)] — Renumber *clause* **9.1.1** as *clause* **9.2.5** and insert the following Note:

'NOTE —This test is required for low pressure extinguishers.'

(*Page* 18, *clause* **9.5.3**) — Insert the following at the end:

'Except for CO_2 and other gaseous agents.'

(*Page* 19, *clause* **9.8**) — Insert the following Note:

'NOTE —Alternatively, for plastic components, test certificate of manufacturer of plastic components or BIS licensees or any other recognized test laboratory shall be acceptable and no test is required for acceptance criteria.'

(*Page* 20, *clause* **9.8.6.3**) — Insert the following Note at the end of clause:

'NOTE — Alternatively, for plastic components, test certificate of manufacturer of plastic components or BIS licensees or any other recognized test laboratory shall be acceptable and no test is required for acceptance criteria.'

[*Page* 20, *clause* **9.9.3** (a)] — Substitute '27 ± 5°C' *for* '7 ± 5°C'.

(*Page* 21, *clause* **9.12.1.4**) — Substitute the following for the existing:

'**9.12.1.4** The maximum indicated gauge pressure shall be between 150 percent and 250 percent of the indicated service pressure (P_s) at 27°C, but not less than 120 percent of the maximum service pressure (P_{ms}). The gauge dial shall indicate, in green, the operable pressure range of the extinguisher. The zero, service, and maximum indicated gauge pressure shall be shown in numerals and with marks. The low charge and over charge shall be indicated in red. The body and working parts of the pressure gauge shall be metallic in nature'.

(*Page* 22, *clause* **9.12.1.5**) — Substitute the following for existing:

'**9.12.1.5** The mark used to indicate the service pressure at 27°C should be clearly visible.'

(*Page* 22, *clause* **9.12.1.6**) — Delete.

(*Page* 22, *clause* **9.12.1.7**, *sentance* 2) — Delete.

(*Page* 23, *clause* **9.12.6.1**, *line* 5) — Substitute '27 ± 5° C' *for* ' 20° C'.

[*Page* 23, *clause* **10.1**, (*see also* Amendment No. 2)] — Insert 'or labelled' *after* 'painted'.

(*Page* 23, *clause* **10.2.1.1**, *sentence* 1) — Insert the following after sentence 1:

'The instructions may be in form of label or sticker.'

(CED 22)

Reprography Unit, BIS, New Delhi, India

DRAFT
SCHEME OF TESTING AND INSPECTION
FOR CERTIFICATION OF
PORTABLE FIRE EXTINGUISHER- PERFORMANCE AND CONSTRUCTION
AS PER IS 15683: 2006

1. LABORATORY

1.1 A Laboratory shall be maintained which shall be suitably equipped and staffed, where tests shall be carried out in accordance with the methods given in the specification.

1.2 All testing apparatus / measuring instruments shall be periodically checked and calibrated and records of such checks/calibration shall be maintained.

2. TEST RECORDS

2.1 All records of tests and inspection shall be kept in suitable forms approved by the Bureau.

2.2 Copies of any records and other connected papers that may be required by the Bureau shall be made available at any time on request.

Note: The existing forms etc. as being maintained by the manufacturers may be retained. These forms, however, shall contain all the information required for operating this scheme of Testing and Inspection.

3. QUALITY CONTROL

3.1 It is recommended that, as for as possible, Statistical Quality Control (SQC) methods may be used for controlling the quality of the product during production as envisaged in this scheme. [See IS 397(part 1) to IS 397 (part 4)].

3.2 In addition, effort should be made to gradually introduce a Quality Management System in accordance with IS/ISO 9001 to all activities of the organization.

4. STANDARD MARK

4.1 The Standard Mark as given in column (1) of the first schedule of the license, shall be marked/applied indeligibly by stenciling/screen printing/transfix labels/engraving on each fire extinguisher provided always that the item to which this mark is thus applied conforms to every requirement of the specification.

In case the mark is applied by engraving/punching, it shall be applied in such a manner that it does not impair the strength and dimensional requirements of the fire extinguisher in anyway.

4.2 Marking - In addition, fire extinguisher shall be clearly and indeligibly marked by means as stated above (Ref. Clause 10.2 of IS 15683:2006 also) with the following-

a) Name or Trade mark of manufacturer
b) BIS License number (CM/L- xxxxxxx)
c) Type of media of fire extinguisher
d) Base material and its percentage for Powder
e) Model number
e) Rating and classification of fire extinguisher
f) 'Acceptable to use at temperature from ..... to ..... ^{o} C'
g) Empty mass in kg
h) Nominal full mass in kg/ Gross mass with tolerance or Min & max gross mass in kg
i) Year of manufacture
j) Sequential serial number
k) following statement as applicable –
l) For rechargeable extinguishers: 'Recharge immediately after any use'
m) For disposable extinguishers ; 'Discard immediately after any use'
n) Operating, recharging, inspection and maintenance instructions (in the form of an etched or embossed metal name plates or band or an acceptable pressure sensitive nameplates or by silk screening of paint. Operating instructions also to be shown by pictorial view.
p) Name of Clean agent to be marked on the label of fire extinguisher.

5. LEVELS OF CONTROL

5.1. The Tests as indicated in the Table 1 and at the levels of controls specified therein shall be carried out on the whole production of the factory covered by this scheme and appropriate records and charts maintained in accordance with clause 2 above. All the production which conforms to this Indian Standard and covered by this license shall be marked with Certification Mark of the Bureau.

5.3 CONTROL UNIT

5.3.1 For the purpose of this scheme a control unit, shall be taken as 100 or part there of, extinguishers of the same type/classification and capacity manufactured continuously or on consecutive days from same consignment of inputs (material, machine and man power in case of manual welding employed).

5.3..2 For Plastic components, a control unit may be taken as the quantity manufactured continuously on same machine using same source and consignment of raw material, with same mix of ingredients, if any used.

5.3.3 For Pressure gauges and Indicators- Control Unit may be taken as the quantity of gauges and indicators received from same supplier / manufacturer, of same size, model, and material.

5.3.4 On the basis of tests and inspection results, decision regarding conformity or otherwise of the control unit to a given requirement of the specification shall be made.

5.3.5 When any sample fails in respect of a given requirements the material of entire control unit may be suitably corrected and subject twice the number of samples to test for all requirements again, and the control unit shall be accepted for certification marking only when the re-processed material conforms to all the requirements. If further failure occurs in any of the requirements, the entire lot/control unit shall not be marked. Alternately, on the discretion of manufacturer all material of the control unit may not be marked in the first instance of failure.

5.3.6 Records of such failure and reprocessing and retesting shall be maintained.

5.4 PROCESS CONTROL

5.4.1 In respect of all other clauses of the specification and at all stages of production, the factory shall maintain appropriate control & checks to ensure that their product conforms to the various requirements of the specification.

6. REJECTIONS

6.1 A separate record shall be maintained giving information relating to the rejection of the production not conforming to the requirements of the specification and the method of its disposal. Such material shall in no circumstances be stored together with that conforming to the specification.

7. SAMPLES

7.1 The licensee shall supply, free of charge, the samples required in accordance with the Bureau of Indian Standards (Certification) Regulations, 1988, as subsequently amended, from the factory or go downs. The Bureau shall pay for the samples taken by it from the open market.

8. REPLACEMENT

8.1 Whenever a complaint is received soon after the goods with Standard Marks have been purchased and used, and if there is adequate evidence that the goods have not been misused, defective goods or their components are replaced or repaired free of cost by the licensee in case the complaint is proved to be genuine and the warranty period (where applicable) has not expired. The final

authority to judge the conformity of the product to the Indian Standard shall be with the Bureau. The firm shall have own complaint investigation system as per IS/ISO 10002.

8.2 In the event of any damages caused by the goods bearing the Standard Mark, or Claim being filed by the Consumers against BIS Standard Mark and not "Conforming to" the relevant Indian Standard, entire liability arising out of such non conforming product shall be of licensee and BIS shall not in any way be responsible in such cases.

9. STOP MARKING

9.1 The marking of the product shall be stopped under intimation to the Bureau if, at any time, there is some difficulty in maintaining the conformity of their product to the specification, or the testing equipment goes out of order. The marking may be resumed as soon as the defects are removed under intimation to Bureau.

9.2 The marking of the product shall be stopped immediately if directed to do so by Bureau for any reason. The marking may then be resumed only after permission by the Bureau. The information regarding resumption of markings shall also be sent to the Bureau.

10. PRODUCTION DATA

10.1 The licensee shall send to BIS as per the enclosed Proforma-1 to be authenticated by a Chartered Accountant, a statement of quantity produced, marked and exported by them and the trade value thereof at the end of each operative year of the licence.

SCHEME OF TESTING AND INSPECTION FOR
PORTABLE FIRE EXTINGUISHERS- PERFORMANCE AND CONSTRUCTION
AS PER IS 15683: 2006

Table 1
Levels of Control

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
1	Extinguishing media i) Carbon di-oxide	5.1.1	IS 15683, IS 15222	One	Each consignment	Manufacturer's certificate may be accepted. Firm to arrange for testing of samples at an independent approved lab once in six month.
	ii) Clean agents	5.1.2	IS 15683	do-	-do-	As per Manufacturer/ supplier certificate of Clean agent
	iii) Powders	5.1.3	IS 15683, IS 4308, IS 14609, IS 4861	-do-	-do-	IS no.s as applicable
	iv) Foam agents	5.1.4	IS 15683, IS 4989, ISO 7203	-do-	-do-	IS no.s as applicable

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
2	Propellants	5.2	IS 15683	One	Three months	As above
3	Filling requirements	5.3	IS 15683			
	i) Fill density	5.3.1	IS 15683	One	Each control unit	Firm to declare fill density as per the Standard of clean agents.
	ii) Filling tolerance	5.3.2	IS 15683	One	Each control unit	
	iii) Capacities	5.3.3	IS 15683	One	Each control unit	
4	Test Pressure	6	IS 15683			
	i) Test pressure	6.1	IS 15683	All	Each control unit	
	ii) Min Burst Pressure	6.2	IS 15683	One	Each control unit	

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
5	Gen Operating performance requirements	7	IS 15683			
	i) Operating temperatures	7.1	IS 15683			Firm to declare any one of the temperature ranges.
	ii) Min. effective discharge time	7.2.1,	IS 15683	One	Each control unit	For Class A
		7.2.2	IS 15683	One	Each control unit	For class B
	iii)Bulk range of discharge	7.2.3	IS 15683	One	Each control unit	
	Resistance to temp changes	7.3.1, 7.3.2	IS 15683 IS 15683	One	Once in three months	Type Test
	Retention of charge					
	a) Routine checks	7.4.1	IS 15683	All	Each control unit	
	b) Retention of charge following partial discharge	7.4.2	IS 15683	One	Each control unit	
	c) Leakage test	7.4.3, 9.7.2	IS 15683	One	Once in Six months	Type Test
	Mechanical resistance test	7.5	IS 15683			Type Test
	a) Resistance to impact	7.5.1	IS 15683	One	Once in three months	Type Test

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
	b)Resistance to Vibrations	7.5.2	IS 15683	One	Once in three	Type Test
	Resistance to corrosion	7.6	IS 15683			Type Test
	a) External corrosion	7.6.1	IS 15683, IS 11864	One	One year	One sample from each type (family/extinguishing media). All types (families/extinguishing media) to be covered in a year. .
	b) Internal corrosion (for water based media and gaseous extinguishers)	7.6.2	IS 15683	Two	One year	As above.
	Tapping test	7.7	IS 15683	One	Three months	All sizes and types to be covered in two years.
	Intermittent discharge test	7.8	IS 15683	One	Three months	As above.

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
6	Performance requirement for Test Fires	8.1.to 8.5	IS 15683	One	One year	All sizes, types and extinguishing media to be covered in a year. The fire rating shall be declared by the manufacturer. **Preferably be done in presence of BIS inspecting officer at least once a year.** If test facility does not exists, test shall be done in a BIS recognized Lab.
7	Electrical conductivity of extinguisher discharge	8.6	IS 15683	One	Six months	Applicable to water based extinguishers that are marked as suitable for use on energized electrical equipment. All sizes to be tested once in six months.

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
8	Construction Requirements i) High Pressure extinguishers	9.1	IS 15683, *IS 7285, *IS15660, *IS 4947	All	Each control unit	*IS number as applicable. For Steel body. For Aluminium body. For Gas cartridge.
	ii) Low pressure extinguishers General requirements	9.2.1.1 to 9.2.1.7	IS 15683	All	Each control unit	
	Determination of max service pressure	9.2.1.8	IS 15683	Three	Once in Three months	All sizes and types.
	Burst test	9.2.2, 9.7.1	IS 15683	One	Each control unit	
	Crushing Test (Type Test)	9.2.3	IS 15683	Three	Each control unit	May be carried out on the same cylinder taken for burst test.
	Permanent Volumetric expansion test (Type Test)	9.2.4	IS 15683	One	Each control unit	For high pressure cylinder only. No further testing is required if material is ISI marked and accompanied by a Test Certificate from supplier.

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
	Pressure Cyclic Test (Type Test)	9.2.5	IS 15683	One	Every 5 th control unit and whenever there is change in material source	Start from 1st control unit
	Welded low carbon steel cylinder	9.2.6	IS 15683			
	i) Cylinder and filler material	9.2.6.1 to 9.2.6.2	IS 15683	One	Each consignment	Firm may get the material tested at independent BIS approved lab, if in house facilities are not available
	ii) Cylinder thickness	9.2.6.3	IS 15683	All	Each control unit	
	Stainless steel cylinders	9.2.7	IS 15683			
	i) Material, domes and bottoms	9.2.7.1 to 9.2.7.2	IS 15683	One	Each consignment	Firm may get the material tested at independent BIS approved lab, if in house facilities are not available.
	ii) Cylinder thickness	9.2.7.3	IS 15683	All	Each control unit	
	Aluminium cylinders	9.2.8	IS 15683			
	i) Material	9.2.8.1	IS 15683	All	Each control unit	Firm may get the material tested at independent approved lab, if in house facilities are not available.
	ii) cylinder thickness	9.2.8.2	IS 15683	All	Each control unit	
	Carrying handle	9.3.1 to 9.3.3	IS 15683	All	Each control unit	

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
	Mounting	9.4.1 to 9.4.2 & 9.4.5, 9.4.6	IS 15683	All	Each control unit	
	i) Mounting bracket strength	9.4.3, 9.4.4	IS 15683	Two	Each control unit	
	Caps, Valves and Closures	9.5.1 to 9.5.4 & 9.5.6	IS 15683	All	Each control unit	
	i) Burst test- for above	9.5.5	IS 15683	One	Each control unit	
	Safety devices	9.6.1, 9.6.2	IS 15683	Two	Each control unit	
	Hydrostatic pressure test	9.7.1.2	IS 15683	All	Each control unit	
9	Requirement for plastics components					Whenever provided
	i) General requirements	9.8.1.1 to 9.8.1.4	IS 15683	All	Each control unit	
	ii) Burst Strength	9.8.2.1, 9.2.2, 9.8.5.1	IS 15683	Three	Each control unit	For normally pressurized & non-pressurized components

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
	iii) Air-oven ageing	9.8.2.2, 9.2.2, 9.8.5.1	IS 15683	Three	Each control unit	---- do ---
	iv) Ultraviolet light exposure	9.8.3, 9.8.5.2	IS 15683	Six	Each control unit	
	v) Impact resistance	9.8.4, 9.8.2.2, 9.8.5.1, 7.5.1	IS 15683	Four	Each control unit	Two with and two without the safety-locking device engaged
	vi) Test for Exposure to extinguishing media	9.8.6, 7.5	IS 15683	Three	One year or whenever source is changed	For water based extinguishing media only
10	Hose assemblies	9.9	IS 15683	Two	Each control unit	
11	Method of operation	9.10, 7.5	IS 15683	One	Each control unit	Test may be combined with ‘min effective discharge time and bulk range of discharge’ test

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
12	Safety locking devices	9.11	IS 15683			
	i) Release of safety device	9.11.1	IS 15683	Two	Each control unit	
	ii)Breaking test for tamper indicator	9.11.6	IS 15683		Each control unit	
	iii) General requirements	9.11.2, 9.11.3, 9.11.4, 9.11.5	IS 15683	Two	Each control unit	
13	Requirements for Pressure gauges and Indicators	9.12	IS 15683			For Stored – Pressure type extinguishers
	i) General	9.12.1	IS 15683	All	Each control unit	
	ii) Calibration test	9.12.2	IS 15683	All	Each control unit	Calibration certificate from recognized laboratory may be considered.
	iii) Burst strength test	9.12.3	IS 15683	One	One hundred or part there off from same source	Gauge used for Over Pressure test (clause-9.12.4) may be used.

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
	iv) Over pressure test	9.12.4	IS 15683	One	As above	
	v) Water resistance test	9.12.5, 7.6.1	IS 15683	One	As above	All sizes of pressure gauges to be tested.
	vi) Leakage test	9.12.6	IS 15683		Six month	Testing may be done at independent reputed lab.
	vii) Plastic components	9.12.7, 9.8	IS 15683	Three	One hundred (pressure gauges) or part there off	
14	Dip-Tubes and Filters	9.13	IS 15683	All	Each control unit	For water based extinguishers
15	Test for Horns	9.14	IS 15683	One	Each control unit	1) For CO_2 extinguishers. 2) Test may be combined with 'min effective discharge time and bulk range of discharge'

Sl. No.	Test Requirements	Test methods		Levels of Control		
		clause	References	No. of sample	Frequency	Remarks
16	Colour for extinguisher body	10.1	IS 15683 IS 5 IS 2932	All	Each control unit	
17	Marking	10.2.1, Fig 5	IS 15683	All	Each control unit	
18	Operating Instructions	10.2.2	IS 15683	All	Each control unit	
19	Code Symbols	10.2.3, Fig 6	IS 15683	All	Each control unit	
20	Recharging Instructions	10.2.4	IS 15683	All	Each control unit	
21	Inspection Instructions	10.3	IS 15683	All	Each control unit	
22	User Manual and Service Manual	11	IS 15683	All	Each control unit	To be provided with each Extinguisher