



**PRODUCT MANUAL
FOR FERTILIZER AND CHEMICAL INJECTION SYSTEM
PART 1 VENTURI INJECTOR
ACCORDING TO IS 14483 (Part 1) : 1997**

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 14483 (Part 1) : 1997
	Title	:	Fertilizer and Chemical Injection System Part 1 Venturi Injector
	No. of Amendments	:	02
2.	Sampling Guidelines:		
a)	Raw material	:	Material shall comply to clause 4.1 and 4.2 of IS 14483 (Part 1)
b)	Grouping guidelines	:	NA
c)	Sample Size	:	02 Sets (Test specimens shall be selected as per clause 7 of IS 14483 (Part 1).
3.	List of Test Equipment	:	Please refer ANNEX – <u>A</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>B</u>
5.	Possible tests in a day :		
	(i) Constructional Requirements (ii) Resistance of Venturi Injector to Internal Hydrostatic Pressure (iii) Performance Test		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 14483(Part1) : 1997 with the following scope:		
	Name of the product	Fertilizer and Chemical Injection System Part 1 Venturi Injector	
	Any other aspect required as per the standard	i. Working Pressure Range ii. Nominal Size iii. Minimum flow (Optimal), Q_{min} iv. Maximum Flow rate, Q_{max}	

ANNEX A

TO PRODUCT MANUAL
FOR FERTILIZER AND CHEMICAL INJECTION SYSTEM
PART 1 VENTURI INJECTOR
ACCORDING TO IS 14483 (Part 1) : 1997

LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sr. No.	Tests used in with Clause Reference	Test Equipment
1	Nominal size Cl 3.2	Vernier Caliper (0-150mm/0.1mm)
2.	Resistance of Venturi Injector to Internal Hydrostatic Pressure. Cl 6.1	Hydraulic Testing machine with water tank and pressure gauge (capable of reading 1.6 times the declared maximum operating pressure) Stop watch, Air Conditioner
3.	Performance Test. Cl 6.2	Performance Test Setup with water Pump, tank and fittings as per fig.1 of IS 14483 (Pt 1), Pressure gauge, Pressure reducing device or Flow control valve, Flow Meter (02 nos.) 0-99999 LPH/ 1LPH, Air Conditioner.

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

ANNEX B

SCHEME OF INSPECTION AND TESTING FOR FERTILIZER AND CHEMICAL INJECTION SYSTEM PART 1 VENTURI INJECTOR ACCORDING TO IS 14483 (PART 1) : 1997

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 – The Standard Mark as given in Schedule of the licence shall be suitably marked on each Venturi Injector and its container provided always that the product so marked conforms to every requirement of the specification.

3.1 Marking – Each Venturi Injector shall bear a readily visible and durable marking incorporating particulars mentioned at clause 8.1 of Indian Standard IS 14483 (Part 1). In addition, the following details shall be mentioned on each machine legibly and indelibly:

- a) BIS Licence No. CM/L_____.
- b) BIS website details i.e – “For details of BIS Certification please visit www.bis.gov.in”

3.2 The manufacturer shall supply along with each piece of Venturi Injector the information as per clause 9.1 of IS 14483 (Part 1) in the form of catalogues or information sheets.

4. CONTROL UNIT – For the purpose of this Scheme, Venturi Injectors of the same model manufactured/assembled from the same consignment of raw materials in one shift shall constitute a control unit.

5. 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.

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

5.2 On the basis of test and inspection results, a decision regarding conformity or otherwise of control unit with the requirements of the specification shall be taken.

5.2.1 The parts/components which do not conform to the specification shall not be used.

6. RAW MATERIAL- The material for the construction of different components of venturi injector shall be in accordance with clause 4 of IS 14483 (Part 1).

6.1 The material used for different components shall be declared by the manufacturer in the arts catalogue.

7. 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
LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
5	Constructional Requirements	5.1 to 5.6	IS 14483 (Part 1)	R	Each venturi injector	One control unit	
6.1	Resistance of Venturi Injector to Internal Hydrostatic Pressure.	6.1 to 6.1.1	-do-	R	8	-do-	
6.2	Performance Test.	6.2	-do-	R	2	-do-	

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled 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.