



**PRODUCT MANUAL FOR
FOOT-VALVES, REFLUX VALVES OR NON-RETURN VALVES AND
BORE VALVES TO BE USED IN SUCTION LINES OF
AGRICULTURAL PUMPING SYSTEM
ACCORDING TO IS 10805: 1986**

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 license/certificate.

1.	Product	:	IS 10805: 1986
	Title	:	Foot-Valves, Reflux Valves or Non-return Valves and Bore Valves to be used in Suction Lines of Agricultural Pumping Systems
	No. of Amendments	:	4
2.	Sampling Guidelines:		
a)	Raw material	:	Black Japan Coating as per IS 341
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	1 Valve
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
6.	Scope of the Licence	:	Please refer ANNEX – D

ANNEX-A

GROUPING GUIDELINES

1. IS 10805: 1986 covers different types of valves to be used in suction lines of centrifugal pumps for agricultural purposes.
2. The following parameters are taken into consideration while evolving the grouping guidelines:
 - a) Type of valve: Foot-valves, Reflux valves or Non-return valves and Bore valves
 - b) End Connections: Screwed, Flanged
 - c) Nominal Size (mm): 25, 32, 40, 50, 65, 80, 100, 125, 150
3. Considering the above, the following grouping guidelines shall be followed for GoL/CSoL:
 - a) To cover a range of sizes of a particular classification (Type, End Connection) sample of highest nominal size intended to be covered in the Licence shall be drawn and tested for all the requirements.
4. The Firm shall declare the varieties of various valves they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
5. During the operation of license, it shall be ensured that all varieties covered in the license 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*

Sr No	Tests used in with clause reference	Test equipment
1	Dimensions (Clause 2, 4.2 and 4.3)	(a) Vernier calipers (b) Micrometer (c) Snap Gauges (d) Thread Gauges
2	K- Value and Discharge rang (Clause 4.1 and 6.2)	(a) Flowmeter or V -notch (b) Stop watch (c) Manometer
3	Seat Test (Clause 6.1.1)	(a) 2 m long pipe (b) Stop watch
4	Housing Test (Clause 6.1.2)	(a)Hydraulic Testing Machine

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 equipment.

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

3. LABELLING AND MARKING – As per Clause 8 of IS 10805: 1986.

4. CONTROL UNIT – All the valves of the same type, end connections and size manufactured under identical condition of production 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.

6. 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 Required (R) or Sub-contracting permitted (S)	Levels of Control		
Clause	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
3	Materials	3	IS 10805	S	One	Each Consignment	No testing is required if the material is ISI Marked or accompanied with a test certificate.
5	Coatings	5	IS 805	S			
2	Dimensions	2 Table 1	IS 10805	R	One	Every 10 th Valve from each control unit	Gauges shall be used for regular checking. In case of failure, the subject valve shall be rejected. Subsequently ten valves shall be checked. Original frequency shall be restored only if all the ten valves pass.
4.2	Pipe Threads	4.2	IS 10805 IS 554	R		Every 10 th Valve of each nominal size from each type	
4.3	Flange Dimensions	4.3	IS 10805 IS 1536	R	One	Every 10 th Valve of each nominal size from each type	
6	TESTINGS						
6.1.1	Seat Test	6.1.1	IS 10805	R	One	Each valve	
6.1.2	Housing Test	6.1.2	IS 10805	R	One	Each valve	
6.2	K- Value Test	6.2,4.1	IS 10805	R	One	Once in a fortnight from each size and type	

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.

ANNEX-D

SCOPE OF LICENCE

Licence is granted to use Standard Mark as per IS 10805: 1986 with the following scope:	
Type	Foot-Valves, Reflux Valves or Non-return Valves and Bore Valves
End Connections	Screwed, Flanged
Nominal Size (mm)	25, 32, 40, 50, 65, 80, 100, 125, 150