



उत्पाद मैनुअल
शक्ति चलित भूसा कटर - विशिष्ट एवं परिक्षण संहिता
IS 11459:2024 के अनुसार

PRODUCT MANUAL
FOR Power Operated Chaff Cutter – Specification and Test Code
ACCORDING TO IS 11459:2024

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity 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.

1.	मानक संख्या IS No.	:	IS 11459:2024
	शीर्षक Title	:	Power Operated Chaff Cutter – Specification and Test Code
	संशोधनों की संख्या No. of amendments	:	NIL
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	The material for construction of various components of the chaff cutter shall conform to Cl. 5 of IS 11459:2024. Blade shall conform to the Cl. 6 of IS 11459:2024. Conformity may be established through supplier test certificate/test report from BIS recognized lab/empanelled lab or any other lab having NABL accreditation as per IS/ISO/IEC 17025 or in house testing/combination thereof, as applicable Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established

			during Grant of Licence/Change in Scope of Licence/Factory Surveillance
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer Annex-A
c)	नमूने का परिमाण Sample Quantity	:	2 Nos. Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (in case of market surveillance, effort may be made to procure the required quantity of product sample, as far as possible since raw material sample may not be available in market)
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to Annex-B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex-C
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	As the licence is operated on Factory Testing basis, complete testing of a sample shall be done in factory. 2 days required for complete testing and inspection. Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा / Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 11459:2024 with the following scope:		
	Name of the Product	Power Operated Chaff Cutter	
	Type	Model Nos to be mentioned (Pl see Annex-A)	

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ANNEX-A

GROUPING GUIDELINES

The following grouping guidelines shall apply in case of Grant of Licence (GoL)/Change in Scope of Licence (CSoL).

The manufacturer shall declare each model number of the Power Operated Chaff Cutter intended to be covered in the scope of licence. For each model, the manufacturer shall declare the following details

i) POWER UNIT

- a) Provision
- b) Type of prime mover
- c) Recommended power
- d) Type of drive

ii) MAIN DRIVE

- a) Type
- b) Size of handle
- c) Size of handle support
- d) Size of belt
- e) Size of pulley
- f) Type of drive
- g) Diameter of main shaft, mm

iii) CUTTER HEAD

- a) Type (cylinder/flywheel type)
- b) Number of blades
- c) Diameter of flywheel or cylinder, mm
- d) Size of throat, mm
- e) Recommended clearance between fixed and rotating blades

iii) FEEDING MECHANISM

- a) Type of feeding (chute fed/conveyor fed)
- b) Type of cut chaff dropping position (Let-fall type/ Throw-away type/ Blow-up type)
- b) Height of feeding tray
- c) Length of feeding tray
- d) Size of feeding tray
- e) Angle of inclination of tray
- f) Type and size of conveyor
- g) Number of feed rolls
- h) Width of rolls
- j) Effective width of rolls
- k) Diameter of rolls
- m) Space between the axis of upper roll and axis of lower rolls:
 - 1) Minimum
 - 2) Maximum
- n) Recommended feeding capacity

iv) BLOWING UNIT

- a) Number
- b) Type
- c) Number of blades
- d) Tip diameter
- e) Recommended speed
- f) Recommended air displacement

g) Size of feed blowpipe

v) TRANSMISSION SYSTEM

a) Method of power transmission and gear ratio from main shaft to:

- 1) feed rolls
- 2) conveyor
- 3) blower
- 4) cutter head

b) Recommended speed of main shaft

vi) OVERALL DIMENSIONS

- a) Length, mm
- b) Width, mm
- c) Height, mm
- d) Total mass, kg

vii) TRANSPORT

- a) Type
- b) Number of wheels
- c) Size of wheels
- d) Wheel track

viii) MATERIALS

In addition to the above, Material of construction data sheet as per Annex C of IS 11459:2024 shall be submitted for each model.

Samples of each model shall be tested to cover the same in the scope of licence.

Scope of licence shall be restricted based on the manufacturing and testing facilities available.

During operation of licence, samples of each variety covered in the scope of licence, shall be tested in rotation, to the extent possible

ANNEX – B

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests Used In With Clause Reference	Test Equipment/Chemical
1	Construction , Cl. 7	Measuring Tape
2	Determination of Moisture Content of Chaff, Cl. 10	Analytical Balance, Aluminium dish having a diameter of at least 50 mm and a depth of about 20 mm, Air oven with temperature indicator, dessicator
3	Power consumption, Cl. 12.1	Electric Motor, ohm-meter, volt-meter, watt-meter, energy meter (multi-meter with these functions may be used)
4	Short run tests, Cl. 13.1 (Quantity and Quality of Cut, power requirement)	Electric Motor, fodder of appropriate type, rigid plastic pipe of diameter approximately equal to the diameter of the fodder stalk and 2 m in length, tachometer, weighing balance, energy meter, device for measuring circumferential speed of the tip (m/s) of blower, measuring tape
5	Long run test, Cl. 13.2	Electric Motor, fodder of appropriate type, tachometer, weighing balance, energy meter, device for measuring circumferential speed of the tip (m/s) of blower, measuring tape

ANNEX C

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. lot/batch etc.) 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.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: All the power operated chaff cutters of the same model assembled 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 subcontracted 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/empanelled 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. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each chaff cutter and on the packaging provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 **Additional Marking requirements:** The material shall also be marked with the following additional requirement on each chaff cutter and/or on the packaging:

a) “For BIS certification details please visit www.bis.gov.in”

3.3 Each chaff cutter shall be provided with an operator’s manual (Hindi or English or vernacular language) in which all safety aspects are also to be highlighted along with the precautions to be taken for safe operation of chaff cutter.

4. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the 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
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods Clause Reference			No. of Sample	Frequency	Remarks
5	Materials	5	IS 14459	S	One of each type of material	Each consignment	Conformity may be established through supplier test certificate/test report from BIS recognized lab/empanelled lab or any other lab having NABL accreditation as per IS/ISO/IEC 17025 or in house testing/combination thereof, as applicable
6	Hardness of Blade	6	IS 14459	S	One	Each consignment	Conformity may be established through supplier test certificate/test report from BIS recognized lab/empanelled lab or any other lab having NABL accreditation as per IS/ISO/IEC 17025 or in house testing/combination thereof, as applicable
7	Constructional requirements	7	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that product conforms to the requirement of the standard.		
9	TESTS						
9.1	Type Tests						
9.1.1	General						
i)	Checking of specifications	11.1	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that product conforms to the requirement of the standard.		
ii)	Checking of material	11.2	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that product conforms to the requirement of the standard.		
iii)	Visual observations and	11.3	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to		

	adjustments				ensure that product conforms to the requirement of the standard.		
9.1.2	Tests at No-Load						
a)	Power consumption	12.1	IS 14459	R	Type tests shall be conducted at the initial stage of design approval for each model and thereafter whenever there is any change in design or materials.		
b)	Visual observations	12.2	IS 14459	R	Type tests shall be conducted at the initial stage of design approval for each model and thereafter whenever there is any change in design or materials.		
9.1.3	Tests at Load						
a)	Short run tests 1) Quality of cut 2) Quantity of cut 3 Power requirement 4) Visual observations and 5) Blowing efficiency	13.1	IS 14459	R	Type tests shall be conducted at the initial stage of design approval for each model and thereafter whenever there is any change in design or materials.		
b)	Long run tests	13.2	IS 14459	R	Type tests shall be conducted at the initial stage of design approval for each model and thereafter whenever there is any change in design or materials.		
9.2	Routine tests						
a)	Checking of specifications	11.1	IS 14459	R	One	Each control unit	
b)	Visual observations and adjustments	11.3	IS 14459	R	One	Each control unit	
c)	Tests at no load	12	IS 14459	R	One	Each control unit	
14	OTHER REQUIREMENTS	14	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that product conforms to the requirement of the standard.		
15	SAFETY REQUIREMENTS	15	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that product conforms to the requirement of the standard.		
16	CAUTIONARY NOTICES	16	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that cautionary notices and operators manual are provided with each chaff cutter.		
17	WORKMANSHIP AND FINISH	17	IS 14459	R	Manufacturer shall put in place adequate inspections and in process controls to ensure that product conforms to the requirement of the standard.		

