

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

संख्या / No: Machine-425/1263  
माह / Month: March, 2021  
Validity: 28.02.2026



## DIVYA SHAKTI 4G-120A 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]

Website: <http://srfmtti.dacnet.nic.in/>

E-mail: [fmti-sr@nic.in](mailto:fmti-sr@nic.in)

Tele.: 08551-286441

<b>Machine-425/1263</b>	<b>DIVYA SHAKTHI 4G-120A POWER REAPER</b>	<b>COMMERCIAL (ICT)</b>
-------------------------	---	-------------------------

Manufacturer (apa) : M/s. Yancheng Xinmingyue Machinery Manufacture Co. Ltd., Xinyang Road, Yanching city, Jiangsu province, **China.**

Applicant : M/s. Chirag Corporation, 320, Marshal House, 33/1, N.S. Road, Kolkata-700 001, West Bengal, **India.**

**DIVYA SHAKTHI 4G-120A POWER REAPER**

Report No. : **Machine-425/1263**

Month: **March**

Year: **2021**



**Government of India**  
**Ministry of Agriculture and Farmers Welfare**  
**Department of Agriculture, Cooperation and Farmers Welfare**  
**Southern Region Farm Machinery Training and Testing Institute**  
**Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)**  
**[An ISO 9001:2015 CERTIFIED INSTITUTE]**

Telephone No. 08551-286441

E-mail: [fmti-sr@nic.in](mailto:fmti-sr@nic.in)

Website: <http://srfmtti.dacnet.nic.in/>

Machine-425/1263	DIVYA SHAKTHI 4G-120A POWER REAPER	COMMERCIAL (ICT)
------------------	------------------------------------	------------------

- 16.1.3** Specific fuel consumption of engine corresponding to maximum & rated power was recorded as 281 & 274 g/kWh against the declared value of 320 g/kWh respectively.
- 16.1.4** Max. torque was observed as 12.89 Nm against the declared value of 11.5 Nm in natural ambient condition.
- 16.2** Max. Noise at operator's ear level was observed as 99 dB (A), which is on higher side. Therefore this should be looked into for corrective action.
- 16.3** The amplitude of mechanical vibration on various assemblies marked as (\*) in chapter 9 of this test report is on higher side. Therefore necessary action to reduce vibration should be taken.
- 16.4** **Knife:** The dimension of Knife does not conform, in full, to IS: 6025-1982.
- 16.5** The provided labeling plate should be as per the requirement of IS.
- 16.6** **Field Performance Test:**
- 16.6.1** **Rate of work:**
- i) The average area covered and time required for harvesting one hectare was recorded as 0.191 to 0.213 ha/h and 4.69 to 5.26 hours respectively.
  - ii) The average hourly fuel consumption varies from 0.73 to 0.82 l/h & the fuel requires for harvesting one hectare area was recorded as 3.42 to 4.30 l/ha.
  - iii) The average mass of straw with grain harvested was recorded as 15075 to 16296 kg/ha.
  - iv) The average mass of grains recovered was recorded as 5414 to 6230 kg/ha.
- 16.6.2** **Quality of work:**
- i) The average post harvest loss was recorded as 0.41 to 0.70 %.
  - ii) The average stubble height was recorded as 64.5 to 74.5mm.
  - iii) The crop harvested by the machine is left in windrows, which minimizes the time required for the collection and transportation of the crop.
- 16.7** Two skilled operators are required for operating the machine continuously.
- 16.8** **Wear of critical components:**
- i) The wear rate of cutter bar on mass basis was recorded as 0.026 % per hour.

ii) Hardness of movable & stationary blade do not conform to the requirement as per IS 6025:1982 (Reaffirmed 1999). Therefore, this should be taken care for necessary action.

iii) The chemical composition of cutting (movable) blade and stationary blades are not conforming to the requirement of relevant code. Therefore, this should be taken care for corrective action.




#### 16.9 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.

#### 16.10 Technical literature:

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

#### TESTING AUTHORITY:

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

#### 17. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's comments
17.1	17.2	We will discuss with the factory and reduce the noise at operator's ear level
17.2	17.3	The mechanical vibration as reported are commonly on higher side in all such machines. However we will take necessary action in this regard
17.3	17.10	We will provide the same as per your recommendation
General: We have noted all observations during testing, and will work on the same. Thank you for your suggestions and recommendations.		