

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)
COMMERCIAL TEST REPORT
(INITIAL)

संख्या/No: Machine-415/1247
माह/Month: January, 2021
Validity: 31.12.2025



AGROTEC ATC/PR-005 POWER REAPER



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation and Farmers Welfare

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

[An ISO 9001:2015 CERTIFIED INSTITUTE]

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Machine-415/1247	AGROTEC ATC/PR-005 POWER REAPER	COMMERCIAL (ICT)
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Manufacturer : M/s. Agrotec Corporation,
C-29, Sector-3, Near Heritage Hospital,
Devendar Nagar, Raipur-492 009,
Chhattisgarh, **India.**

Applicant : The Manufacturer

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16. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

- 16.1** There was only one operating clutch provided for operating both the travelling and reaping attachment. For safety concern it is strongly recommended to provide the separate clutches for operating the machine and reaping operations.
- 16.2.1** Engine maximum and rated power were observed as 3.7 kW against the declared values of 3.7 kW.
- 16.2.2** Back up torque of engine was observed as 5.10 %.
- 16.2.3** Specific fuel consumption of engine corresponding to maximum & rated power was recorded as 383 g/kWh against the declared value of 405 g/kWh.
- 16.2.4** Max. torque was observed as 10.30 Nm against the declared value of 12.4 Nm in natural ambient condition.
- 16.3** Max. Noise at operator's ear level was observed as 94 dB (A), which is on higher side. Therefore this should be looked into for corrective action.
- 16.4** The dimension of Knife conforms to IS 6025:1982.
- 16.5** The dimensions of knife guard does not conform in full, to IS 6024:1983 (Reaffirmed 1999)
- 16.6** Provided labeling plate should be as per the requirement of IS.
- 16.7** **Field performance test:**
- 16.7.1** **Rate of work:**
- i) The average area covered and time required for harvesting one hectare was recorded as 0.180 to 0.218 ha/h and 4.52 to 4.93 hours respectively.
 - ii) The average hourly fuel consumption varies from 1.36 to 1.45 & the fuel requires for harvesting one hectare area was recorded as 6.24 to 6.76 l.
 - iii) The average mass of straw with grain harvested was recorded as 24338 to 28375 kg/ha.
 - iv) The average mass of grains recovered was recorded as 4381 to 5393 kg/ha.
- 16.7.2** **Quality of work:**
- i) The average post harvest loss was recorded as 0.02 to 0.03%.
 - ii) The average stubble height was recorded as 6.30 to 7.10 cm.
 - iii) The crop harvested by the machine is left in windrows, which minimizes the time required for the collection and transportation of the crop.
- 16.8** Two skilled operators are required for operating the machine continuously.

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16.9 Wear of critical components:

- i) The wear rate of cutter bar on mass basis was recorded as 0.05 % per hour.
- ii) Hardness of cutting blade at its hardened zone is conforming whereas at its remainder zone it is not conforming to IS 6025:1982 (reaffirmed 1999). This should be looked into for corrective action.
- iii) Chemical composition of cutting blade is not conforming to the requirement of relevant code. Therefore this should be taken care for corrective action.

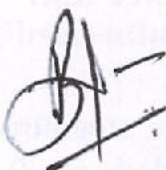


16.10 Provision for safety:

A safety pin on the conveyor chain is not provided to take care of overloading of cutter bar. It needs to be provided at suitable place.

16.11 Technical literature:

The operation manual cum parts catalogue of reaper and engine in single booklet was supplied with the reaper for reference during the test. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132 :1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY:

B.N. DIXIT AGRICULTURAL ENGINEER	
P.C. MESHARAM SENIOR AGRICULTURAL ENGINEER	
Dr. P.P. RAO DIRECTOR	

17. APPLICANT COMMENTS

Para No.	Our reference	Applicant's comments
17.1	16.1	We have noted this point seriously. Definitely we will develop our design as per your suggestion
17.2	16.3	We will work on it to reduce the noise level of the machine
17.3	16.5	We have noted the suggestion, we will work on it