

THIS REPORT IS VALID UPTO 31.05.2031



KISANKRAFT, KK-SPR-1201PE SELF PROPELLED REAPER



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture 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/>

Machine- 601/1658	KISANKRAFT, KK-SPR-1201PE SELF PROPELLED REAPER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. Chongqing Dinking Power Machinery Co., Ltd, Caojie Industrial Park, Hechuan, District, Chongqing, **China.**

Applicant : M/s. KisanKraft Limited, Sri Huchhanna Tower, No 4, 1st Main, 7-A Cross, Maruthi Layout, Dasarahalli, HAF Post, Hebbal, Bangalore-560024.

KISANKRAFT, KK-SPR-1201PE SELF PROPELLED REAPER

Report No.: **Machine-601/1658**

Month: **June**

Year: **2024**

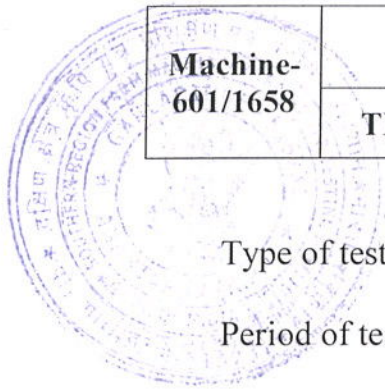


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Machine-601/1658	KISANKRAFT, KK-SPR-1201PE SELF PROPELLED REAPER	COMMERCIAL (ICT)
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Type of test : Commercial (ICT)
Period of test : April, 2024 to June, 2024
Test Report No. : **Machine-601/1658**
Month / Year of release : June, 2024

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The test sample was selected randomly through virtual mode by the Institute.
- iii) The results presented in this report do not, in any way, attribute to the durability of the machine.
- iv) This report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training and Testing Institute, Garladinne, Anantapur (A.P.).
- V) This is a report on Commercial Test of **SELF PROPELLED REAPER** named "**KISANKRAFT, KK-SPR-1201PE SELF PROPELLED REAPER**". This report is valid up to **31.05.2031**. Vide Ministry's O.M. No. 13-22/2020-M&T (I&P) dated 12.12.2023.

SELECTED CONVERSIONS

Sl. No	Units	Conversion Factor
1	Force	
	1 kgf	9.80665 N
		2.20462 lbf
2	Power	
	1 hp	1.01387 metric hp (Ps) 745.7 W
	1 Ps	735.5 W
3	Pressure	
	1 psi	6.895 kPa
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm ²
	1 mm of Hg	1.3332 m-bar

**KISANKRAFT, KK-SPR-1201PE
SELF PROPELLED REAPER**

**Machine-
601/1658**

**COMMERCIAL
(ICT)**

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1	2	3	4
21	Provision of row marker / crop guide	Must be provided	Provided
22	Marking /labeling of machine	The labeling plate should be riveted on the body of machine having Name and Address of Manufactures & Applicant, Country of Origin, Make, Model, Year of Manufacturer, Serial Number, Engine Number, Engine HP, Rated Rpm & SFC	Manufacturer address is not provided
23	Literature	Operator manual, service manual and parts catalogue should be provided	Provided

18. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

18.1 Engine performance:

- 18.1.1 Engine maximum and rated power were observed as 3.44 kW against the declared values of 4.0 kW.
- 18.1.2 Max. Torque was observed as 20.86 Nm against declaration value of 10.5 Nm.
- 18.1.3 Specific fuel consumption of engine corresponding to maximum power was recorded as 518 g/kWh. against the declaration value of 383 g/kWh
- 18.1.4 Back up torque of engine was observed as 4.50 % only against the declaration value of 10%. This should be looked into for corrective action.

18.2 Noise measurement:

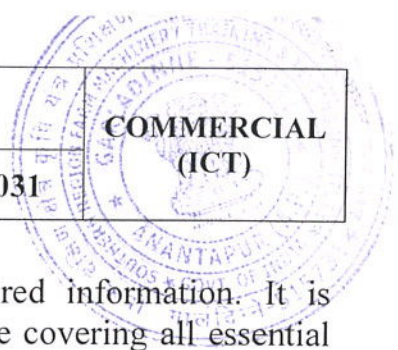
Max. Noise at operator's ear level was observed as 94 dB (A).

18.3 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power Reaper was observed to the extent of 654 microns, which is on higher side. Therefore, necessary action to reduce the vibration should be taken in future.

- 18.4 The dimension of knife does not conform, in full, to IS: 6025-1982. This should be looked into for necessary corrective action.

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18.5 Marking /labeling:

The labeling plate does not reveal all the required information. It is therefore recommended that a suitable labeling plate covering all essential components, inter alia, the following must be provided:

- i) Manufacturer address

18.6 Ease of operation & adjustment:

Safety guard **MUST** be provided for drive pulley & belt.

The exhaust **MUST** be provided with spark arresting device.

Safety notice & hazard warnings labels **MUST** be provided on machine.

18.7 Field performance Test:

18.7.1 Rate of work and fuel consumption:

- The speed of harvesting ranged between 2.50 to 2.69 kmph for paddy crops respectively.
- The area harvested by the machine was recorded as 0.101 to 0.174 ha/h.
- The average hourly fuel consumption varied from 0.800 to 1.29 l/h for paddy crop respectively.
- The fuel consumption per unit area harvested varied from 6.88 to 8.69 l/ha for paddy crop respectively.

18.7.2 Quality of Work:

- i) The post-harvest loss was observed as 0.93 to 2.30 % for Paddy and respectively.
- ii) The stubble height was recorded as 81.67 to 86.67 mm for Paddy respectively.
- iii) Machine leaves the harvested crop in windrows.

18.8 Wear of critical components:

- i) The wear rate of cutter bar on mass basis was recorded as 0.002% per hour.

18.9 Provision for safety:





A safety pin at driven sprocket of conveyor chain is provided to take case of overloading of cutter bar.

18.10 Technical literature:

The operator manual cum parts catalogue of reaper and engine in single booklet was supplied with the reaper for reference during the test. The manuals are no adequate. The most of initial setting and discard limit of critical components may be added in manuals and leaflets etc. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132: 1999 (Reaffirmed: 2019) for the sake of user & technical personnel.

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TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. P. KAMALABAI SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	

19. APPLICANTS COMMENTS

Sl. No	Para No	Particular
1	18.1	We will take the corrective against the same.
2	18.6	We will take the corrective against the same.
3	18.9	We will take the corrective against the same.
4	18.10	We will take the corrective against the same.