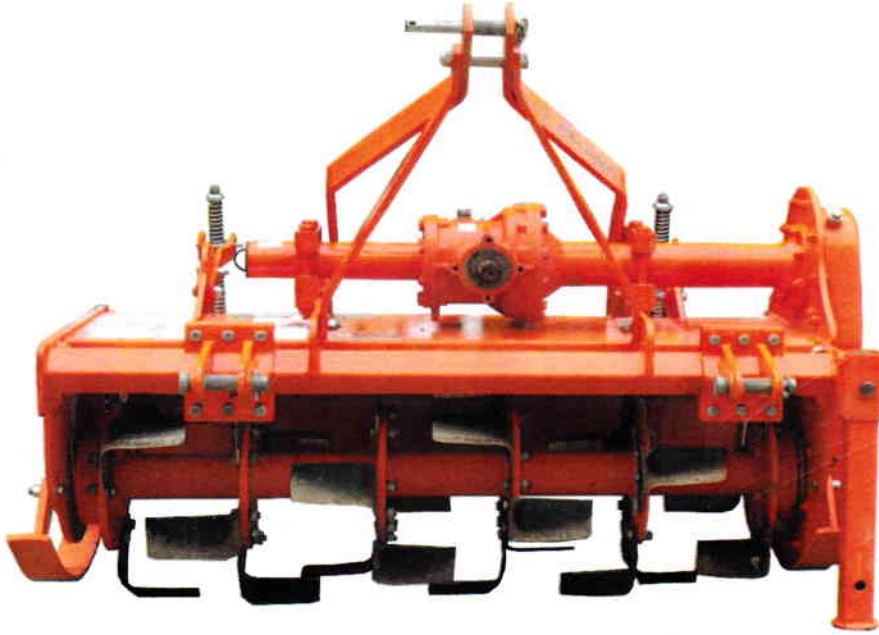




THIS TEST REPORT IS VALID UPTO 31/10/2026



**SHAKTIMAN ROTARY TILLER, MODEL: SRT-4(120)/SS CD SC
SINGLE SPEED, CHAIN DRIVE, CENTRALLY MOUNTED**



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भारत सरकार

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कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

कृषि, सहकारिता एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

विश्वनाथ चारिआलि, जिला-विश्वनाथ(असम)

BISWANATH CHARIALI: BISWANATH: ASSAM, PIN - 784 176

[AN ISO 9001:2015 CERTIFIED INSTITUTION]

1. SCOPE OF TEST

The scope of test was to check and assess the following:

1.1 Laboratory Test:

- a) Checking of specifications
- b) Hardness of soil engaging parts (Blades of Rotary tiller)
- c) Chemical analysis of critical components (Blades of Rotary tiller)
- d) Wear analysis of critical components (Blades of Rotary tiller)

1.2 Field Test :

- a) Rate of work
- b) Quality of work
- c) Ease of operation, maintenance and adjustments
- d) Labour requirement
- e) Defects, Breakdowns & Repairs.

2. METHOD OF SELECTION

The implement was directly submitted for test by the applicant at this Institute. Hence, the method of selection is not known.

3. TEST PROCEDURE

IS: 17045 : 2018 : Rotary Tiller (Rotavator) – Tractor Driven – Test Procedure, and Recommendation on Selected Performance Characteristics

4. SPECIFICATIONS**4.1 General:**

Name and address of the manufacturer : **M/s TIRTH AGRO TECHNOLOGY PVT. LTD.**
 "SHAKTIMAN" Survey No-108/1 Plot No-B.NH-27, Nr Bharudi Toll Plaza, Bhunava (Village), Taluka: Gondal, Dist:Rajkot, State:Gujarat INDIA-360 311

Name & Address of Applicant : **M/s TIRTH AGRO TECHNOLOGY PVT. LTD.**
 "SHAKTIMAN" Survey No-108/1 Plot No-B.NH-27, Nr Bharudi Toll Plaza, Bhunava (Village), Taluka: Gondal, Dist:Rajkot, State:Gujarat INDIA-360 311

Name of machine : Rotary Tiller (Rotavator)
 Type : Single Speed, Chain Drive, Centrally Mounted,
 Make : **M/s TIRTH AGRO TECHNOLOGY PVT. LTD.**
 Model : SRT-4(120)/SS CD SC
 Year of manufacture : 2018
 Serial Number : AGBI101112984
 Recommended power source, hp : Above 35
 Type of blade : Hatchet(L-Shaped)
 Size (cm) {Rotor Dia. x Working width} : 48Φ x 113

Imp.269/348	SHAKTIMAN ROTARY TILLER, Model : SRT-4(120)/SS CD SC SINGLE SPEED, CHAIN DRIVE, -COMMERCIAL (Initial)
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1	2	3	4	5	6	7
ii	Make	Evaluative	Should be provided rotary tiller (Rotavator)	--	SHAKTIMAN	Yes
iii	Model			--	SRT-4(120)/SS CD SC	Yes
iv	Size, (m) {Dia of Rotor X Width of Cut}			--	0.48 x 1.13	Yes
v	Country of origin			--	India	Yes
vi	Year of manufacture			--	2018	Yes
vii	Chassis, Serial Number			--	AGBI101112984	Yes
viii	Recommended PTO speed of Prime mover(rpm)			--	540	Yes
ix	Maximum PTO power requirement, kW			--	26-37/35-50	Yes

8 Category of breakdowns/ defects					
	Category of breakdowns	Category Evaluative/ Non Evaluative	Requirements	As Observed	Whether meets the requirements (Yes/ No)
i	Critical breakdowns	Evaluative	No critical breakdown	None	Yes
ii	Major breakdown	Evaluative	Not more than one and neither of them should be repetitive in nature.	None	Yes
iii	Minor breakdowns	Evaluative	Not more than three and frequency of it's should not be more than two.	None	Yes
iv	Total breakdowns	Evaluative	In no case, the total no of breakdown should exceed four, i.e. (1 major + 3 minor) or 4 minor breakdown	None	Yes

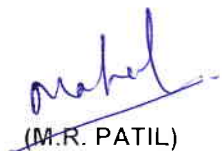
11. COMMENTS AND RECOMMENDATIONS

- 11.1** The dimension of three point linkage (hitch pyramid) of the rotary tiller (Rotavator) does not conform to IS: 4468-1997. This should be looked into for corrective action for standardization.
- 11.2** Dimensions of PIC and PIC yoke bore of implement does not conform to IS: 4931-1995 and therefore, it should be looked into for corrective action
- 11.3** Chemical composition of rotor blades does not conform to IS: 6690-2002. The percentage of carbon and Manganese content in composition of rotary tiller blade material was recorded as 0.256 and 1.275, respectively. The carbon content was on lower side and Manganese content was on higher side when compared with the relevant Indian Standard. Moreover, the hardness of edge portion of rotor blades also does not conform to relevant Indian Standard. It is therefore, recommended that the material of rotary tiller blade should be improved and provided as per requirement of Indian Standard.
- 11.4** In dry land operation average depth of cut was recorded 9.17 cm which does not meet the requirement of Indian Standard

11.5 Technical literature:

Operator cum Service Manual & Parts Catalogue was provided along with the machine during the course of testing. It is further recommended to bring out these manuals in hindi and other vernacular languages as per IS: 8132-1999

TESTING AUTHORITY


(M.R. PATIL)
AGRICULTURAL ENGINEER


(J.P. MANDAL)
SENIOR AGRICULTURAL ENGINEER


(K.K. NAGLE)
DIRECTOR

Draft test report compiled by - Shri Khagendra Bora, STA

12. APPLICANT'S COMMENTS

Para No	Our Reference	Applicants Comments
12.1	11.1	Dimension of three-point linkage (Hitch Pyramid) will be modified to confirm IS 4468-1997.
12.2	11.2	The dimension of PIC & PIC Yoke of implements will be modified to confirm IS 4931-1995.
12.3	11.3	Shaktiman Rotary Tiller blade are made of "BORON" steel which is better than Carbon & Silicon Manganese steel Referred in IS 6690-2002. Chemical compositions and Hardness of Rotavator Blade are maintaining as per "BORON" steel.
12.4	11.4	We will take necessary action for increase of depth of operation.