

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट

INITIAL COMMERCIAL TEST REPORT

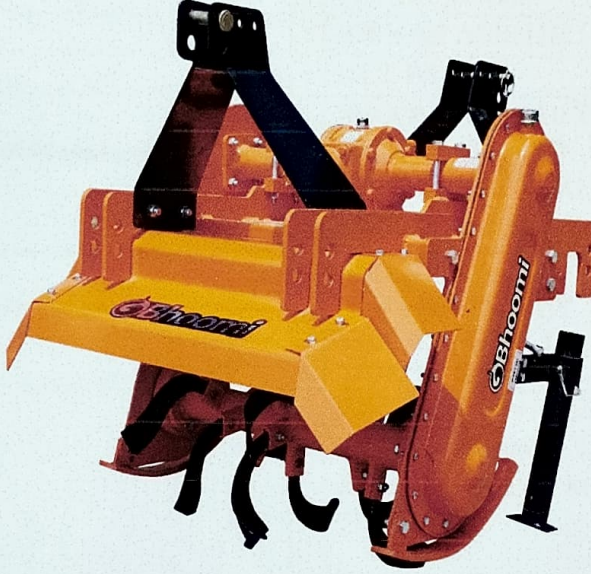
THIS TEST REPORT VALID UP TO

:

संख्या/No. CSIR/CMERI/FMTTC/2024/017

माह/Month: June, 2024

31<sup>st</sup> MAY, 2031



**BHOOMI AGRO HI TECH PRIVATE LTD.  
REVERSE FORWARD ROTAVATOR (2.5 FEET)  
(MODEL: BRT – R/F)**



Government Of India



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र  
**Farm Machinery Training and Testing Centre**  
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान  
**CSIR - Central Mechanical Engineering Research Institute**  
महात्मा गांधी एवेन्यू, दुर्गापुर  
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CSIR/CMERI/FMTTC/2024/017	<b>BHOOMI AGRO HI TECH PRIVATE LTD. REVERSE FORWARD ROTAVATOR (BRT-R/F) (INITIAL COMMERCIAL TEST)</b>
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Name of Machine	: Reverse Forward Rotavator (2.5 feet)
Type	: Tractor Operated
Make	: BHOOMI AGRO HI TECH PRIVATE LTD
Model	: BRT- R/F
Name and address of Manufacturer	: BHOOMI AGRO HI TECH PRIVATE LTD. PAIKI 3, SURVEY NO. 342, VILLAGE - KHIRASARA. TALUKA - LODHIKA, RAJKOT, GUJARAT - 360035
Name and address of Applicant	: BHOOMI AGRO HI TECH PRIVATE LTD. PAIKI 3, SURVEY NO. 342, VILLAGE - KHIRASARA. TALUKA - LODHIKA, RAJKOT, GUJARAT - 360035
Test Conducted at	: Farm Machinery Training & Testing Centre, CSIR - Central Mechanical Engineering Research Institute, M G Avenue, Durgapur- 713209

**THIS TEST REPORT VALID UP TO: 31<sup>st</sup> May, 2031**  
[ vide DAC&FW OM No. 13-22/2020 - M&T (I&P) dated 12.12.2023]



Report No.: CSIR/CMERI/FMTTC/2024/017

Month: JUNE

Year: 2024

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

Report prepared by

*[Signature]*

Report verified by

*[Signature]*

**Farm Machinery Training and Testing Centre,  
CSIR-Central Mechanical Engineering Research Institute, Durgapur  
THIS REPORT IS VALID UPTO: 31<sup>st</sup> May 2031**

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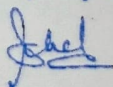
**4. SPECIFICATION****4.1. General**

Type of machine	: Reverse Forward Rotavator (2.5 feet)
Make	: BHOOMI AGRO HI TECH PRIVATE LTD
Model	: BRT- R/F
Serial No.	: 14052
Name and Address of manufacturer	BHOOMI AGRO HI TECH PRIVATE LTD. PAIKI 3, SURVEY NO. 342, VILLAGE - KHIRASARA. TALUKA - LODHIKA, RAJKOT, GUJARAT - 360035
Year of manufacture	: 2024
Country of origin	: INDIA
Type of blade	: J-TYPE
Working width, mm	: 589
Recommended Prime mover size	: 15 hp and above

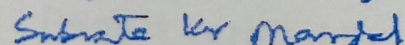
**4.2. Details of prime mover**

Tractor used during test	
Make	: Sonalika
Model	: DI-745 III POWER PLUS
Engine Sr. No.	: 3102IL14B1026973F5
Max. PTO power kW	: 40.20 hp as per test report no. T-1143/1663/2018, T-1381/1908/2020 AE, March 2020 issued by CFMT&TI, Budni

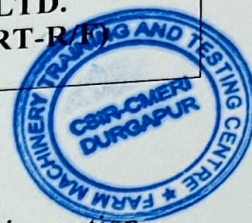
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### 13. COMMENTS AND RECOMMENDATIONS

13.1 The implement hitch specifications confirm partially as per IS standard. Corrective action needs to be taken at production end.

13.2 The PIC dimensions of the rotavator confirm partially as per IS standard. Corrective action needs to be taken at Vendor & Production end.

13.3 Chemical analysis of the blade confirm partially with the requirement as per IS: 6690-1981. It should be looked into.

13.4 Hardness of the blade is partially confirm as per IS standard. Corrective action needs to be taken at Vendor & Production end.

### 14. TECHNICAL LITERATURE

The following literatures are provided by the applicant during the test along with the application form.

- User's manual book
- Parts' catalogue
- Service manual

However, these manuals need to be updated as per IS: 8132-1999.



### TESTING AUTHORITY

Report Prepared by	Senior Technical Officer CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 04/06/2024
Report Verified & Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 04/06/2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	<i>[Signature]</i> 04/6/24

### 15. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
15	13.1 to 13.4	Corrective actions will be taken against the given comments.



**ANNEXURE – II**

**FIELD PERFORMANCE RESULTS (DRY LAND)**

Place of test: Farm Field of CSIR-CMERI, Durgapur  
Tractor used: SONALIKA DI-745 III POWER PLUS

Sl. No.	Parameters	Test details				
		I	II	III	IV	V
1.	Date of test	15-05-2024	16-05-2024	17-05-2024	20-05-2024	21-05-2024
2.	Net test duration (h)	2.33	3.00	9.58	7.10	3.10
3.	Gear used	L-2				
	Engine Speed					
	- No load	1798	1748	1736	1825	1840
	-On load	1720	1648	1641	1740	1718
5.	Type of soil	Sandy Loam				
6.	Bulk density (g/cc)	1.83	1.82	1.89	1.84	1.86
7.	Soil moisture (%)	16.5	14.8	15.7	15.2	15.0
8.	Previous treatment	NIL				
9.	Forward speed, kmph	1.92	1.85	2.10	2.22	2.26
10.	Wheel slippage (%)	-1.2	-1.3	-1.1	-1.1	-1.5
11.	Av. Depth of cut (cm)	14.0	13.4	14.1	15.2	15.8
12.	Av. width of cut(cm)	70.0	69.8	68.8	68.8	67.8
13.	Field Capacity (ha/h)	0.18	0.18	0.17	0.19	0.19
14.	Time required for one ha (h)	5.6	5.6	5.8	5.2	5.2
15.	Field efficiency (%)	80.7	77.3	81.1	78.4	81.7
16.	Fuel consumption					
	- l/h	2.8	2.8	2.8	2.9	2.8
	- l/ha	15.7	15.6	16.1	15.2	14.4
17.	Average PTO power utilized (kW)	10.4	10.1	10.2	10.5	10.4

Report prepared by

*[Signature]*

Report verified by

*[Signature]*