

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2023/023

माह/Month: September, 2023

THIS TEST REPORT VALID UP TO : 31st August, 2030



**PSD CHAFF CUTTER WITH 3 HP MOTOR
(MODEL – PSD-CC)**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान
CSIR - Central Mechanical Engineering Research Institute
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Name of Machine	: PSD CHAFF CUTTER WITH 3 HP MOTOR
Type	: Power Operated
Make	: PSD INDUSTRIES PVT. LTD.
Model	: PSD-CC PSD INDUSTRIES PVT. LTD.
Name and address of Manufacturer	: UG-9, Shree Ram Plaza, Station Road, Patna – 800001 (Bihar)
Name and address of Applicant	: PSD INDUSTRIES PVT. LTD. UG-9, Shree Ram Plaza, Station Road, Patna – 800001 (Bihar)
Test Conducted at	: Farm Machinery Training and Testing Centre CSIR- Central Mechanical Engineering Research Institute, M G Avenue, Durgapur, Pin – 713209, West Bengal.

THIS TEST REPORT VALID UP TO: 31/08/2030

[vide DAC&FW OM No. 13-24/2018- M&T (I&P) dated 19.09.2018]

Report No.: CSIR/CMERI/FMTTC/2023/023

Month: September

Year: 2023

**CSIR - Central Mechanical Engineering Research Institute,
Durgapur - 713209
(W.B.), INDIA**



4. SPECIFICATIONS

4.1 General

Type of machine	: Power Operated Chaff Cutter
Make	: PSD INDUSTRIES PVT. LTD.
Model	: PSD-CC
Serial No.	: 005
Name and address of manufacturer	: PSD INDUSTRIES PVT. LTD. UG-9, Shree Ram Plaza, Station Road, Patna – 800001 (Bihar)
Year of manufacture	: 2023
Country of origin	: India

4.2 Construction details(Refer Fig.1)

4.2.1 Stand

Size of Platform, mm	: 705 x 475
Height of Platform from GL, mm	: 870

4.2.2 Chaff cutter assembly

Power unit

Type and rating	: Single phase and 3.0 hp/2.2kw
Mass, kg	: 28.6
Method of mounting	: Motor is fixed on the mounting frame with the help of nut and bolt.
Size of mounting base, mm	: 664 x 68 x 27 - 02 Nos

Main Power Transmission

Type	: Belt and Pulley
Size of motor pulley, mm	: Ø76.13
Size of Flywheel Pulley, mm	: Ø138.93
Type & size of belt	: 'V' Belt, L= (1305mm), (B1262LP/B48)
Reduction ratio	: 1.83
Arrangement of belt tensioning	: Provided

Flywheel

Number	: 01
Material	: Cast iron
Diameter of flywheel, mm	: Ø 878
Thickness of flywheel, mm	: 5.81
Size of 'S' shape for mounting blade, mm	: 1005x68.40x10.45 (L x B x Thk.)
Number and Size of Holes on 'S' for mounting blades	: 3 on each Blade, Ø10



3	Hardness		
3.1	The blade shall be heat treated to have hardness within a range of 35 to 50 HRC up to two thirds portion from the tip of the beveled edge. The hardness value shall not differ from the maximum hardness found in the same blade by more than 10 percent.	41 HRC	Conforms

IS:1511-1979 (Specification for Blades for Manually Operated Chaff Cutter): -

Note: BIS for rectangular blades of Power operated chaff cutter is not available.

3.2	DIMENSIONS OF BLADE:-																		
3.2.1	The essential dimension of blade when read in conjunction with Fig. 2. shall be as given below: -																		
	<table border="1"> <thead> <tr> <th>Sr. No</th><th>Dimension</th><th>Observation</th><th>Conformity</th></tr> </thead> <tbody> <tr> <td>i</td><td>Length</td><td>425</td><td>Conforms</td></tr> <tr> <td>ii</td><td>Width</td><td>148</td><td>Conforms</td></tr> <tr> <td>iii</td><td>Thickness</td><td>2.5</td><td>Conforms</td></tr> </tbody> </table>	Sr. No	Dimension	Observation	Conformity	i	Length	425	Conforms	ii	Width	148	Conforms	iii	Thickness	2.5	Conforms		
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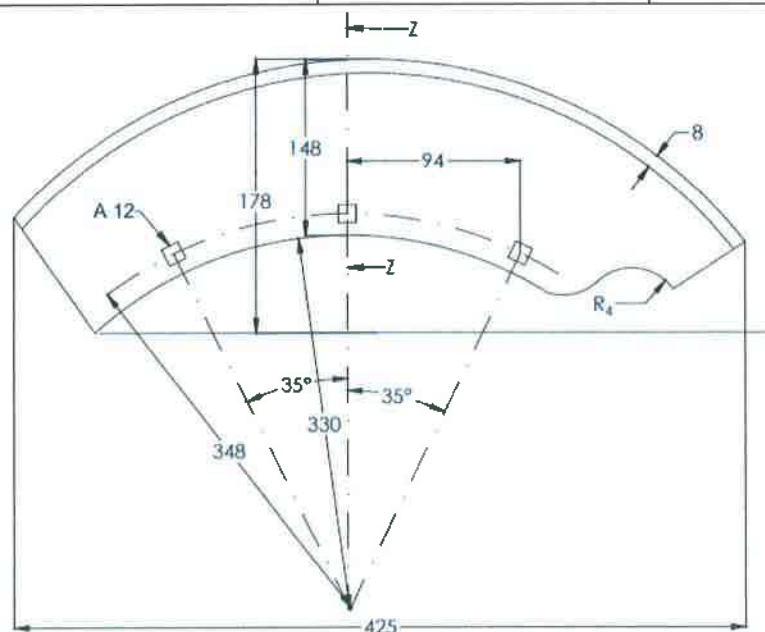


Fig. 2 (a) Typical shape of the blade (All Dimensions are in mm)



5.5	Blower:- Blower if provided shall be centrifugal type with the suitable arrangement for controlling air blast.	N.A.	N.A.
5.6	Transmission system:- The gears shall be properly meshed and shall be suitably covered.	Provided	Conforms
	Provision shall be made for lubrication.	Provided	Conforms
	A suitable arrangement shall be provided for clutching or declutching of drive.	R/F Switch Provided	Conforms
6	Other Requirements		
6.1	Provision shall be made to change the inclination of the plane of the cutting knives to the plane of rotation of fly wheel to avoid feed interference.(If applicable)	N.A.	N.A.
6.2	Provision for adjustment of the following shall be made		
	a. Feed rate	N.A.	N.A.
	b. Length of cut	N.A.	N.A.
	c. Feed roll clearance	N.A.	N.A.
	d. Space between fixed and rotating blades	N.A.	N.A.
	e. Air displacement (if applicable)	N.A.	N.A.
	f. Direction of rotation of feed rolls	N.A.	N.A.
6.3	If the cutter head is open, arrangement shall be made for locking it with the stand and the cutting edge of the blade shall be covered	Cutter Head is enclosed in metal frame	Conforms
6.4	Various controls shall be easily accessible and capable of being locked in a chosen position.	Provided	Conforms
6.5	Suitable guards shall be provided on the Transmission system of the chaff cutter	Provided	Conforms
6.6	The chaff cutter shall be provided with operator's manual	Not Provided	Does Not Confirm
7	Workmanship and Finish		
7.1	Welding used for joining different components shall not be porous, it shall be smooth.	Provided	Conforms
7.2	All sharp corners and protruding fasteners shall Be avoided.	Provided	Conforms
7.3	The chaff cutter shall be suitably painted.	Provided	Conforms
8	Marking and Packing		

11. TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 29.09.2023
Report Verified by	Scientist, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 29/09/23
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 29.09.2023
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	<i>[Signature]</i> 29/9/23

12. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
12	9.1	Noted, we will rectify.
	9.2/9.3	Noted, it will be provided.
	9.4-9.7	Noted.
	9.8	Noted, we will provide.
	9.9	Noted, we will rectify this during mass production.
	9.10/9.11	Noted, we will provide.

