



**VST MITSUBISHI SHAKTI/VT224-1D/AJAI-4WB TRACTOR**



सत्यमेव जयते

भारत सरकार

कृषि एवं किसान कल्याण मंत्रालय  
(कृषि, सहकारिता एवं किसान कल्याण विभाग)

GOVERNMENT OF INDIA

MINISTRY OF AGRICULTURE AND FARMERS WELFARE

(DEPARTMENT OF AGRICULTURE, CO-OPERATION AND FARMERS WELFARE)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

ट्रैक्टर नगर, बुदनी (म.प्र.) ४६६ ४४५

**CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE**

(An ISO : 9001 - 2008 Certified Institute)

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<b>Manufacturer</b>	:	<b>M/s. VST Tillers Tractors Limited Plot No.39, Phase-1, Sipcot Industrial Complex, Mookandapalli Hosur-635 126.</b>
Test requested by	:	The manufacturer
Selected for test by	:	Applicant
Place of running-in	:	At applicant's works
Duration of said running-in, (h):		
- Engine	:	5
- Transmission	:	2
<b>Method of Selection</b>	:	The tractor was submitted directly by the applicant for test. Hence method of selection is not known.

### SPECIFICATIONS

<b>1.1 Tractor:</b>		
Make	:	VST Tillers Tractors Limited
Model	:	VST MITSUBISHI SHAKTI/ VT224-1D/AJAI-4WB TRACTOR
Brand name	:	NA
Variants. If any:	:	NONE
Type	:	Four wheel drive, General Purpose, Agricultural Tractor
Year of manufacture	:	2014
Chassis number	:	T 14 G 049775
Country of origin	:	India
<b>1.2 Engine:</b>		
Make	:	VST Tillers Tractors Limited
Model	:	V 3 D
Type	:	Four Stroke, Water cooled, Indirect injection, naturally aspirated ,diesel engine
Serial number	:	D14G005741
Country of origin	:	India
<b>1.2.1 Engine speed (rpm), (Manufacturer's recommended production setting),:</b>		
- Maximum speed at no load	:	3125 to 3175
- Low idle speed	:	850 to 950
- Speed at maximum torque	:	2150 to 2250
<b>Rated speed, (rpm):</b>		
- For PTO use	:	3000
- For drawbar use	:	3000
<b>1.3 Cylinder &amp; Cylinder Head:</b>		
Number	:	3
Disposition	:	Vertical inline
Bore/stroke, (mm)	:	73/78
Capacity as specified by the applicant, (cc)	:	979.35
Compression ratio	:	23 :1
Type of cylinder head	:	Monoblock
Type of cylinder liners	:	Wet, Non-replaceable
Type of combustion chamber	:	In direct injection
Arrangement of valves	:	Overhead

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### 17. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

17.1 Evaluative (mandatory) / Non-evaluation (Non-mandatory) parameter applicable for qualifying Minimum Performance criteria as per Clause-4 (Table-1) of IS: 12207-2014 for acceptance of the tractor for the purpose of subsidies/NABARD financing are summarized as under:

Sl. No.	Characteristic	Category (Evaluative / Non Evaluative)	Requirements as per IS: 12207-2014	Values declared by the applicant/ (D) Requirement (R)	As observed	Whether meets the requirements (Yes/No)
1	2	3	4	5	6	7
<b>17.1.1</b>	<b>PTO Performance :</b>					
<b>a)</b>	Maximum power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: -5 / +10% for PTO power >26 kW. - 7.5/+10% for PTO power ≤ 26 kW or -5 / +10% for Engine power >26 kW. - 7.5/+10% for Engine power ≤ 26 kW	13.4 (D)	13.9	Yes
<b>b)</b>	Power at rated engine speed, (kW)	Non Evaluative	-do-	13.4 (D)	13.9	Yes
<b>c)</b>	Specific fuel consumption corresponding to maximum power, (g/kWh)	Non Evaluative	± 5%	370 (D)	342	Yes
<b>d)</b>	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	± 8%	50 (D)	46.1	Yes
<b>e)</b>	Back-up torque, percent	Non Evaluative	10 percent, min.	10 (D) 10 (R)	4.53	<b>No</b>
<b>f)</b>	<b>Maximum operating temperature, (°C)</b>					
	1) Engine oil	Non Evaluative	The declared value should not exceed the max. value specified by the oil company and the observed value under high ambient condition should not exceed the declaration.	130 (D)	129	Yes
	2) Coolant (water)	Evaluative	The declared value should not exceed the boiling temperature of coolant under the pressurized or otherwise and the observed value under high ambient condition should not exceed the declaration.	120 (D)	120	Yes
<b>g)</b>	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions	3.47 (R)	1.26	Yes
<b>h)</b>	Smoke level	Evaluative	Maximum light absorption coefficient of 3.25 per meter or equivalent BOSCH No. 5.2 or 75 Hatridge value ( <b>As per CMVR</b> )	3.25 per meter (R)	0.65	Yes

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1	2	3	4	5	6	7
<b>17.1.2</b>	<b>Drawbar performance :</b>					
<b>a)</b>	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 65% of static mass with ballast	Ballasting not recommended by the manufacturer	---	NA
<b>b)</b>	Max. drawbar pull with standard ballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 65% of static mass of tractor with standard ballast	5.48 (R) 6.0 (Minimum) (D)	7.17	Yes
<b>c)</b>	Maximum drawbar power with standard ballast, (kW).	Evaluative	Minimum 80 % of PTO power as referred in SI. No. i) a) of PTO performance in case of tractors having total static mass > 1500 kg Minimum 75 % of PTO power as referred in SI No. i) a) of PTO performance in case of light weight tractors having 1500 kg total static mass of tractor Minimum 75 % of the engine power as referred in SI No. i) a) of engine performance in case of tractors which do not have a PTO shaft.	10.4 (R) 10.1 (D)	12.3	Yes
<b>d)</b>	Maximum transmission oil temperature (°C)	Non Evaluative	The declared value should not exceed the maximum value specified by oil company	110 (D)	81	Yes
<b>17.1.3</b>	<b>Power lift and hydraulic pump performance :</b>					
<b>a)</b>	Maximum lifting capacity throughout the range of lift, (kN):					
	1) At hitch points	Non Evaluative	[Tolerance of minus 10%]	5.0 (D)	4.54	Yes
	2) With the standard frame	Evaluative	The lift capacity should at least be 24 kg/PTO kW. and it should be 21.5 kg/engine kW where the tractor is not provided with a PTO shaft	4.0 (D) 3.30 (R) (Minimum)	3.62	Yes
<b>b)</b>	Maximum drop in the height of the point of application of the force after each 5 minutes interval for a total duration of 30 Minutes, (mm)	Non Evaluative	Observed value should not exceed 50 mm.	5 mm	03	Yes
<b>17.1.4</b>	<b>Brake performance at maximum speed (21.5 kmph):</b>					
<b>a)</b>	Maximum stopping distance at a force, equal to or less than 600 N on brake pedal with Standard ballast, (m):					
	1) Cold brake	Evaluative	10	10 (R)	6.57	Yes
	2) Hot brake	Evaluative	10	10 (R)	6.82	Yes
<b>b)</b>	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s <sup>2</sup> (N)	Evaluative	600	600 (R)	320 to 382	Yes

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1	2	3	4	5	6	7
c)	Whether parking brake is effective at a force of 600 N at foot pedal(s) or 400 N at hand lever	Evaluative	Yes / No	Yes (R )	Yes	Yes
<b>17.1.5</b>	<b>Noise measurement :</b>					
a)	Maximum ambient noise emitted by the tractor dB(A)	Evaluative	As per CMVR	85 (Maximum) (R )	80	Yes
b)	Maximum noise at operator's ear level dB(A)	Evaluative	As per CMVR	96 (Maximum) (R )	94	Yes
<b>17.1.6</b>	<b>Amplitude of mechanical vibrations at :</b>					
1)	Left foot rest	Non Evaluative	100 microns (max)	100 (Maximum) (R )	270	No
2)	Right foot rest				130	No
3)	Seat (with driver seated)				70	Yes
4)	Steering Wheel				100	Yes
<b>17.1.7</b>	<b>Air cleaner oil pull over:</b>					
1)	Max. percentage of oil pull over	Non Evaluative	0.25 percent maximum/tolerance Nil	0.25% Max.	0.06	Yes
<b>17.1.8</b>	<b>Haulage requirements :</b>					
a)	Gross mass of the trailers, (tones):					
1)	Two wheel	Non Evaluative	--	3.0 (D)	3.0	Yes
2)	Four wheel		--	Not Recommended	--	NA
b)	Distance travelled / litre of fuel consumption, (km/l):					
1)	Two wheel	Non Evaluative	--	6.0 (D)	5.55 to 5.78	No
2)	Four wheel		---	--	NA	
c)	Fuel consumption (ml/km/tonne):					
1)	Two wheel	Non Evaluative	--	58.0 (D)	57.6 to 60.0	Yes
2)	Four wheel		--	--	NA	
<b>17.1.9</b>	<b>Wetland cultivation :</b>					
	Sealing for the following assemblies:	Evaluative	The identified assemblies should essentially meet the requirement of IS: 11082. No water ingress in the identified assembly given in column-2. If tractor does not meet the requirements of wetland cultivation, it may be recommended for dry land operation only.	There should be no ingress of water and/or mud	No ingress of mud and / or water was observed	Yes
1)	Clutch assembly	-do-				
2)	Brake housings	-do-				
3)	Front axle hubs	-do-				
4)	Engine oil	-do-				
5)	Transmission oil	-do-				

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<b>17.1.10 Safety features :</b>						
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>a)</b>	Guards against moving and hot parts	Evaluative	Belt drives, pulley, silencer, hydraulic pipes (As per IS 12239 (part 2))	--	Provided	Yes
<b>b)</b>	Lighting arrangement	Evaluative	As per CMVR	--	Provided	Yes
<b>c)</b>	Seating requirement (Tractors having more than 1150 mm rear track width)	Non-Evaluative	Should meet the requirements of IS: 12343 (as amended from time to time)	--	Not applicable	NA
<b>d)</b>	Technical requirements for PTO shaft	Non-Evaluative	Should meet the requirements of IS 4931 (as amended from time to time)	--	<b>Does not meet the requirement</b>	<b>No</b>
<b>e)</b>	Dimension of three point linkage	Non-Evaluative	Should meet the requirements of IS 4468 (part 1) (as amended from time to time)	--	<b>Does not meet the requirement</b>	<b>No</b>
<b>f)</b>	Specification of linkage drawbars	Non-Evaluative	Should meet the requirements of IS 12953 and IS 12362 (part 3) (as amended from time to time)	--	<b>Does not meet the requirement</b>	<b>No</b>
	Specification of Swinging drawbar	Non-Evaluative		Not provided	<b>NA</b>	<b>NA</b>
<b>17.1.11</b>	<b>Labelling of tractors (Provision of labelling plate):</b>					
	1) Make	Evaluative	Should conform to the requirements of CMVR along-with declared value of PTO HP	--	VST Tillers Tractors Ltd.	Yes
	2) Model	Evaluative		--	VST MITSUBISHI SHAKTI/ VT224-1D/AJAI-4WB	Yes
	3) Year of manufacture	Evaluative		--	2014	Yes
	4) Engine number	Evaluative		--	D14G005741	Yes
	5) Chassis number	Evaluative		--	T 14G049775	Yes
	6) Declaration of PTO power, kW	Evaluative		--	13.42	Yes
<b>17.1.12</b>	<b>Discard limit for:</b>					
<b>a)</b>	Cylinder bore diameter, (mm)	Evaluative	To be specified by the manufacturer	73.95 (D)	72.97 to 72.99	Yes
<b>b)</b>	Clearance between piston & cylinder liner at skirt, (mm)	Non-Evaluative		0.30 (D)	0.092 to 0.105	Yes

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1	2	3	4	5	6	7
<b>c)</b>	<b>Ring end gap (mm):</b>					
	- Top comp. ring	Evaluative	-do-	1.5	0.25 to 0.30	Yes
	- 2 <sup>nd</sup> comp. ring		-do-	1.5	0.25 to 0.35	Yes
	- 3 <sup>rd</sup> comp. ring		-do-	1.5	0.28 to 0.46	Yes
	- Oil ring		-do-	1.5	0.20	Yes
<b>d)</b>	<b>Ring groove clearance (mm):</b>					
	- Top comp. ring	Evaluative	-do-	--	Taper Ring	Yes
	- 2 <sup>nd</sup> comp. ring		-do-	0.30	0.038 to 0.046	Yes
	- 3 <sup>rd</sup> comp. ring		-do-	0.30	0.026 to 0.032	Yes
	- Oil ring		-do-	0.30	0.055 to 0.062	Yes
<b>e)</b>	<b>Clearance of main bearings (mm):</b>					
	- Diametrical clearance	Evaluative	To specified by the manufacturer	0.15	0.081 to 0.132	Yes
- Crankshaft end float	Evaluative	0.50		0.12	Yes	
<b>f)</b>	<b>Clearance of big end bearings, (mm):</b>					
	- Diametrical	Evaluative	-do-	0.15	0.063 to 0.102	Yes
	- Axial	Evaluative	-do-	0.50	0.15	Yes
<b>g)</b>	Clearance between king pin and bush, (mm)	Non Evaluative	-do-	1.5	0.16 to 0.18	Yes
<b>h)</b>	Clearance between centre pin and bush, (mm)	Non Evaluative	-do-	1.0	0.09 to 0.16	Yes
<b>17.1.13</b>	<b>Literature (Submission to test agency)</b>					
<b>(a)</b>	Operator manual	Evaluative	Provided/Not Provided	As per relevant IS Code (IS 8132)	Provided	Yes
<b>(b)</b>	Parts Catalogue	Evaluative	Provided/Not Provided	As per relevant IS Code (IS 8132)	Provided	Yes
<b>(c)</b>	Workshop/Service manual	Evaluative	Provided/Not Provided	As per relevant IS Code (IS 8132)	Provided	Yes

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17.1.12 CATEGORY OF BREAKDOWNS / DEFECTS :					
S. No.	Category of breakdowns	Category (Evaluative / Non Evaluative)	Requirements as per IS: 12207-2014	As observed	Whether meets the requirements (Yes/No.)
1.	Critical	Evaluative	No critical breakdown	None	Yes
2.	Major	Evaluative	Not more than two and neither of them should be repetitive in nature	None	Yes
3.	Minor	Evaluative	Not more than five and frequency of each should not be more than two.	None	Yes
4.	Total breakdowns	Evaluative	In no case, the total number of breakdowns should exceed five, that is, (2 major + 3 minor) or 5 minor breakdowns.	None	Yes
17.2 Optional requirements as per Clause-4 (Table-2) of IS:12207-2014:					
S. No.	Characteristic	Requirements as per IS: 12207-2014	AS observed	Whether meets the requirements (Yes/No.)	
1.	Fitment of ROPS	With a provision for fitment of ROPS.	Not provided	-	
		If ROPS fitted it should meet the requirement of IS: 11821-1992	Not provided	Not Applicable	
2.	Accessories	Trailer hitch, front tow hook, linkage drawbar may be provided.	Front tow hook not provided	<b>No</b>	

**17.3 Conformity with following IS:**

- i) Guidelines for declaration of power and specific fuel consumption and labeling of agricultural tractors (First revision) [IS 10273:1987 (Reaffirmed in March, 2009)] : **Conforms**
- ii) Agricultural tractors – Rear mounted power take-off - Types 1, 2 and 3(third revision)[IS: 4931-1995 (Reaffirmed in March, 2009)] : **Does not conform**
- iii) Agricultural wheeled tractors - Rear mounted three-point linkage: Part 1 Categories 1, 2, 3 & 4 (fourth revision) [IS 4468 (Part-I):1997 (Reaffirmed in March, 2007)/ISO 730-1:1994] : **Does not conform**
- iv) Drawbar for agricultural tractors – Link type [IS 12953:1990 (Reaffirmed in March, 2007)] : **Does not conform**
- v) Agricultural tractors - Operator's seat technical requirement [IS 12343 –1998 (First revision) (Reaffirmed in March, 2009)] : **Does not conform**
- vi) Guide for safety & comfort of operator of agricultural tractors: Part 1 General requirements (first revision) : [IS 12239 (PT-1)-1996 (Reaffirmed in March, 2009)/ISO 4254-1:1989] : **Does not conform**



- vii) Tractors and machinery for agriculture and forestry – Technical means for ensuring safety Part 2: Tractors (first revision) IS 12239 (PT-2)-1999 (Reaffirmed in March, 2009)] : **Does not conform**
- viii) Tractors and machinery for agriculture and forestry, powered lawn and garden equipment – Symbols for operator controls and other displays [IS: 6283 (Part-1 & Part-2) –2006 & 2007(Reaffirmed in March, 2009)/ ISO 3767-2:1991)] : **Does not conform**
- ix) Guide lines for location and operation of operator controls on agricultural tractors and machinery (first revision) (IS: 8133 – 1983) (Reaffirmed in March, 2009)] : **Does not conform**
- x) Agricultural Tractor & Machinery Lighting device for travel on public roads (IS: 14683-1999) (Reaffirmed in March, 2009)] : **Conforms**

#### 17.4 Salient Observations:

##### 17.4.1 Laboratory tests:

##### 17.4.1.1 PTO Performance:

- i) The backup torque is **4.53** % against the minimum requirements of **10.0%**. This should be looked into.
- ii) The specific fuel consumption corresponding to maximum power was measured as **343** g/kWh against the declaration of 360 g/kWh, which is within the tolerance limit of IS: 12207-2014.
- iii) During higher ambient test, the observed maximum temperature was  $120^{\circ}\text{C}$ , which is at the upper limit of the declaration i.e.  $120^{\circ}\text{C}$ . This calls for the necessary improvement in the cooling system.

##### 17.4.1.2 Mechanical Vibration:

The amplitude of mechanical vibration on various assemblies marked as (\*) in Chapter-9 of this test report is on higher side, especially at RHS & LHS foot rest. This calls for dampening down of vibrations to improve the operational comfort and service life of components.

##### 17.4.1.3 Power take off shaft :

- i) The dimension  $d\Phi$  of power take off shaft does not meet the requirements of IS 4931-1995. This should be looked into for necessary corrective action.

##### 17.4.1.4 Three point linkage:

- i) The dia. of lower hitch pin hole & its width does not meet the requirements of IS: 4468 (Part -1) -1998.
- ii) The power movement range does not meet the requirements of IS:4468 (Part -1) 1998. This should be looked into for necessary corrective action.


##### 17.4.1.5 Linkage drawbar :

- i) No dimension of linkage drawbar conforms to IS: 12953-1990(reaffirmed in 2000). This should be looked into for necessary corrective action.

#### 17.4.2 Field performance test:

##### 17.4.2.1 Dry land operation :

- i) The tractor has no provision for track width adjustment of rear wheels. This limits the use of tractor for intercultural operation.
- ii) Rear working light (plough light) is not provided on the tractor, for operation in the field during night. As per clause 4.1.7 of IS: 14683-1999, at least one lamp projection a general flood pattern of light should be provided at rear.



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**17.4.2.2 Wet land cultivation (Puddling operation):**  
No ingress of mud/or water was noticed during puddling operation of the tractor. Hence, It meets the requirements of IS: 11082-1984 (Technical requirements of agricultural tractors for wetland operation). The tractor is suitable for wetland operation (Puddling).

**17.4.2.3 Wear assessment :**  
During wear assessment the height of lining over the rivet head of the clutch plate was observed between 1.30 to 1.48 against the discard limit of 1.5 mm. this should be looked into for necessary improvements.

**17.5 Maintenance / Service Problems:**  
No noticeable maintenance/ service problem was observed during the test.

**17.6 Recommendation with regard to safety on tractor:**  
The following requirements, inter alia, may be considered for incorporation on the tractor:

- i) Provision for spark arresting device in exhaust system.
- ii) "Minimum cautionary notice" as per clause 11.2 of IS: 12239 (part-2)-1999
- ii) The full width of rear wheels of tractor is not fully guarded by the mud guard, the rear mudguards should be re designed/improved to enhance the safety

**17.7 Adequacy of Literature supplied with machine:**  
Applicant provided instruction manual, Service log book & Part's catalogue for VST MITSUBISHI SHAKTI/ VT224-1D/AJAI-4WB TRACTOR.

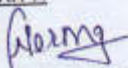
**17.7.1** It is, however, recommended that above literature may be brought out as per IS: 8132-1999 (reaffirmed in March, 2009) and following points need to be incorporated:

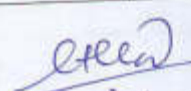
- i) The guidance of users & service personnel in national as well as regional language for this model of tractor.
- ii) Instruction manual should be included part no or publication number by which manual may be ordered. Besides publication or printing date must be on it.

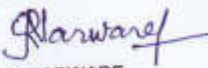
**18.0 Citizen charter**

Test duration under citizen charter	Duration of Test	Whether the report released within time frame given in the citizen charter	Remark
9 Months	November, 2015 to July, 2016 (7 Months)	Yes	--

**TESTING AUTHORITY:**

  
**NITESH KUMAR VERMA**  
 AGRICULTURAL ENGINEER

  
**Y.K.RAO**  
 SENIOR AGRICULTURAL ENGINEER

  
**J.J.R.NARWARE**  
 DIRECTOR

The test report is compiled by sh. Nitesh Kumar Verma, Agricultural Engineer

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### 19. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
19.1	17.4.1.1 (i,iii)	Will be looked into necessary corrective action
19.2	17.4.1.2,17.4.1.3,17.4.1.4,17.4.1.5	Will be looked into necessary corrective action
19.3	17.4.2.1 (i,ii), 17.4.2.3	Necessary corrective action will be taken/will be studied
19.4	17.6 (i,ii,iii)	Necessary corrective action will be taken/will be studied
19.5	17.7.1 (i, ii)	This will be implemented immediately

### ANNEXURE – I

#### TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS:	HOURS
1.	Running-in	--
2.	PTO performance test	11.5
3.	Power lift and hydraulic pump performance test	3.3
4.	Drawbar performance test	13.0
5.	Air cleaner oil pull over test	3.5
6.	Turning ability	0.2
7.	Location of centre of gravity	0.2
8.	Operator's field of vision	Nil
9.	Brake test	1.3
10.	Noise measurement	1.6
11.	Mechanical vibration test	1.0
12.	Theoretical speed test	1.1
<b>B.</b>	<b>FIELD TEST:</b>	
1.	Rotavation	20.7
2.	Puddling test (including water proof test)	15.3
<b>C.</b>	<b>HAULAGE TEST:</b>	6.2
<b>D.</b>	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	6.1
	<b>TOTAL:</b>	<b>85.0</b>

**ANNEXURE – II****BRIEF SPECIFICATION OF IMPLEMENTS USED DURING FIELD TEST**

<b>S. No.</b>	<b>I t e m</b>	<b>Rotavator</b>
1.	Make	Mitsubishi shakti
2.	Type	Mounted
3.	No. of disc/blades	28,at spacing of 45 mm fitted on a shaft through fasteners
4.	Type of discs/blades	Hatchet
5.	Size of bottom/blades,(mm)	210X40X5
6.	Spacing of bottom/flanges,(mm)	80
7.	Lower hitch point span,(mm)	260
8.	Mast height (mm)	220
9.	Overall dimensions,(mm):	
	- Length	1200
	- Width	1550
	- Height	800
10	Gross mass, (kg)	140

**ANNEXURE – III****BRIEF SPECIFICATION OF CAGE WHEEL**

<b>S. No.</b>	<b>Items</b>	<b>Specification</b>
1.	Type	Half cage wheel made of M.S rod of 19.2 & 15.6 mm diameter and M.S. sheet lugs
2.	Diameter, (mm)	725
3.	Width, (mm)	250
4.	No. and type of lugs	8, Trapezoidal shape made of ms sheet
5.	Size of lug , (mm)	165X255X5.6
6.	Spacing of lugs, (mm)	195
7.	Weight of each cage wheel, (kg)	25