



उत्पाद मैनुअल

भारतीय मानक 4246: 2025 के अनुसार
द्रवित पेट्रोलियम गैसों के साथ प्रयुक्त घरेलु गैस चूल्हे और निर्मित हाब्स

दस्तावेज संख्या - पी एम/आई एस 4246/5/ अगस्त 2025

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/ प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

PRODUCT MANUAL FOR DOMESTIC GAS STOVE AND BUILT IN HOB FOR USE WITH LPG ACCORDING to IS 4246:2025

Document No.- PM/IS 4246/5/August 2025

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.

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1.	Product	:	IS 4246:2025
	Title	:	Domestic Gas Stove and Built In Hob for Use With LPG
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	Materials and Components - As per clause 5 of IS 4246:2025
b)	Grouping guidelines	:	Each Type of Domestic Gas Stove/Built in Hob for use with LPG shall be tested for GoL/CSoL
c)	Sample Size	:	One Gas Stove/Built in Hob and spare components (Gas rail, nozzle, end plugs, gas cock, injector jets, installations, etc. as necessary for complete testing of the product)
3.	List of Test Equipment	:	Please refer <u>ANNEX – A</u>
4.	Scheme of Inspection and Testing	:	Please refer <u>ANNEX – B</u>
5.	Possible tests in a day	:	All tests
6.	Scope of the Licence	:	Please refer <u>ANNEX – C</u>

ANNEX - A**List of Test Equipments****Major test equipment required to test as per the Indian Standard**

Sl. No	Tests used in with clause reference	Test Equipments
1.	Testing of Materials - clause 5	(a) Muffle Furnace with Temperature Indicator (b) Magnifying Glass , Compass and Marker (c) Centre Punch and Hammer
2.	Gas Soundness - clause 13	(a) Leak Test apparatus with Bubble Indicator (b) Pressure gauge (c) Water Tank
3.	Strength and Rigidity - clause 15	(a) Dial Gauge with magnetic stand (b) Surface Plate and Iron weight (c) Steel Legs, Steel Strips (d) Frame, Fridge
4	Gas Consumption - clause 17	(a) Stopwatch, Thermometer (b) Gas Flow meter, Manometer (c) Air testing apparatus with empty compressor tank (d) Pressure Regulator, Barometer, Scale (e) Calibration Bottle
5	Resistance to draught - clause 23	a) Rotating Vane Anemometer b) Mini fan
6	Combustion Test - clause 24	(a) Digital CO(Carbon mono-oxide) Indicator (b) Gas collecting hood (c) Aluminium Vessel (d) Orsett Apparatus (e) Pipette (f) Chemicals, Measuring cylinders and Chemical Balance, wash bottle
7	Fire Hazard and Limiting Temperature - clause 25	(a) Thermocouple, Stainless steel tube (b) Temperature indicator
8	Thermal efficiency - clause 26	(a) Weighing Balance and Weight Box (b) Thermometer (c) Aluminium Pan and Stirrer (d) Pressure Regulator, Manometer
9	Dimensions	(a) Micrometer ,Vernier caliper, Dial caliper (b) Thread Gauge
10	To maintain temperature for testing	(a) Air conditioner

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

ANNEX - B

Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit i.e. Batch and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with **para 2.4** below.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 **Control Unit:** For the guidance of manufacturers, the recommended definition of Control Unit is quantity of Gas Stoves/Built-in Hobs having same design and material of burners, total gas consumption in g/h and rating of individual burners in kcal/h, manufactured in a day.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in-house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer, and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in-house as “R” or other tests which can be sub-contracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. LABELLING AND MARKING – As per the requirement of IS 4246:2025. The Standard Mark, as given in the Schedule of the licence, shall be marked on each Gas stove or Built in Hob, as applicable, provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place on product or package as follows: “For details of BIS certification please visit www.bis.gov.in”.

4. REJECTION - All the production which conforms to the Indian Standard and covered under scope of the licence shall be marked with Standard Mark. 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: Subcontracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.	General	4, 4.1.1	IS 5116	R	Each Stove/Built-in Hob	---	---
5	MATERIALS						
	Main body of Burner	5.2,5.5 Annex C	IS 5116	S	One	Each Consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked. Raw materials which are under mandatory BIS Certification, shall be ISI Marked. In case of failure, consignment shall not be used in manufacturing.
	Plastic Component	5.1.1, Annex B	IS 5116	S			
	Toughened glass	5.1.2	IS 4246 IS 2553(Part 1) IS 14900	S			
		5.1.3 (e) Annex C 4, 5, 6	IS 4246 IS 6506	S			
	Copper and Copper Alloy	5.3, IS 2305	IS 5116	S			
	Non Metallic materials in contact with LPG	5.4, Annex D	IS 5116	S			
	Gas tap	5.6	IS 5116	S			

	Drip tray	5.7	IS 5116	S	One	Each Consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked. In case of failure, consignment shall not be used in manufacturing
	Additional requirement for surface of glass	5.1.3 (except 5.1.3 (e))	IS 4246	R	One	Each Control Unit	
6	Design for Maintenance	6	IS 4246	R	Each Stove/Hob	---	---
7	Rigidity and Stability	7.1	IS 4246	R	Each Stove/Hob	---	---
		7.2, 7.3	IS 4246	R	One	Each Control Unit	
8	Workmanship and Finish	7.1	IS 5116	R	Each Stove/Hob	---	---
	Vitreous–enamelled Components	7.2, Annex E	IS 5116	S	Two pieces	Each Consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked. In case of failure, consignment shall not be used in manufacturing.
	Nickel Chrome plated material	7.3	IS 5116 IS 3203 IS 6009	S	Two pieces		
	Painted surface	7.4	IS 5116	R	One	Every month	---
	Screws, Nuts, Bolts, Springs , Pipes and Pins	7.7 8.3	IS 5116 IS 4246	S	One	Each Consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked. In case of failure, consignment shall not be used in manufacturing.
	External finish	8.2	IS 4246	R	Each Stove/Hob	---	---

9	Gas Taps	8	IS 5116	R	Each Stove/Built in hob	---	---
		8.1 to 8.6, 8.8 to 8.12 Fig 2, 3	IS 5116	R	Each Stove/ Built in Hob	---	---
		8.7, Fig 4	IS 5116	S	Two	Each Consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked. In case of failure, consignment shall not be used in manufacturing.
10	Injector Jets (Material of Construction and Thread to be declared)	9	IS 5116	S	10%	Each Consignment	
11	Burners	10	IS 5116	R	Each Burner	---	---
		11.2, 11.3, 11.4	IS 4246	R	Each Gas Stove/ Built in Hob		
12	Pan Supports	12.1, 12.3	IS 4246	R	Each Pan Support	---	---
13	Gas Soundness	16, Annex J	IS 5116	R	Each Gas Stove/ Built in Hob	---	If there is any defect in any stove, it shall be rectified. The rectified stove shall again be tested and marked only if found conforming. In addition, a stove shall be drawn from each control unit and tested for Gas Soundness after the stove has been operated for two hours.

14	Gas inlet connection	18.2	IS 5116	R	One Gas Stove/ Built in Hob	Once in a month	In case of failure, twice the number of samples shall be tested and if any stove fails the control unit shall be rejected.
		18.3,18.4	IS 5116	S	10%	Each Consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked. In case of failure, consignment shall not be used in manufacturing.
		14.2 to 14.6	IS 4246	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained		
15	Strength and Rigidity	15, Annex B	IS 4246	R	One Stove	Each Control Unit	In case of failure, twice the number of samples shall be tested and if any stove fails the control unit shall be rejected.
18	Ignition & Flame Travel	18 14, Annex G	IS 4246 IS 5116	R	Each Stove/ Built in Hob	-	If there is any defect in any stove, it shall be rectified. The rectified stove shall again be tested and marked only if found conforming.
19	Flame Stability	19	IS 4246	R	One Stove/Built-in Hob	Each Control Unit	
20	Noise Control	20	IS 4246	R	Each Stove Built in Hob	---	
21	Flash Back	21	IS 4246	R	One Stove/ Built in Hob	Each Control Unit	In case of failure, all gas stoves in the control unit shall be tested and only

22	Formation of Soot	22	IS 4246	R	One Stove/ Built in Hob	Each Control Unit	those stoves which are conforming shall be marked.
	TYPE TESTS						
5	Flash Back Test for Material of the Burner	5.2, Annex C	IS 5116	R	One burner and its part	Once in a month	The test shall also be conducted, if there is any change in material of Burner and its parts. or source of supply
17	Gas Consumption	17, Annex D	IS 4246	R	Three Stoves/Built in Hob	Each Control Unit	In case of failure, six more stoves or Built in-hobs, shall be tested from the same control unit and if any stove fails all the stoves in the control unit shall be checked and those stoves which are conforming shall be marked. However, those stoves which are failing may be reprocessed and retested and marked only if found conforming.
23	Resistance to Draught	23	IS 4246	R	One Stove/ Built in Hob	Once in a month for each type of Gas stove, Hob produced in the month	---
24	Combustion	24, Annex E		R	One Stove/ Built in Hob		---

25	Fire Hazard and Limiting Temperature	23, Annex M	IS 5116	S	One Stove/ Built in Hob	Once in a month	Stoves having different body material and finish shall be tested separately, if manufactured during the month
		25.2, Annex F	IS 4246	S	One Stove/ Built in Hob		
26	Thermal Efficiency	26, Annex F	IS 4246	R	One Stove/ Built in Hob	Once in a month	In case of failure, samples from three consecutive control units shall be tested and original frequency may be restored if all the samples pass.

ANNEX – C**SCOPE OF THE LICENCE**

Licence is granted to use Standard Mark as per IS 4246:20225 with the following scope:	
Name of the Product	Domestic Gas Stove and Built in hob, for use with Liquefied Petroleum Gases
Product covered	Domestic Gas Stove Built in hob
Type	a) Total Gas consumption in g/h. b) No. of burners and rating of burners in kcal/h. c) Material of body and burner d) Thread size of injector jet e) Toughened glass top, if applicable f) Auto- ignition, if applicable