



**PRODUCT MANUAL FOR
RESILIENT SEATED CAST IRON AIR RELIEF VALVES
FOR WATER WORKS PURPOSES
ACCORDING TO IS 14845: 2000**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 14845: 2000
	Title	:	RESILIENT SEATED CAST IRON AIR RELIEF VALVES FOR WATER WORKS PURPOSES
	No. of Amendments	:	1
2.	Sampling Guidelines:		
a)	Raw material	:	Clause 9.1, Table 1 of IS 14845: 2000
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	Valve – 1 No for all tests
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day	:	All tests possible in a day
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 14845: 2000 with the following scope:		
	Name of the product	RESILIENT SEATED CAST IRON AIR RELIEF VALVES FOR WATER WORKS PURPOSES	
	Type		
	Nominal Pressure		
	Nominal Size		
	Service Application		
	End Connection		

ANNEX A**Grouping Guidelines**

1. Resilient Seated Cast Iron Air Relief Valves for Water Works Purposes as per IS 14845:2000 are categorized as under:

(a) Type:

- i) Single air valve - Small orifice type (S 1) / Large orifice type (S 2)
- ii) Double air valve - Standard type with in-built isolating valve (DS 1) or Standard type without isolating valves (DS 2)
- iii) Kinetic air valve (DK)

(b) Nominal Pressure: PN 1.0, PN 1.6**(c) Nominal Sizes**

Type	Nominal Sizes (mm)		End connection
	Group I	Group II	
Single air valve – Small orifice type - S1	15, 25 and 40	-	Flanged or screwed
Single air valve – Large orifice type – S2	25, 40 and 50	-	Flanged or screwed
Double air valve – Standard type with in-built isolating valve (DS 1)	40 and 50	80, 100, 150 and 200	Flanged
Double air valve – Standard type without isolating valve (DS 2)	40 and 50	80, 100, 150 and 200	Flanged
Kinetic air valve (DK)	40 and 50	80, 100, 150 and 200	Flanged

2. Considering the above, following grouping guidelines is developed for GoL/CSoL:
- a) One sample of any nominal size from each size group for each type, nominal pressure and end connection shall be tested for all requirements to cover all sizes of valves in that group for the variety tested i.e. type, nominal pressure and end connection.
 - b) If valve of PN 1.6 is tested, valve of PN 1.0 may be included in the scope of licence.
3. The Firm shall declare the varieties of valves intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and testing capabilities of the Manufacturer.
4. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX B**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Temperature Rating (Clause 6)	Pressure gauges Water pump Water heater Glass thermometer
2.	End connection (Clause 8)	Vernier calliper Outside micrometer Steel scale Outside calliper Thread gauges
3.	Design and Manufacture, Dimensions (Clause 10)	Vernier calliper Outside micrometer Steel scale/tape Outside caliper Micrometer Angle protractor Air velocity measuring device Jigs and fixtures Shore hardness tester Single pan balance Fine copper wire Radius gauges
4.	Testing and Performance (Clause 12)	Hydrostatic testing arrangement with water pump Blank end flanges Air compressor Pressure gauges Stop watch Hammer

The above list is indicative only and may not be treated as exhaustive.

ANNEX C

Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirement of IS 14845: 2000

4. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

4.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

5. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
6	Temperature Rating	6	IS 14845	R	Each valve	-	-
8	End Connection	8.1 to 8.3	IS 14845	R	Each valve	-	-
9	Material	9.1, Table 1	IS 14845	S	One	Each consignment	#
10	Design and Manufacture	10.1 to 10.9,10.11 Table 2 to 6, Fig. 1 to 4	IS 14845	R	Each valve	-	-
10.10	Bolts and Nuts	10.10	IS 14845	S	One	Each consignment	#
11	Finish	11	IS 14845	R	Each valve	-	-
12	Testing and Performance	12.1 to 12.4, Fig. 5	IS 14845	R	Each valve	-	-
13.2	Protection of Exposed Machined Surface	13.2	IS 14845	R	Each valve	-	-
14	Coating	14.1, 14.4	IS 14845	R	Each valve	-	-
17	Preparation for Despatch	17.1	IS 14845	R	Each valve	-	-

No further testing is required if accompanied with the Test Certificate or ISI marked.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.