



**PRODUCT MANUAL
FOR IRRIGATION EQUIPMENT-STRAINER-TYPE FILTERS
ACCORDING TO IS 12785 : 1994**

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 12785 : 1994
	Title	:	Irrigation Equipment – Strainer-Type Filters -Specification
	No. of Amendments	:	04
2.	Sampling Guidelines:		
a)	Raw material	:	Material shall be as per Clause 4.1 of IS 12785.
b)	Grouping guidelines	:	As there are no grouping guidelines for the product, sample shall be drawn for each size, type of screen, type of connection, Nominal test pressure and range of flow rates.
c)	Sample Size	:	01 No. (Sampling shall be done as per clause 5 of IS 12785. For Type test, test specimens shall be drawn at random from a quantity of at least 20 strainers).
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	Possible tests in a day:		
	(i) Tightness of strainer element (ii) Clean Pressure Drop (iii) Resistance to Internal Hydrostatic Pressure at High Temperature (iv) Resistance of strainer to internal Hydrostatic Pressure		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 12785 : 1994 with the following scope:		
	Name of the product	Irrigation Equipment – Strainer-Type Filters	
	Sizes	Nominal size.	
	Any other aspect required as per the Standard	a) Metal Screen/ Plastic Screen. b) Treaded connection/ Flanged connection. c) Nominal pressure d) Range of flow rates	

ANNEX A

**TO PRODUCT MANUAL
FOR IRRIGATION EQUIPMENT-STRAINER-TYPE FILTERS
ACCORDING TO IS 12785 : 1994**

LIST OF TEST EQUIPMENTS

Major test equipment required to test as per the Indian Standard

Sl. No.	Test used in with clause reference	Test Equipment
1.	Dimensions Cl. 4.1 & 4.3	Digital Vernier callipers, Micrometer, Coat gauge.
2.	Resistance of strainer to internal Hydrostatic Pressure Cl. 6.1	Pressure gauge (capable of reading 1.5 times the nominal operating pressure), stop watch, slip gauge, End Flanges for Hydro Test for 50mm & 75mm Filters.
3.	Resistance to Internal Hydrostatic Pressure at High Temperature Cl. 6.2	Pressure gauge, Hot water-bath (capable of operating at $60 \pm 2^{\circ}\text{C}$), Digital Thermometer, Stop watch, slip gauge.
4.	Resistance of filter element to buckling or tearing. Cl 6.3	Thin film of impermeable plastic, Pressure gauge (capable of reading 0.5 times the nominal operating pressure), stop watch, Measuring jar.
5.	Tightness of strainer element Cl. 6.3 & 6.4	Solid impermeable element, Pressure gauge, Measuring Jar.
6.	Clean Pressure Drop Cl. 6.5	Underground RCC Tank with 7.5 HP pump & 75 micron screen, Arrangement for pressure drop test with two stations for 50mm & 75mm Filters with associated pipelines & ball valves, Flow meter/ Rotameter.

This list above is indicative only and ma not be treated as exhaustive.



**SCHEME OF INSPECTION AND TESTING
FOR IRRIGATION EQUIPMENT-STRAINER -TYPE FILTERS
ACCORDING TO IS 12785 : 1994**

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. PACKING AND MARKING – The Standard Mark, as given in the Schedule of the licence, shall be marked on each Strainer housing, provided always that the strainer type filter to which this mark is thus applied, conform to every requirement of the specification.

3.1 Marking – Each Strainer housing and Filter elements shall be marked as per the clause 7.1 and 7.2 respectively of IS 12785. In addition, each Strainer housing shall be marked clearly and indelibly with the following information:

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

3.1.1 Manufacturer shall supply information about the strainer type filters to the user, in the form of catalogues as per clause 8 of IS 12785.

3.2 Packing – The Strainer type filters shall be packed so as to avoid damage in transit.

4. CONTROL UNIT – For the purpose of this Scheme, strainer type filters of the same model manufactured/assembled 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 tests and inspection results, a decision regarding the conformity or otherwise of the 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 the strainer type filter shall conform to the requirements stipulated in the Indian Standard.

6.1 The material used for different components shall be declared by the manufacturer in the 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
4.1	General	4.1.1 4.1.1.1 4.1.2 4.1.3 4.1.4	IS 12785 & IS 4736 IS 12785 IS 12785 & IS 4736 IS 12785 -do-	R	-	Each filter	
4.2	Strainer housing	4.2.1 4.2.2 4.2.3	-do- -do- -do-	R	-	Each filter	
4.3	Connections (as applicable) i) Threaded ii) Flanged iii) Others iv) Drain	- - 4.3.3 4.3.4	IS 2643 or IS 554 IS 6418 & IS 6392 IS 6418 IS 12785	R	One -do- -do- -do-	Each control unit -do- -do- Each filter	
6.1	Resistance of strainer to internal Hydrostatic Pressure	6.1	IS 12785	R	One	Each control unit	
6.2	Resistance to Internal Hydrostatic Pressure at High Temperature	6.2	-do-	R	One	-do-*	

6.3	Resistance of strainer element to buckling or tearing	6.3	-do-	R	One	-do-*	
6.4	Tightness of strainer element	6.4	-do-	R	One	-do-*	
6.5	Clean Pressure Drop	6.5	-do-	R	One	-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 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.

Note-3: *This test shall be performed only for strainer filter with nominal sizes of up to and including 152.4 mm.