



उत्पाद मैनुअल

**आई एस 1391 (भाग 2): 2023 के अनुसार
कक्छ वातानुकूलक – विभक्त वातानुकूलक के लिए**

दस्तावेज संख्या-पी एम/आई एस 1391 (भाग 2)/6/ सितम्बर 2023

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
ROOM AIR CONDITIONERS - SPLIT AIR CONDITIONERS
ACCORDING to IS 1391 (Part 2):2023**

Document No.-PM/IS 1391 (Part 2)/6/ September 2023

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.

भारतीय मानक ब्यूरो
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PRODUCT MANUAL FOR ROOM AIR CONDITIONERS - SPLIT AIR CONDITIONERS ACCORDING TO IS 1391 (PART 2): 2023

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 1391 (Part 2): 2023
	Title	:	Room Air Conditioners - Split Air Conditioners
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	• Material- as per Cl. 5.1.4 • Supply Cord – IS 694 or IS 9968 (Part 1) • Conductor for supply cord- as per Cl. 5.2.5 • Refrigerant Pipe and Fittings- IS 10773 or material specified in Annex B of IS 11329 • Air Filter- as per Cl. 5.5 • Pre-filter, if used- IS 17570 (Part 1)/ ISO 16890-1 • HEPA Filters, if used- IS 16753-1/ISO 29463-1 • Temperature Sensing Controls- as per Cl. 5.6 • Hermetic Compressors- IS 10617 • Heat Exchangers- IS 11329 • Motors- as per Cl. 5.9
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	Please refer ANNEX – B
3.	List of Test Equipment	:	Please refer ANNEX – C
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – D
5.	Possible tests in a day	:	Please refer ANNEX – E
6.	Scope of the Licence	:	Please refer ANNEX – F
7.	Any other product specific guidelines	:	Please refer ANNEX – G

ANNEX--A**GROUPING GUIDELINES**

1. The following parameters are taken into consideration for evolving the grouping guidelines for certification as per IS 1391 (Part 2): 2023:

a) **Classifications based upon function:**

- (i) Cooling only
- (ii) Cooling and heating

b) **Classifications based upon type of product:**

- (i) Indoor unit (IDU) only
- (ii) Outdoor unit (ODU) only
- (iii) Split Air Conditioners (Both IDU and ODU)

2. Further, Air Conditioners may be grouped in to following 4 groups, based on cooling capacity:

Group	Cooling capacity in Watt (W)
I	Upto and including 5 200
II	Above 5 200 to 10500
III	Above 10 500 to 13 250
IV	Above 13 250 to 18 000

3. From each group, sample of highest cooling capacity among the capacities intended to be covered in the license for each function, shall be tested for all requirements.

4. The test protocol shall be as given below depending upon the type of manufacturer:

- ***Manufacturer of IDU only - Sample of IDU for Production Routine Tests only.***
- ***Manufacturer of ODU only - Sample of ODU for Production Routine Tests only.***
- ***Manufacturer of Split AC – Sample of Split AC for complete testing.***

5. When samples are tested to cover both the groups and functions, at least one sample from each function shall be tested to cover the entire range.

6. All model numbers, along with their following technical parameters intended to be covered in the scope of licence, shall be declared by the manufacturer at the time of grant of licence/Change in scope of licence:

- Model Number
- **Function:** Cooling only/Cooling and Heating
- Rated Cooling capacity, in Watts
- Rated heating capacity, in Watts, if applicable

- Rated Voltage, Frequency and Phase
 - Maximum Power Consumption at rated conditions, in Watts
 - Name and quantity of refrigerant charge
 - Nominal current at rated conditions
 - ISEER at rated conditions, if applicable
 - Speed: Fixed/Variable
 - Whether Unit is with or without Pre-filters/HEPA filters
 - Whether Unit is Fixed capacity or Two-stage or Multi-stage or Variable Capacity
 - Mounting arrangement: Floor type/Ceiling type (Cassette)/Wall type
7. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
8. During the operation of Licence, it shall be ensured that all the varieties covered in the Licence are tested in rotation, to the extent possible.
9. A typical example for drawal of sample to cover the entire varieties under the scope of the License is given for the purpose of general guidance:

(a) Manufacturer of IDU only

Sample 1	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 5 200 W, 'Cooling only'
Sample 2	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 10 500 W, 'Cooling only' or 'Cooling and heating'
Sample 3	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 13 250 W, 'Cooling only' or 'Cooling and heating'
Sample 4	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 18 000 W, 'Cooling and heating'

Or

Sample 1	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 5 200 W, 'Cooling and heating'
Sample 2	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 10 500 W, 'Cooling only' or 'Cooling and heating'
Sample 3	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 13 250 W, 'Cooling only' or 'Cooling and heating'
Sample 4	Indoor Unit - Corresponding to ODU of Rated Cooling Capacity 18 000 W, 'Cooling only'

(b) Manufacturer of ODU only

Sample 1	Outdoor Unit - Rated Cooling Capacity 5 200 W, 'Cooling only'
Sample 2	Outdoor Unit - Rated Cooling Capacity 10 500 W, 'Cooling only' or 'Cooling and heating'
Sample 3	Outdoor Unit - Rated Cooling Capacity 13 250 W, 'Cooling only' or 'Cooling and heating'
Sample 4	Outdoor Unit - Rated Cooling Capacity 18 000 W, 'Cooling and heating'

Or

Sample 1	Outdoor Unit - Rated Cooling Capacity 5 200 W, 'Cooling and heating'
Sample 2	Outdoor Unit - Rated Cooling Capacity 10 500 W, 'Cooling only' or 'Cooling and heating'
Sample 3	Outdoor Unit - Rated Cooling Capacity 13 250 W, 'Cooling only' or 'Cooling and heating'
Sample 4	Outdoor Unit - Rated Cooling Capacity 18 000 W, 'Cooling only'

(c) Manufacturer of Split AC

Sample 1	Split Air Conditioner - Rated Cooling Capacity 5 200 W, 'Cooling only'
Sample 2	Split Air Conditioner - Rated Cooling Capacity 10 500 W, 'Cooling only' or 'Cooling and heating'
Sample 3	Split Air Conditioner - Rated Cooling Capacity 13 250 W, 'Cooling only' or 'Cooling and heating'
Sample 4	Split Air Conditioner - Rated Cooling Capacity 18 000 W, 'Cooling and heating'

Or

Sample 1	Split Air Conditioner - Rated Cooling Capacity 5 200 W, 'Cooling and heating'
Sample 2	Split Air Conditioner - Rated Cooling Capacity 10 500 W, 'Cooling only' or 'Cooling and heating'
Sample 3	Split Air Conditioner - Rated Cooling Capacity 13 250 W, 'Cooling only' or 'Cooling and heating'
Sample 4	Split Air Conditioner - Rated Cooling Capacity 18 000 W, 'Cooling only'

10. During operation of the licence if any new model is intended to be covered within the existing scope of licence, the parameters as per para 6 above for all such new model numbers will be declared by licensee to BIS for records. The declaration shall be submitted by the manufacturer as per APPENDIX I below, through Manakonline (communication window) and the information shall be noted by BIS. After submission of the declaration to BIS Branch Office through Manakonline, the licensee may use the standard mark on such new models (Licensee shall be able to produce documentary proof of having submitted this information to BIS).
11. However, in case any discrepancy is observed post-facto due to which it is viewed that the models are not to be endorsed in the scope (e.g. if the added models do not fall within granted scope), Head of BIS Branch Office concerned, may, after giving the licensee an opportunity to explain, direct the licensee to cease marking on such models, or in case the appliances are already marked and dispatched, issue directions for product recall.
12. During the operation of Licence, it shall be ensured that all the varieties covered in the Licence are tested in rotation, to the extent possible.

APPENDIX –I
FORMAT FOR DECLARATION FOR ADDING NEW MODELS WITHIN SCOPE OF LICENCE
BY LICENSEE

Date:

Branch Office
Bureau of Indian Standards

Sir/Madam

Subject: DECLARATION FOR ADDING NEW MODELS WITHIN SCOPE OF LICENCE

With reference to my existing licence for “Room Air Conditioners- Split Air Conditioners” as per IS 1391 (Part 2) (Licence No CM/L-.....), I request BIS to add the following new models in the scope of my licence

List of new models intended to be covered in existing scope of licence

Model	Model 1	Model 2	Model 3
Technical parameter			
Product: Please refer to <i>Annex G of this Manual</i>			
Model Number			
Function: Cooling only/Cooling and Heating			
Rated Cooling capacity, in Watts			
Rated heating capacity, in Watts, if applicable			
Rated Voltage, Frequency and Phase			
Maximum Power Consumption at rated conditions, in Watts			
Name and quantity of refrigerant charge			
Nominal current at rated conditions			
ISEER at rated conditions, if applicable			
Speed: Fixed/Variable			
Whether unit is With or without Pre-filters/HEPA filters			
Whether Unit is Fixed capacity or Two-stage or Multi-stage or Variable Capacity			
Mounting arrangement: Floor type/Ceiling type (Cassette)/Wall type			

I declare that the above models, as indicated above, fall within the existing scope of my licence.

I declare that the above information is true and correct to the best of my knowledge and undertake that in case my declaration is found defective or incorrect BIS may take action as deemed appropriate as per the BIS Act, Rules and Regulations which we shall comply with including recall of such products from the market.

Signature with date of Firm’s authorized signatory

Name and designation

ANNEX--B**SAMPLE SIZE**

Type of Manufacturer	Sample details
Manufacturer of IDU only	* One Indoor Unit along with dummy Outdoor Unit
Manufacturer of ODU only	* One Outdoor Unit along with dummy Indoor Unit
Manufacturer of Split AC	One Split Air Conditioner

*** For considering Grant of Licence/ Change in Scope of Licence of “IDU only” / “ODU only”, complete Factory Testing w.r.t verification of Constructional Requirements and Production Routine Tests as per Table 1A / Table 1B, as applicable, shall be carried out. No separate sample shall be drawn for Independent Testing and Licence is to be operated on Factory Testing basis.**

ANNEX-C**List of Test Equipment*****Major test equipment required to test as per the Indian Standard******(a) IDU only***

Sr No	Tests used in with clause reference	Test equipment
1.	General Running Test. Cl 12.2.1	Run test facility
2.	Leakage Test, Cl. 12.2.2	Pressure test set up, Pressure gauge, Leak detector
3.	High Voltage Test, Cl. 12.2.3	High Voltage tester
4.	Leakage Current Test, Cl. 12.2.4	Leakage current tester
5.	Earth Resistance Test, Cl. 12.2.5	Voltage Source, Milli-ohmmeter

(b) ODU only

Sr No	Tests used in with clause reference	Test equipment
1.	General Running Test. Cl 12.2.1	Run test facility
2.	Leakage Test, Cl. 12.2.2	Pressure test set up, Pressure gauge, leak detector
3.	High Voltage Test, Cl. 12.2.3	High Voltage tester
4.	Leakage Current Test, Cl. 12.2.4	Leakage current tester
5.	Earth Resistance test, Cl. 12.2.5	Voltage Source, Milli-ohmmeter

(c) Split AC

Sr No	Tests used in with clause reference	Test equipment
1.	General Running Test. Cl 12.2.1	Run test facility
2.	Leakage test, Cl. 12.2.2	Pressure test set up, Pressure gauge, Leak detector
3.	High Voltage Test, Cl. 12.2.3	High Voltage tester
4.	Leakage Current Test, Cl. 12.2.4	Leakage current tester
5.	Earth Resistance test, Cl. 12.2.5	Voltage Source, Milli-ohmmeter
6.	Cooling Capacity test, Cl. 9.10, & Heat Pump heating capacity test, Cl. 9.11 Annex G, H	Test set up for Calorimeter method or Air enthalpy (Room Psychometric) method as per Annex G, H Temperature measuring instruments as per Cl. 11.1
7.	Power factor test, Cl. 9.3	PF Meter
8.	Maximum Operating Condition test, Cl. 9.4	Test set up as per Cl. 9.4
9.	Freeze up test Cl. 9.5	Test set up as per Cl. 9.5
10.	Enclosure sweat test, Cl. 9.6	Test set up as per Cl. 9.6
11.	Power consumption test, Cl. 9.7 & 9.8	Power meter
12.	Sound Pressure test, Cl. 9.13	Sound measuring room as per Cl. 9.13.2, Sound measuring instrument as per Cl. 9.13.3.
13.	Maximum Heating Performance Test, Cl. 9.12	Test set up as per Cl. 9.12

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

ANNEX- D

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 1391 (Part 2): 2023. The Standard Mark, as given in the Schedule of the licence, shall be marked on each Air Conditioner provided always that the Air Conditioner 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 as follows: “For details of BIS certification please visit www.bis.gov.in”.

Please also refer to *Annex G*.

4. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1A, Table 1B, and Table 1C and the levels of control in column 3 of Table 1A, Table 1B, and Table 1C, as applicable, 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. Please also refer to *Annex G*.

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 1A**(IDU Only)**

(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				
5	CONSTRUCTION						
5.1	General	5.1	IS 1391 (Part 2)	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained. With respect to materials, Conformity shall be established as per Internal quality Assurance Plan of the licensee and no further testing is required if received with a test certificate or is ISI Marked..		
5.2.2, 5.2.4, 5.2.5	Supply Cord and Electric Conductors	5.2.2, 5.2.4, 5.2.5	IS 1391 (Part 2)	S	No testing required in case received along with test certificate or is ISI Marked.		
5.3	Refrigerant Circuit	5.3	IS 1391 (Part 2) IS 10773 IS 11329				
5.5	Air Filter	5.5	IS 1391 (Part 2)				
5.5.2	- Pre-filter, (if used) - HEPA Filters(if used)	5.5	IS 1391 (Part 1) IS 17570 (Part 1)/ ISO 16890-1 IS 16753-1/ISO 29463-1				
5.6	Temperature sensing Controls	5.6	IS 1391 (Part 2) IS/IEC 60730- 2-9				

5.7	Hermetic Compressors	5.7	IS 1391 (Part 2) IS 10617		No testing required in case received along with test certificate or is ISI Marked.	
5.8	Heat Exchanger	5.8	IS 1391 (Part 2) IS 11329			
5.9	Motors	5.9	IS 1391 (Part 2) IS 996			
---	A.C Motor Capacitor	---	IS 2993			
5.4	Provision for earthing	5.4	IS 1391 (Part 2) IS 302(Part 1)	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.	
15.2	Production Routine Test					
12.2.1	General Running Test	12.2.1	IS 1391 (Part 2)	R	Each IDU	—
12.2.2	Pressure Test or Leakage Test	12.2.2	IS 1391 (Part 2)			—
12.2.3	High Voltage Test	12.2.3 Annex A	IS 1391 (Part 2) IS 302 (Part 1)			—
12.2.4	Leakage Current Test	12.2.4, 13.2	IS 1391 (Part 2) IS 302 (Part 1)			—
12.2.5	Earth Resistance Test (Provision for Earthing)	12.2.5, 27	IS 1391 (Part 2) IS 302 (Part 1)			—
12.4	Acceptance Tests	12.4	IS 1391 (Part 2)	As agreed to between manufacturer and purchaser.		

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

Note- 2: The control unit and levels of control as decided by the Bureau are 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.

TABLE 1B**(ODU Only)**

(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				
5	CONSTRUCTION						
5.1	General	5.1	IS 1391 (Part 2)	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained. With respect to materials, Conformity shall be established as per Internal quality Assurance Plan of the licensee and no further testing is required if received with a test certificate or is ISI Marked..		
5.2.2, 5.2.4, 5.2.5	Supply Cord and Electric Conductors	5.2.2, 5.2.4, 5.2.5	IS 1391 (Part 2)	S	No testing required in case received along with test certificate or is ISI Marked		
5.3	Refrigerant Circuit	5.3	IS 1391 (Part 2)				
5.5	Air Filter	5.5	IS 1391 (Part 2)				
5.5.2	- Pre-filter, (if used) - HEPA Filters(if used)	5.5	IS 1391 (Part 1) IS 17570 (Part 1)/ ISO 16890-1 IS 16753-1/ISO 29463-1				
5.6	Temperature sensing Controls	5.6	IS 1391 (Part 2) IS/IEC 60730- 2-9				
5.7	Hermetic Compressors	5.7	IS 1391 (Part 2) IS 10617				

5.8	Heat Exchanger	5.8	IS 1391 (Part 2) IS 11329	S	No testing required in case received along with test certificate or is ISI Marked	
5.9	Motors	5.9	IS 1391 (Part 2) IS 996			
---	A.C Motor Capacitor	---	IS 2993			
5.4	Provision for earthing	5.4	IS 1391 (Part 2) IS 302(Part 1)	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.	
12.2	<i>Production Routine Test</i>					
12.2.1	General Running Test	12.2.1	IS 1391 (Part 2)	R	Each ODU	—
12.2.2	Pressure Test or Leakage Test	12.2.2	IS 1391 (Part 2)			—
12.2.3	High Voltage Test	12.2.3 Annex A	IS 1391 (Part 2) IS 302 (Part 1)			—
12.2.4	Leakage Current Test	12.2.4, 13.2	IS 1391 (Part 2) IS 302 (Part 1)			—
12.2.5	Earth Resistance Test (Provision for Earthing)	12.2.5, 27	IS 1391 (Part 2) IS 302 (Part 1)			—
12.4	<i>Acceptance Tests</i>	12.4	IS 1391 (Part 2)	As agreed to between manufacturer and purchaser.		

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

Note- 2: The control unit and levels of control as decided by the Bureau are 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.

TABLE 1C**(Split Air Conditioner)**

(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				
5	CONSTRUCTION						
5.1	General	5.1	IS 1391 (Part 2)	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained. For materials, Conformity shall be established as per Internal quality Assurance Plan of the licensee and no further testing is required if received with a test certificate or is ISI Marked..		
5.2.2, 5.2.4, 5.2.5	Supply Cord and Electric Conductors	5.2.2, 5.2.4, 5.2.5	IS 1391 (Part 2)	S	No testing required in case received along with test certificate or is ISI Marked.		
5.3	Refrigerant Circuit	5.3	IS 1391 (Part 2)				
5.5	Air Filter	5.5	IS 1391 (Part 2)				
5.5.2	- Pre-filter, (if used) - HEPA Filters(if used)	5.5	IS 1391 (Part 1) IS 17570 (Part 1)/ ISO 16890-1 IS 16753-1/ISO 29463-1				
5.6	Temperature sensing Controls	5.6	IS 1391 (Part 2) IS/IEC 60730- 2-9				
5.7	Hermetic Compressors	5.7	IS 1391 (Part 2) IS 10617				

5.8	Heat Exchanger	5.8	IS 1391 (Part 2) IS 11329	S	No testing required in case received along with test certificate or is ISI Marked.		
5.9	Motors	5.9	IS 1391 (Part 2) IS 996	S			
---	A.C Motor Capacitor	---	IS 2993	S			
5.4	Provision for Earthing	5.4	IS 1391 (Part 2) IS 302(Part 1)	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.		
9, 12.3	PERFORMANCE REQUIREMENTS, TYPE TESTS						
12.3.3	Protection against access to the live part	8	IS 302 (Part 1)	S	One	Once in a year for each function and rating (also refer Note 1).	—
	Electric strength test	13.3	IS 302 (Part 1)	S	One		—
	Electrical leakage current at operating temperature	13.2	IS 302 (Part 1)	S	One		—
9.2	Safety Conditions for units using A ₃ refrigerants	-	IS 16678 (Part 2)/ ISO 5149 (Part 2)	R	One	Once in a month (also refer Note 1).	
9.3 12.3.1(a)	Power Factor Test	9.3	IS 1391 (Part 2)	S	One	Once in two years for each function and rating (also refer Note 1).	—
9.4 12.3.1(b)	Maximum Operating Conditions Test	9.4	IS 1391 (Part 2)	S	One		—
9.5 12.3.1(c)	Freeze Up Test	9.5	IS 1391 (Part 2)	S	One		—
9.6 12.3.1(d)	Enclosure Sweat Test	9.6	IS 1391 (Part 2)				—
9.7 12.3.1(e)	Power Consumption Test for Cooling	9.7	IS 1391 (Part 2)	S	One		—
9.8 12.3.1(e)	Power Consumption Test for Heat Pump	9.8	IS 1391 (Part 2)	S	One		—

9.9 12.3.1 (f)	Cooling Capacity Test	9.9	IS 1391 (Part 2)	S	One		
9.10 12.3.1 (g)	Cooling Capacity Test	9.10	IS 1391 (Part 2)	S	One		
9.12 12.3.1 (h)	Maximum Heating Performance Test	9.12	IS 1391 (Part 2)	S	One	Once in two years for each function and rating (also refer Note 1).	
9.13 12.3.1 (j)	Sound Pressure Test	9.13	IS 1391 (Part 2)	S	One		
12.2	Production Routine Test						
12.2.1	General Running Test	12.2.1	IS 1391 (Part 2)	R	Each IDU/Each ODU		—
12.2.2	Leakage Test	12.2.2	IS 1391 (Part 2)	R			
12.2.3	High Voltage Test	12.2.3 Annex A	IS 1391 (Part 2) IS 302 (Part 1)	R			
12.2.4	Leakage Current Test	12.2.4, 13.2	IS 1391 (Part 2) IS 302 (Part 1)	R			
12.2.5	Earth Resistance Test (Provision for Earthing)	12.2.5, 27	IS 1391 (Part 2) IS 302 (Part 1)	R			
12.4	Acceptance Tests	12.4	IS 1391 (Part 2)	As agreed to between manufacturer and purchaser.			

Note- 1: The test shall be done whenever there is a change in design or change in the supplier of either IDU or ODU for outsourced units.

Note- 2: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-3: The control unit and levels of control as decided by the Bureau are 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 – E

Possible tests in a day

(a) Manufacturer of IDU only

- i) General Running Test (Cl. 12.2.1)
- ii) Pressure Test or Leakage Test (Cl. 12.2.2)
- iii) High Voltage Test (Cl. 12.2.3)
- iv) Leakage Current Test (Cl.12.2.4)
- v) Earth Resistance Test (Cl. 12.2.5)

(b) Manufacturer of ODU only

- i) General Running Test (Cl. 12.2.1)
- ii) Pressure Test or Leakage Test (Cl. 12.2.2)
- iii) High Voltage Test (Cl. 12.2.3)
- iv) Leakage Current Test (Cl.12.2.4)
- v) Earth Resistance Test (Cl. 12.2.5)

(c) Manufacturer of Split AC

- i) General Running Test (Cl. 12.2.1)
- ii) Pressure Test or Leakage Test (Cl. 12.2.2)
- iii) High Voltage Test (Cl. 12.2.3)
- iv) Leakage Current Test (Cl. 12.2.4)
- v) Earth Resistance Test (Cl. 12.2.5)
- vi) Power Factor Test (Cl. 9.3)
- vii) Maximum Operating Conditions test (Cl. 9.4)
- viii) Enclosure Sweat test (Cl. 9.6)

ANNEX F

Scope of Licence

“Licence is granted to use Standard Mark as per IS 1391 (Part 2): 2023 with the following scope:

Name of the product	Please refer to <i>Annex G</i>
Classification based on function	
Cooling Capacity (up to and including)	

ANNEX - G

Guidelines for Certification of Split Air Conditioner (AC)
having Indoor Unit (IDU) and Outdoor Unit (ODU)

1. This has reference to the Certification of Split Air Conditioner (AC) having Indoor Unit (IDU) and Outdoor Unit (ODU) as per IS 1391 (Part 2).
2. As per Para 1 (i) of Scheme-I of Schedule- II of the BIS (Conformity Assessment) Regulations, 2018, a license can be granted by Bureau for products manufactured in a manufacturing premises. Further, as per Para 3 (1) (a) (ii) of Scheme-I of Schedule- II of these Regulations, a part of the manufacturing activity may be outsourced.
3. The following are the possible scenario in the manufacturing of Split Air Conditioner:
 - (A) In-house manufacturing of IDU only.
 - (B) In-house manufacturing of ODU only.
 - (C) In-house manufacturing of both IDU and ODU and selling as individual units only **or** In-house manufacturing of both IDU and ODU and selling as individual units as well as complete Split AC.
 - (D) In-house manufacturing of IDU and Outsourcing of ODU (i.e purchasing of ODU either from domestic or foreign manufacturer) and selling as complete Split AC **or** In-house manufacturing of ODU and Outsourcing of IDU (i.e purchasing of IDU either from domestic or foreign manufacturer) and selling as complete Split AC.
 - (E) Outsourcing of both IDU and ODU (i.e purchasing of both IDU and ODU either from domestic or foreign manufacturer).
4. (i) The manufacturer who intends to obtain BIS Certification Licence for Split AC as per IS 1391 (Part 2) shall normally have complete in-house manufacturing facility. However, considering the possible manufacturing scenario of Split AC Industry, **outsourcing of part of the manufacturing activity may be permitted to the extent of one of the units only (i.e either IDU or ODU only) for certification of Split AC as per IS 1391 (Part 2).**
 - (ii) **Under any circumstances, purchasing of both the units (i.e ISI marked IDU as well as ISI marked ODU) shall not be permitted for the certification of Split AC.**
 - (iii) **For obtaining BIS licence, at least one of the units (i.e. either IDU or ODU) shall be manufactured in-house. In other words, persons who are not having in-house manufacturing facilities either for IDU or for ODU shall not be eligible for obtaining BIS licence.**
5. Accordingly, the guidelines given below shall be followed for Certification of Air Conditioners as per IS 1391 (Part 2):

(A) Manufacturer of only IDU (in-house)

- i) Every manufacturer who is carrying out in-house manufacturing of only IDU shall obtain licence from BIS for the product type **Indoor Unit** as per IS 1391 (Part 2). In such cases, the scope of BIS licence will be **“Indoor Unit Only”**.
- ii) The manufacturer shall have complete in-house testing facility for all the **Production Routine tests** for IDU as per IS 1391 (Part 2) and shall carry out due testing of IDU as per the Scheme of Inspection and Testing (SIT) and maintain records.
- iii) The manufacturer shall ensure that all the components used in manufacturing (either bought out or manufactured in-house) which are covered under the mandatory certification of BIS through various QCOs (e.g: Cables as per IS 694/ IS 9968-1, Capacitors as per IS 2993, Finned Type Heat Exchangers as per IS 11329, Hermetic Compressors as per IS 10617 etc.), as applicable, are ISI Marked under a valid BIS licence.
- iv) Upon obtaining BIS licence, the licensee shall ensure that all the information as per IS 1391 (Part 2) as well as the SIT are marked on each IDU only after due testing of IDU as per the SIT.
- v) Each IDU shall be marked with the BIS Standard Mark as given below and the **responsibility of the Quality of ISI marked IDU shall vest with the IDU licensee:**

IS 1391 (Part 2)



Indoor Unit only

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- vi) **(a) The IDU manufacturer shall sell ISI marked IDU to those manufacturers only who holds BIS licence for the complete product Split AC (i.e Licensee at item ‘5D’ or even to licensee at item ‘5C’).**
 - (b) An undertaking shall be furnished by the IDU manufacturer to BIS to the effect that the ISI marked IDU will be sold to BIS licensees for the complete product Split AC only.
 - (c) However, the actual physical supply of the ISI marked IDU may be to any place other than the licenced premises of the Split AC manufacturer also. The details of all such supplies shall be maintained by the IDU licensee and shall be produced to BIS on demand. An undertaking in this respect shall be obtained from the IDU manufacturer.

(B) Manufacturer of only ODU (in-house)

- i) Every manufacturer who is carrying out in-house manufacturing of only ODU shall obtain licence from BIS for the product type **Outdoor Unit** as per IS 1391 (Part 2). In such cases, the scope of BIS licence will be **“Outdoor Unit Only”**.
- ii) The manufacturer shall have complete in-house testing facility for all the **Production Routine tests** for ODU as per IS 1391 (Part 2) and shall carry out due testing of ODU as per the Scheme of Inspection and Testing (SIT) and maintain records.
- iii) The manufacturer shall ensure that all the components used in manufacturing (either bought out or manufactured in-house) which are covered under the mandatory certification of BIS through various QCOs (e.g: Cables as per IS 694/ IS 9968-1, Capacitors as per IS 2993, Finned Type Heat Exchangers as per IS 11329, Hermetic Compressors as per IS 10617 etc.), as applicable, are ISI Marked under a valid BIS licence.
- iv) Upon obtaining BIS licence, the licensee shall ensure that all the information as per IS 1391 (Part 2) as well as the SIT are marked on each ODU only after due testing of ODU as per the SIT.
- v) Each ODU shall be marked with the BIS Standard Mark as given below and the **responsibility of the Quality of ISI marked ODU shall vest with the ODU licensee:**

IS 1391 (Part 2)



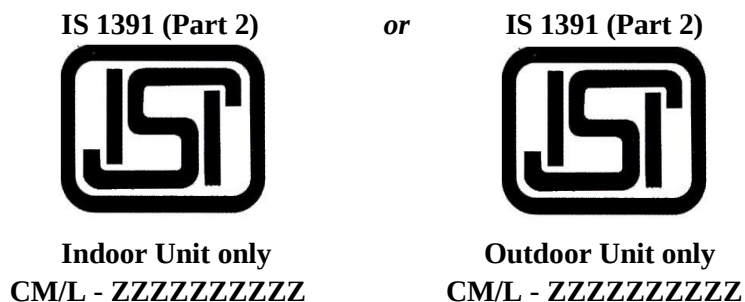
Outdoor Unit only

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- vi) (a) **The ODU manufacturer shall sell ISI marked ODU to those manufacturers only who holds BIS licence for the complete product Split AC (i.e Licensee at item ‘5D’ or even to licensee at item ‘5C’).**
 - (b) An undertaking shall be furnished by the ODU manufacturer to BIS to the effect that the ISI marked ODU will be sold to BIS licensees for the complete product Split AC only.
 - (c) However, the actual physical supply of the ISI marked ODU may be to any place other than the licenced premises of the Split AC manufacturer also. The details of all such supplies shall be maintained by the ODU licensee and shall be produced to BIS on demand. An undertaking in this respect shall be obtained from the ODU manufacturer.

(C) Manufacturer of both IDU and ODU (both in-house)

- i) (a) Every manufacturer who is carrying out in-house manufacturing of both IDU and ODU shall obtain licence from BIS for the product types **Indoor Unit** and **Outdoor Unit** as per IS 1391 (Part 2). In such cases, the scope of BIS licence will be “**Indoor Unit Only**” and “**Outdoor Unit Only**”.
- (b) However, if the manufacturer intends to manufacture the complete product Split AC also in the same premises, the scope of BIS licence will include “**Split AC**” also.
- ii) (a) The manufacturer shall have complete in-house testing facility for all the **Production Routine tests** for IDU as well as ODU as per IS 1391 (Part 2) and shall carry out due testing of IDU and ODU as per the Scheme of Inspection and Testing (SIT) and maintain records.
- (b) **In addition, the manufacturer who has taken licence for the complete product Split AC shall also comply with the provisions of the SIT w.r.t testing of the complete product Split AC and maintain records.**
- iii) The manufacturer shall ensure that all the components used in manufacturing (either bought out or manufactured in-house) which are covered under the mandatory certification of BIS through various QCOs (e.g: Cables as per IS 694/ IS 9968-1, Capacitors as per IS 2993, Finned Type Heat Exchangers as per IS 11329, Hermetic Compressors as per IS 10617 etc.), as applicable, are ISI Marked under a valid BIS licence.
- iv) Upon obtaining BIS licence, the licensee shall ensure that all the information as per IS 1391 (Part 2) as well as the SIT are marked on each IDU and each ODU as well as the complete product Split AC (as applicable) only after due testing of IDU, ODU and the complete product Split AC (as applicable) as per the SIT.
- v) (a) Each IDU and each ODU intended to be sold as individual unit only shall be marked with the BIS Standard Mark as given below and the **responsibility of the Quality of ISI marked IDU and ISI marked ODU shall vest with the licensee:**



- (b) Each IDU and each ODU used for the manufacturing of the complete product Split AC shall be marked with the BIS Standard Mark as given below and the **responsibility of the Quality of ISI marked Split AC shall vest with the Split AC licensee:**

IS 1391 (Part 2)



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vi) (a) **The manufacturer shall sell ISI marked IDU or ISI marked ODU to those manufacturers only who holds BIS licence for the complete product Split AC (i.e Licensee at item '5D' or even to any other licensee at item '5C').**

(b) An undertaking shall be furnished by the manufacturer to BIS to the effect that the ISI marked IDU or ISI marked ODU will be sold to BIS licensees for the complete product "Split AC" only.

(c) However, the actual physical supply of such ISI marked IDU or ISI marked ODU may be to any place other than the licensed premises of the Split AC manufacturer also. The details of all such supplies shall be maintained by this licensee who is making such supplies and shall be produced to BIS on demand. An undertaking in this respect shall be obtained from this manufacturer.

vii) (a) **However, due to any reason, if the Split AC licensee intends to purchase any of the units (i.e either ISI marked IDU or ISI marked ODU) from any other manufacturer, it shall be purchased from BIS licensees only (i.e. Licensee at item '5A' or '5B' or '5D' or even from any other licensee at item '5C').**

(b) An undertaking shall be furnished by the Split AC manufacturer to BIS to the effect that the ISI marked IDU or ISI marked ODU (as the case may be) will be purchased from BIS licensees only.

(c) However, the actual physical receipt of such ISI marked IDU or ISI marked ODU may be at any place other than the licenced premises of this Split AC manufacturer also. The details of all such receipts shall be maintained by this Split AC licensee and shall be produced to BIS on demand. An undertaking in this respect shall be obtained from this Split AC manufacturer.

(d) In such cases where one of the units (i.e either ISI marked IDU or ISI marked ODU, as the case may be) is purchased from BIS licensee, the Standard Mark as given below shall be used on the other unit manufactured in-house (i.e ODU or IDU, as the case may be):

IS 1391 (Part 2)



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(e) Under any circumstances, purchasing of both the units (i.e ISI marked IDU as well as ISI marked ODU) shall not be permitted for the manufacturing of same Split AC. In other words, at least one of the units (ie. either IDU or ODU) used in the manufacturing of same Split AC shall be manufactured in-house.

(D) Manufacturer of Split AC (where one of the units i.e IDU or ODU is manufactured in-house and the other unit i.e ODU or IDU is purchased from outside)

- i) Every Split AC manufacturer who is carrying out in-house manufacturing of one of the units (i.e either IDU or ODU) and intends to purchase the other unit (i.e ODU or IDU, as the case may be) from any other manufacturer shall obtain licence from BIS for the complete product **Split AC** as per IS 1391 (Part 2). In such cases, the scope of BIS licence will be “Indoor Unit Only” and “Split AC” or “Outdoor Unit Only” and “Split AC”, as the case may be.
- ii) The manufacturer shall have complete in-house testing facility for all the **Production Routine tests** for the unit which is manufactured in-house (i.e either IDU or ODU, as the case may be) as per IS 1391 (Part 2) and shall carry out due testing of IDU or ODU (as applicable) as per the Scheme of Inspection and Testing (SIT) and maintain records. **In addition, the licensee shall also comply with the provisions of the SIT w.r.t testing of the complete product Split AC and maintain records.**
- iii) The manufacturer shall ensure that all the components used in manufacturing (either bought out or manufactured in-house) which are covered under the mandatory certification of BIS through various QCOs (e.g: Cables as per IS 694/ IS 9968-1, Capacitors as per IS 2993, Finned Type Heat Exchangers as per IS 11329, Hermetic Compressors as per IS 10617 etc.), as applicable, are ISI Marked under a valid BIS licence.
- iv) Upon obtaining BIS licence, the licensee shall ensure that all the information as per IS 1391 (Part 2) as well as the SIT are marked on each IDU or each ODU (as applicable) as well as the complete product Split AC only after due testing of IDU or ODU (as applicable) and the complete product Split AC as per the SIT.
- v) Each IDU or each ODU (as the case may be) manufactured in-house and used for the complete product Split AC shall be marked with the BIS Standard Mark as given below and **the responsibility of the Quality of ISI marked Split AC shall vest with this Split AC licensee:**

IS 1391 (Part 2)



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- vi) **(a) The Split AC manufacturer shall purchase ISI marked IDU or ISI marked ODU (as the case may be) from BIS licensee only (i.e. Licensee at item '5A' or '5B' or '5C' or even from any other licensee at item '5D').**

(b) An undertaking shall be furnished by this Split AC manufacturer to BIS to the effect that the ISI marked IDU or ISI marked ODU (as the case may be) will be purchased from BIS licensees only.

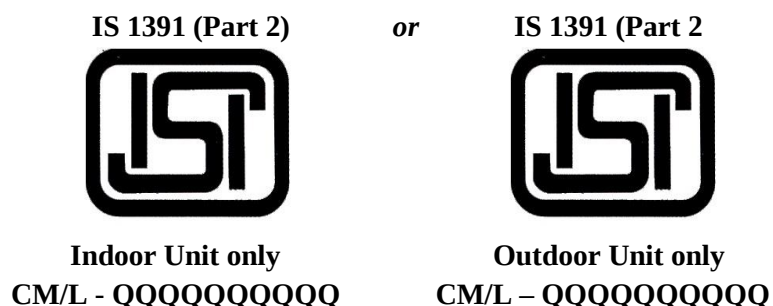
(c) However, the actual physical receipt of such ISI marked IDU or ISI marked ODU may be at any place other than the licenced premises of this Split AC manufacturer also. The details of all such receipts shall be maintained by this Split AC licensee and shall be produced to BIS on demand. An undertaking in this respect shall be obtained from this Split AC manufacturer.

- vii) **(a) In case the licensee intends to sell ISI marked IDU or ISI marked ODU (as the case may be) manufactured in-house to any other manufacturer, it shall be sold to those manufacturers only who hold BIS licence for the complete product Split AC (i.e Licensee at item '5C' or even to any other licensee at item '5D').**

(b) An undertaking shall be furnished by the Split AC manufacturer to BIS to the effect that the ISI marked IDU or ISI marked ODU (as the case may be) will be sold to BIS licensees for the complete product Split AC only.

(c) However, the actual physical supply of such ISI marked IDU or ISI marked ODU (as the case may be) may be to any place other than the licensed premises of the other Split AC licensee also. The details of all such supplies shall be maintained by this Split AC licensee who is making such supplies and shall be produced to BIS on demand. An undertaking in this respect shall be obtained from this Split AC manufacturer.

(d) In such cases where ISI marked IDU or ISI marked ODU (as the case may be) is sold to any other manufacturer, the Standard Mark as given below shall be used on IDU or ODU (as the case may be):



(E) Outsourcing of both the units (i.e IDU and ODU)

- i) **For obtaining BIS licence for certification of Split AC as per IS 1391 (Part 2), outsourcing of both the units (i.e IDU and ODU) shall not be permitted under any circumstances (Please see item 4 also).**