

Government of Pakistan  
**Engineering Development Board**

**Mechanization of Agriculture Sector of Pakistan**

Agriculture constitutes the 2<sup>nd</sup> largest sector of Pakistan economy after services sector. It contributes about 19.2 percent of Gross Domestic Product (GDP) and accounts for half of employed labour force and is also the largest source of foreign exchange earnings. More than 65-70 percent of the population depends on agriculture for its livelihood. Agricultural growth rate has been constrained by shrinking arable land, climate change, water shortages, and large-scale population and labour shift from rural to urban areas.

The agriculture sector's performance during 2020-21 broadly stands encouraging as it grows by 2.77 percent against the target of 2.8 percent but it has still potential to increase growth. Comparatively, with Kazakhstan, Bangladesh and India it is still low as evident from the following table;

Countries	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021 (P)
Kazakhstan	5.40	3.20	3.80	0.10	5.90	-
Bangladesh	2.79	2.97	4.18	3.92	4.60	-
India	6.80	6.61	2.56	4.32	3.63	-
<b>Pakistan</b>	<b>0.15</b>	<b>2.18</b>	<b>4.00</b>	<b>0.56</b>	<b>3.31</b>	<b>2.77</b>
China	3.28	3.96	3.48	3.09	2.98	-
Vietnam	1.36	2.90	3.76	2.01	2.69	-
Azerbaijan	2.60	4.20	4.60	7.27	1.9	-
Malaysia	-3.65	5.89	0.13	1.95	-2.18	-
South Korea	-5.63	2.25	0.15	3.94	-3.95	-
Source: World bank data						

In order to increase agricultural productivity, exports and to ensure uninterrupted supply of basic food items at affordable prices in the country, the Prime Minister, has approved “**Agriculture Transformation Plan (ATP)**” on the presentation of MoNFSR with the objective to enhance national agricultural output and livelihood of farmers.

Under this plan provinces will work on re-tweaking of machinery given under **National Agriculture Emergency Projects (NAEP)** on wheat, rice, sugarcane, and oilseeds for maximum distribution of implements among farming community on following aspect:

- Design of intervention and pre-qualification mechanism
- Additional implements
- Subsidy mechanism to be aligned with Kissan Card
- Service providers to be registered
- Unique implement ID
- Farmers share

**Ministry of Industries and Production (MoIP)** was assigned **Lead Role** under this plan.

The MoIP, after extensive stakeholders consultation and feedback including meetings with leading manufacturers of the implements representing all major clusters of the implements manufacturing across the country recommended to notify a **Standards Development Committee (SDC)**, comprising of the technical/industry experts to prescribe minimum workable standards.

**The Committee was constituted under the Chairmanship of CEO-EDB and framed Terms of References** “To review the current implements plan and its re-tweaking to ensure maximum uptake”;

**Committee:**

- CEO-EDB (Chairman of Committee)
- Chairman-PARC
- Heads of Provisional Agricultural Engineering Departments (Punjab, KPK, Sindh, Baluchistan)
- Director- AMRI
- Chairman-PAMIMA
- Two Private members nominated by PAMIMA;(1 Large Scale manufacturing, 1 Medium/Small Scale Manufacturing)

### **ToRs:**

- Review of the existing standards developed by PSQCA and to prescribe minimum workable standards.
- Develop specs of 43 implements prioritized by the MoNFS within 4 weeks particularly in the view of:
  - Weight,
  - Size and
  - Metallurgy of critical implement parts.
- To develop warranty/bank guarantee mechanism.
- Registration of manufacturers is to be undertaken by EDB under the plan against notified implements.
- To develop mechanism for testing prototype machines.

### **Technical Sub-Committee (TSC):**

The SDC constituted following Technical Sub-Committee for detailed review of the specifications of the implements

- Engr. K. B. Ali General Manager (SDG-EDB) (Convenor)
- Mr. Farukh Rasheed, DG, Agriculture Engineering Department, Sindh
- M. Iqbal Sabir, Director, AMRI, Multan
- Engr. Nazeer Abbas, Director Agri. Engineering Dep. KPK
- Syed Basheer Agha, Director Agri. Engineering Dep. Quetta
- Dr. M. Ashraf, Agri Engineer (Research) Faisalabad, Punjab
- Dr. Hafiz Sultan, Director, Pakistan Agricultural Research Council (PARC) Islamabad
- Mr. Musadiq Iqbal, Deputy Director, PSQCA, Karachi
- Zahid Khan, Deputy Manager (M&E), National Productivity Organization (NPO)
- M. Amjad, Chairman Agricultural Association (PAMIMA), Faisalabad
- Imran Ahmad, Dy. General Manager; Millar Tractors Limited, Lahore

The committee was initially assigned the task to determine minimum specifications of (15+43) = 58 agricultural implements. The SDC held five meetings (during the months of August and September 2021) and after thorough review of the list of implements and

recommendations of Technical Sub-Committee, endorsed recommended minimum specifications of 58 (15+16+27) Agricultural implements.

The SDC, on the request of Pakistan Agricultural Machinery & Implements Manufacturers Association (PAMIMA) also recommended the technical specifications of **Paddy/Rice Thresher (7 ft).**

SDC, on the request of MNFS&R through the MoIP, also reviewed an additional list of 19-Agricultural Implements in 6th Meeting and recommended after evaluation of Technical Sub-Committee (TSC) in 3rd Meeting, both held on 23rd November, 2021.

Final list of 59+19=78 Agricultural implements along with sketches is attached as **Annexure-A.**

EDB Board of Management; decision of the Board is re-produced as under;

***The BoM, in its 50th Meeting held on 17th December, 2021, while appreciating the role of EDB in developing standardized specifications as well as promoting localized equipment directed to take up this sector for in-depth study and development.***

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### Annex-A

S.No.	Name of Machine / Equipment	Status	Page #
1	Disc Harrow (16-Discs)	Local	4-5
2	Rotavator (42-Blades)	Local	6-7
3	Disc Plow (03-Disc)	Local	8-9
4	Border Disc	Local	10-11
5	Potato Planter	Local	12-13
6	Vegetable Ridger	Local	14-15
7	Tractor drawn Groundnut Digger	Local	16-17
8	Cultivator	Local	18-19
9	Land Leveller (Karah)/Front and Rear Blade	Local	20-21
10	Seed Drill with Fertilizer attachment (Rabi)	Local	22-23
11	Chisel Plow	Local	24-25
12	Tractor Mounted Post Hole Digger	Local	26-27
13	Knapsack Manual Sprayer	Imported/ Local	28-29
14	Knapsack Power Mist Blower Sprayer	Imported	30-31
15	Citrus/Guava/Mango/Pomegranate Pruner- <b>Revised</b>	Local	32-33
16	Wheat Seed Cleaner/Grader	Local	34-35
17	Wheat Bed and Furrow Drill.	Local	36-37
18	Pak Seeder.	Local	38-40
19	Happy Seeder.	Local	41-43
20	Wheat Reaper.	Local	44-45
21	Nursery Raising Machine (Moving)	Imported /Local	46-47
22	Walk-behind Rice Transplanter.	Imported	48-49
23	Rice Straw Shredder.	Local	50-51
24	Precision Pneumatic Planter.	Local	52-53
25	Maize Dehusker cum Sheller.	Local	54-55
26	Knapsack Hydraulic Power Sprayer (Battery operated).	Imported	56-57
27	Rice Transplanter Riding Type.	Imported	58
28	A. Rice Combine Harvester. B. Full Feed Rice Combine Harvester. C. Rice Specific Combine Harvester.	Imported	59 60 61
29	Wheat Combine Harvester.	Imported	62
30	Laser Leveller.	Local	63-66
31	Multi Crop Thresher.	Local	67-68
32	Sugarcane Planter	Imported/ Local	69-70
33	Groundnut Thresher	Local	71-72

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

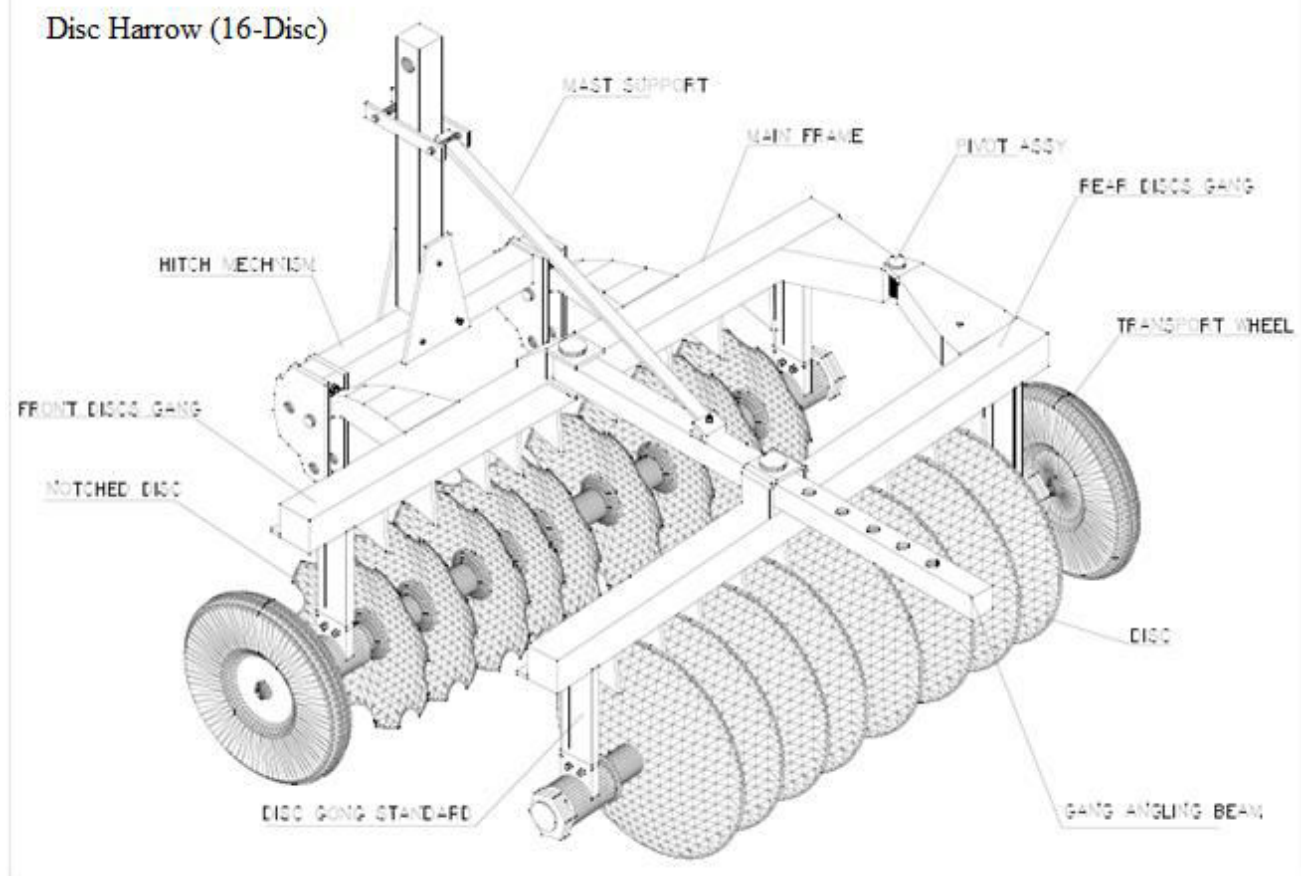
34	Sugar Cane Crusher (High efficiency)	Local	73-75
35	Olive Picker/Harvester (Branch shaker) Type	Imported	76
36	Maize Corn Picker cum De-husker (self-propelled)/ Tractor mounted	Imported	77-78
37	Power Tiller with set of attachments/ implements	Imported	79-80
38	Walk Behind Maize Harvester-Windrower	Imported	81
39	Zero Tillage Drill	Local	82-83
40	Olive Oil Extraction Machine	Imported	84-85
41	Garlic Harvester	Imported/ Local	86-87
42	Potato Digger-Cum-Collector	Imported	88-89
43	Wheat Straw Chopper Blower	Local	90-92
44	Sugarcane Ridger	Local	93-94
45	Potato Digger Shaker	Local	95-97
46	Tractor Operated Carrot Washer	Local	98-99
47	Maize Sheller with Conveyor	Local	100-101
48	Fodder Cutter (Sickle type)	Local	102-103
49	Fodder Cutter (Disc mower)	Local	104-105
50	Fodder Chopper (Stationary)	Local	106-107
51	Silage Baler cum Wrapper	Local	108-109
52	Boom Sprayer	Local	110-111
53	Tractor Mounted Mist Blower Sprayer (Canon type)	Local	112-113
54	Whole Stalk Sugarcane Harvester	Imported	114
55	A) Corn Picker B) Corn picker	Imported Local	115 116
56	Fodder Cutter cum Chopper	Imported/ Local	117
57	Forage Harvester	Local	118-119
58	Cotton Bed Drill	Local	120-121
59	Paddy/Rice Thresher (7 ft.)- <b>additional</b>	Local	122-123
60	Reversible Hydraulic M.B. Plow	Local	124-125
61	M.B. Plow	Local	126-127
62	Double Coulter Drill with Fertilizer Attachment	Local	128-129
63	Wheat Reaper Cum Binder	Local	130-132
64	Cotton Boll Stripper	Local	133-134
65	Inter-row Cultivator	Local	135-136
66	Maize Bed Planter	Local	137-138
67	A) Garlic Planter	Imported / Local	139

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

	B) Garlic Bed Planter	Local	141-142
68	Onion Harvester	Local	142-143
69	Groundnut Drill	Local	144-145
70	Knapsack Hydraulic Power Sprayer (Engine Operated)	Imported	146-147
71	Tractor Mounted Gun Sprayer	Local	148-149
72	Tractor Mounted Air Blast Sprayer	Local	150-151
73	Multi Crop Drill	Local	152-153
74	Vegetable Nursery Transplanter	Imported / Local	154
75	Hay Baler	Imported / Local	155
76	A) Rotavator (48 blades)	Local	156
	B) Rotavator (54 blades)	Local	157
	C) Rotavator (60 blades)	Local	159
	D) Rotavator (66 blades)	Local	160
77	Chisel Plow	Local	162-163
78	Disc Harrow (18 discs)	Local	164-165

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 1. DISC HARROW (16-DISCS)



#### GENERAL

- |                  |   |
|------------------|---|
| 1. Application   | For tilling and incorporation of crop residue into soil |
| 2. Front gang    | Notched   |
| 3. Rear gang     | Plain   |
| 4. Disc spacing  | 220 mm  |
| 5. Tractor power | $\geq 50$ hp  |

#### OVERALL DIMENSIONS

- |                  |                  |                     |
|------------------|------------------|---------------------|
| 6. Length        |                  |                     |
|                  | Mounted position | 2200 mm $\pm$ 20 mm |
|                  | Trailed position | 3400 mm $\pm$ 30 mm |
| 7. Width         |                  | 2200 mm $\pm$ 20 mm |
| 8. Height        |                  |                     |
|                  | Mounted position | 1725 mm $\pm$ 20 mm |
|                  | Trailed position | 940 mm $\pm$ 10 mm  |
| 9. Weight (min.) |                  | 850 kg $\pm$ 10 kg  |

#### MATERIAL SPECIFICATIONS



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

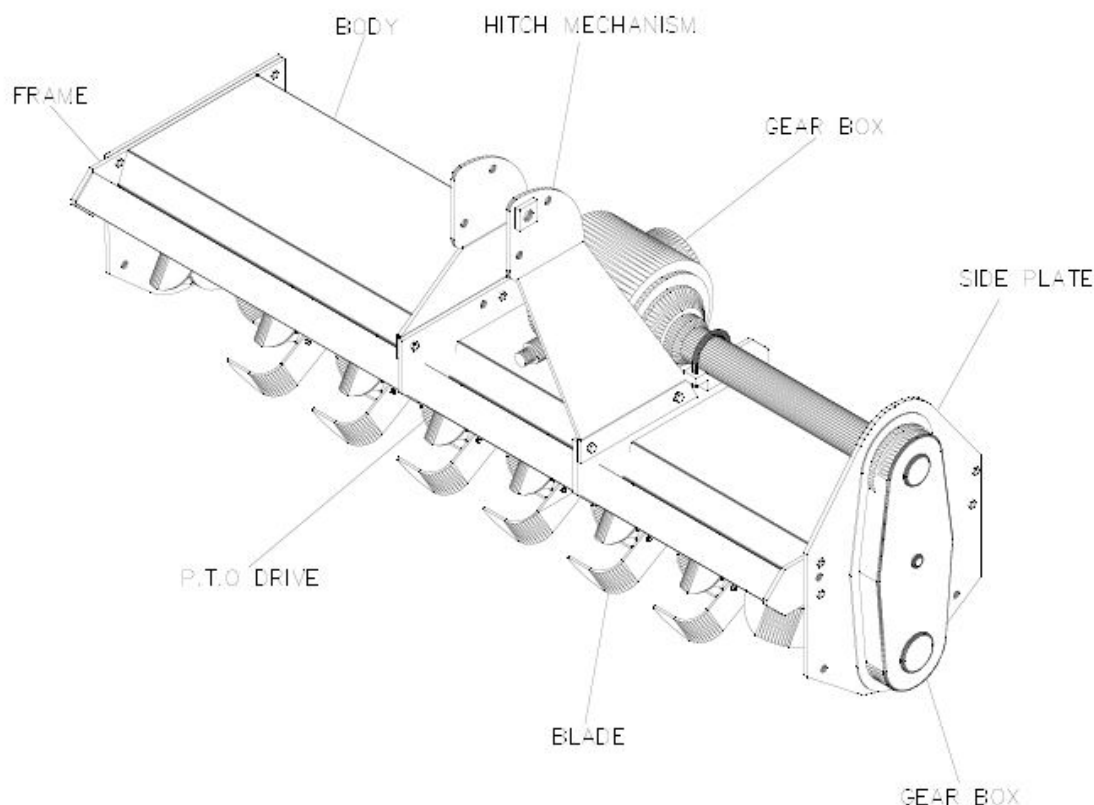
- |                        |   |
|------------------------|---|
| 10. Main frame         | M.S. box 150x150x5 mm or rolled channel 6 mm M.S. sheet   |
| 11. Mast (A-frame)     | Inverted T-type, M.S. box 75x75x5 mm  |
| 12. Hitch assembly     | 30 mm dia. M.S round hook, 18 mm M.S. plate bracket, rotatable  |
| 13. Hitch brackets     | 25 mm M.S. plate  |
| 14. Disc               | 608 mm dia., 4.5 mm thick, hardened steel (HRC $\geq$ 40)   |
| 15. Disc spacer        | Cast Iron with male female hex  |
| 16. Disc scraper       | 5-6 mm M.S. sheet   |
| 17. Gang shaft         | 68-70 mm M.S. round   |
| 18. Gang angling beam  | M.S. box 75x75x5 mm, angle iron reinforced with M.S flat 62x6 mm carrying adjusting holes                           |
| 19. Pivot assembly     | C-Type yoke/bracket, 50 mm M.S. plate and 6 mm M.S. sheet, with M.S. bush 9 mm wall thickness and 44-45 mm dia. pin |
| 20. Disc gang standard | 15 mm M.S plate reinforced or box 5-6 mm M.S sheet  |
| 21. Transport wheel    | 02 Nos. 6.00-16, pneumatic, rim 18 kg (min)   |
| 22. Bearing            | 04 Nos. 6208  |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 23. Paint          | Double coat with primer after surface finish  |
| 24. Nuts and bolts | To be tightened with spring washers   |
| 25. Bearings       | European standard or Equivalent   |
| 26. Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## 2. ROTAVATOR (42-BLADES)

### ROTAVATOR



### GENERAL

1. Application	Used to break and churn the soil
2. Working width	1600 mm
3. No. of blades	42
4. Blade spacing	225 mm
5. U.J. shaft	provided
6. Rotor speed	230-245 rpm @ 540 PTO speed
7. Tractor power	≥ 50 hp

### OVERALL DIMENSIONS

8. Length	1000 mm ± 10 mm
9. Width	1900 mm ± 20 mm
10. Height	1000 mm ± 10 mm
11. Weight (Approx.)	400 kg ± 10 kg

### MATERIAL SPECIFICATIONS

12. Main Frame	M.S. box 75x75x5 mm and supports 12 mm M.S plate
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## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

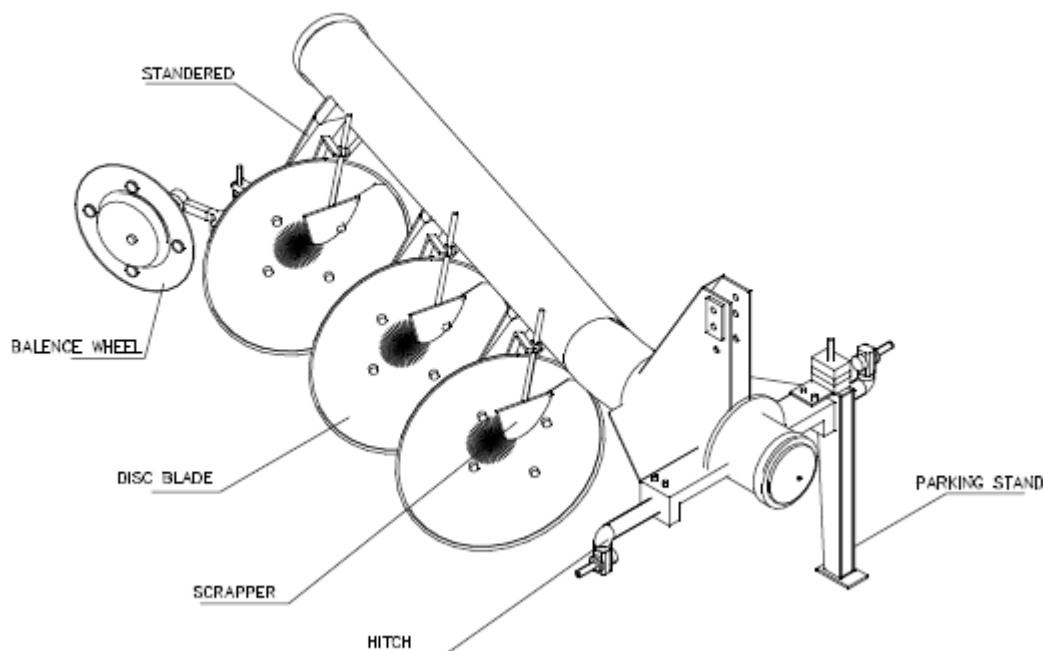
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|-----------------------------|---|
| 13. Mast (A-frame)          | M.S. sheet 8 mm reinforced top ends with 6 mm M.S flat                                    |
| 14. Blades rotor pipe       | Seamless steel pipe, 87 mm OD, wall thickness 6 mm with 60 mm dia. forged axle ends       |
| 15. Blades mounting plates  | 235 mm dia., 11-12 mm thick   |
| 16. Transmission shaft      | ≥58 mm dia. SAE 1045/1050 with safety cover 5 mm wall thickness on both sides of gear box |
| 17. Blades                  | L-shaped, forged, 5-6 mm thick (HRC ≥40)  |
| 18. Sheet Metal             |   |
| Top cover                   | 3-4 mm M.S  |
| Side plates                 | 10 mm M.S.  |
| Rear cover                  | 3-4 mm M.S.   |
| 19. Skids                   | 62x15 mm M.S. flat  |
| 20. Parking stand           | G.I. or M.S pipe  |
| 21. Bearings                |   |
| Gear box (PTO side)         | 01 No. 7310 or 6309   |
| Gear box (pinion side)      | 01 No. 7515 or 32212  |
| Gear box (prop. Shaft side) | 01 No. 7218 or 32211  |
| Gear train (upper)          | 01 No. 7311 or 32210  |
| Gear train (idler)          | 02 Nos. 6309 or 32210   |
| Gear train (lower)          | 01 No. 6312 or 6213   |
| Rotor shaft (free end)      | 01 No. 7512 or 6312   |

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 22. Paint          | Double coat with primer after surface finish   |
| 23. Nuts and bolts | To be tightened with spring washers            |
| 24. Bearings       | European Standard or Equivalent                |
| 25. Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |

## 3. DISC PLOW (03-Disc)

### DISC PLOW



### GENERAL

- |                            |   |
|----------------------------|---|
| 1. Application             | For deep tillage of hard soil                       |
| 2. No. of discs            | 03  |
| 3. Tilt angle (Adjustable) | 15 <sup>0</sup> , 18 <sup>0</sup> & 32 <sup>0</sup> |
| 4. Tractor power           | ≥ 60 hp   |

### OVERALL DIMENSIONS

- |                     |                 |
|---------------------|-----------------|
| 5. Overall length   | 2100 mm ± 20 mm |
| 6. Overall height   | 1080 mm ± 10 mm |
| 7. Overall width    | 1150 mm ± 10 mm |
| 8. Weight (Approx.) | 325 kg ± 5 kg   |

### MATERIAL SPECIFICATION

- |                    |   |
|--------------------|---|
| 9. Main frame      | Tubular, seamless steel pipe, 170 mm OD & 6 mm wall thickness |
| 10. Mast (A-frame) | 6 mm M.S sheet  |
| 11. Disc blade     | 660 mm dia. 6mm thick, hardened (HRC ≥ 40)                    |
| 12. Disc Scraper   | 6 mm M.S sheet  |
| 13. Standard       | Tubular, 9 mm thick M.S. sheet                                |
| 14. Hub & Mounting | Steel cast with 30 mm dia. spindle                            |
| 15. Furrow Wheel   | 508 mm dia., 6 mm thick disc, hardened steel (HRC ≥ 40)       |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                   |  |
|-------------------|--|
| 16. Parking stand | Box or U-shape, 6 mm thick M.S sheet with spring loaded lock   |
| 17. Bearings      | 02 Nos. 3780 and 32212 or<br>02 Nos. 3984-20 and 32210 for each hub<br>02 Nos. 3206 and 3207 or<br>02 Nos. 7206 and 7207 for furrow wheel with seals & grease system |

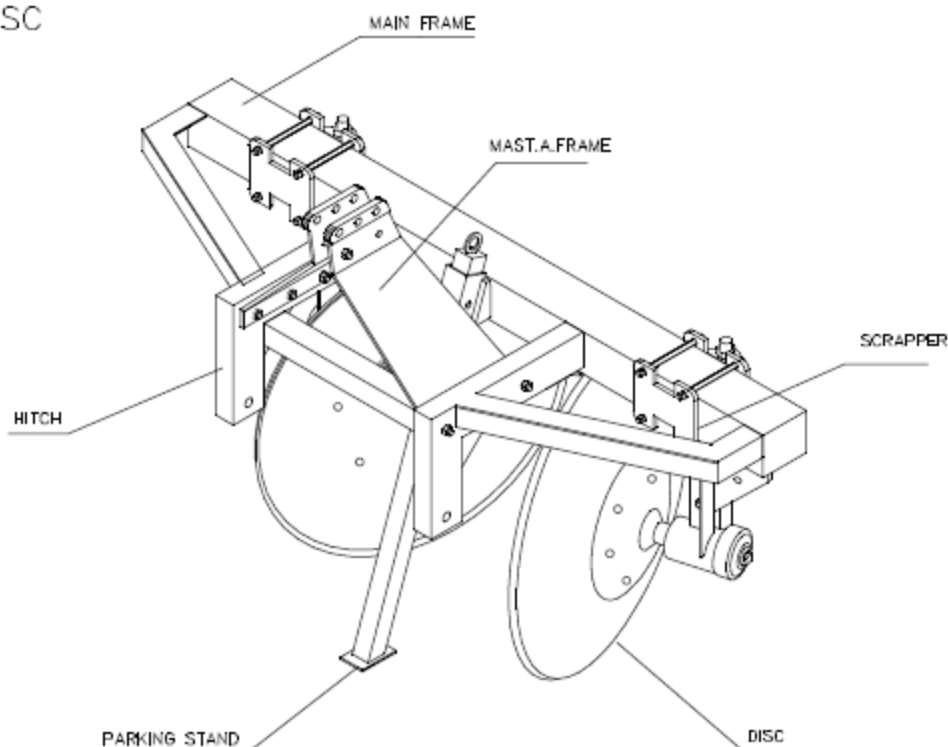
### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 18. Paint          | Double coat with primer after surface finish  |
| 19. Nuts and bolts | To be tightened with spring washers   |
| 20. Bearings       | European Standard or Equivalent   |
| 21. Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### **4. BORDER DISC**

#### **BORDER DISC**



#### **GENERAL**

- |                  |                   |
|------------------|-------------------|
| 1. Application   | For making border |
| 2. Disc spacing  | Adjustable        |
| 3. Tractor power | ≥ 50 hp           |

#### **OVERALL DIMENSIONS (min.)**

- |                  |                 |
|------------------|-----------------|
| 4. Length        | 950 mm ± 10 mm  |
| 5. Width         | 1800 mm ± 20 mm |
| 6. Height        | 1100mm ± 10 mm  |
| 7. Weight (min.) | 170 kg ± 5 kg   |

#### **MATERIAL SPECIFICATIONS**

- |                   |  |
|-------------------|--|
| 8. Main frame     | 100x100x6 mm, M.S. box                             |
| 9. Mast (A-frame) | 6 mm, M.S. sheet                                   |
| 10. Hitch         | 75x40x5 mm, M.S. box                               |
| 11. Standard      | 18 mm, M.S. plate & 62x9 mm M.S. angle             |
| 12. Disc mounting | 15 mm, M.S. plate                                  |
| 13. Disc          | 660 mm dia., 5 mm thick, Hardened steel (HRC ≥ 40) |
| 14. Clamp         | 12 mm M.S. plate                                   |
| 15. Parking stand | G.I pipe or M.S. box                               |
| 16. Bearings      | 04 Nos. 7510 with seal and grease system           |

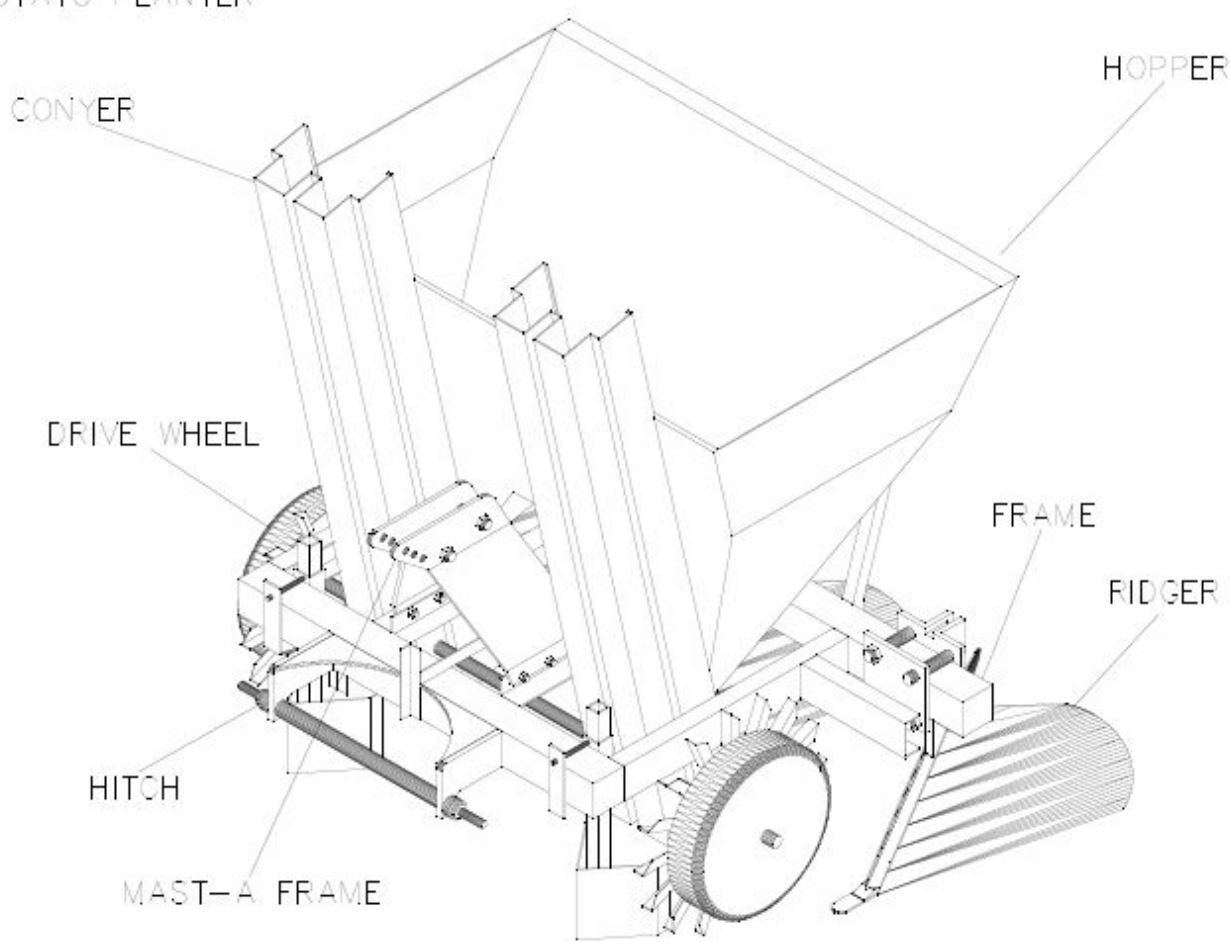
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 17. Paint          | Double coating after primer and surface finish |
| 18. Nuts and bolts | To be tightened with spring washers            |
| 19. Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |

### 5. PATATO PLANTER

#### POTATO PLANTER



#### GENERAL

- |                       |                                |
|-----------------------|--------------------------------|
| 1. Application        | For Ridge making & Planting    |
| 2. No. of rows        | 02                             |
| 3. Ridge spacing      | 660-762 mm, adjustable         |
| 4. Power transmission | Through ground wheel mechanism |
| 5. Seed box capacity  | 300-350 kg                     |
| 6. Seed rate          | Adjustable                     |
| 7. Tractor power      | $\geq 50$ hp                   |

#### OVERALAL DIMENSIONS

- |                   |                     |
|-------------------|---------------------|
| 8. Length         | 1800 mm $\pm$ 20 mm |
| 9. Width          | 1950 mm $\pm$ 20 mm |
| 10. Height        | 1750 mm $\pm$ 20 mm |
| 11. Weight (min.) | 550 kg $\pm$ 10 kg  |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

12. Main Frame	100 x100 x 5 mm, M.S. channel box, reinforced with 100x45x5 mm M.S. channels
13. Mast (A-frame)	10 mm, M.S. sheet, 18 mm, M.S. plate & 38 mm M.S round bar Tine 75x25 mm M.S. plate
14. Wings	8 mm, M.S. formed sheet
15. Share	Steel Cast
16. Ground wheel	12 gauge M.S. sheet, 600 mm dia., with 38x5 mm M.S. angle pegs
17. Seed box	16 gauge M.S. formed sheet
18. Conveyor belt	200x6 mm rubber belt with 90 Nos. M.S. or plastic buckets
19. Seed furrow opener	50x50x5 mm M.S. box with 4 mm M.S. sheet
20. Power transmission	60 # roller chain, 45 mm drive shaft & 35 mm driven shaft
21. Bearings	04 Nos. 6006 04 Nos. 6205 02 Nos.6208

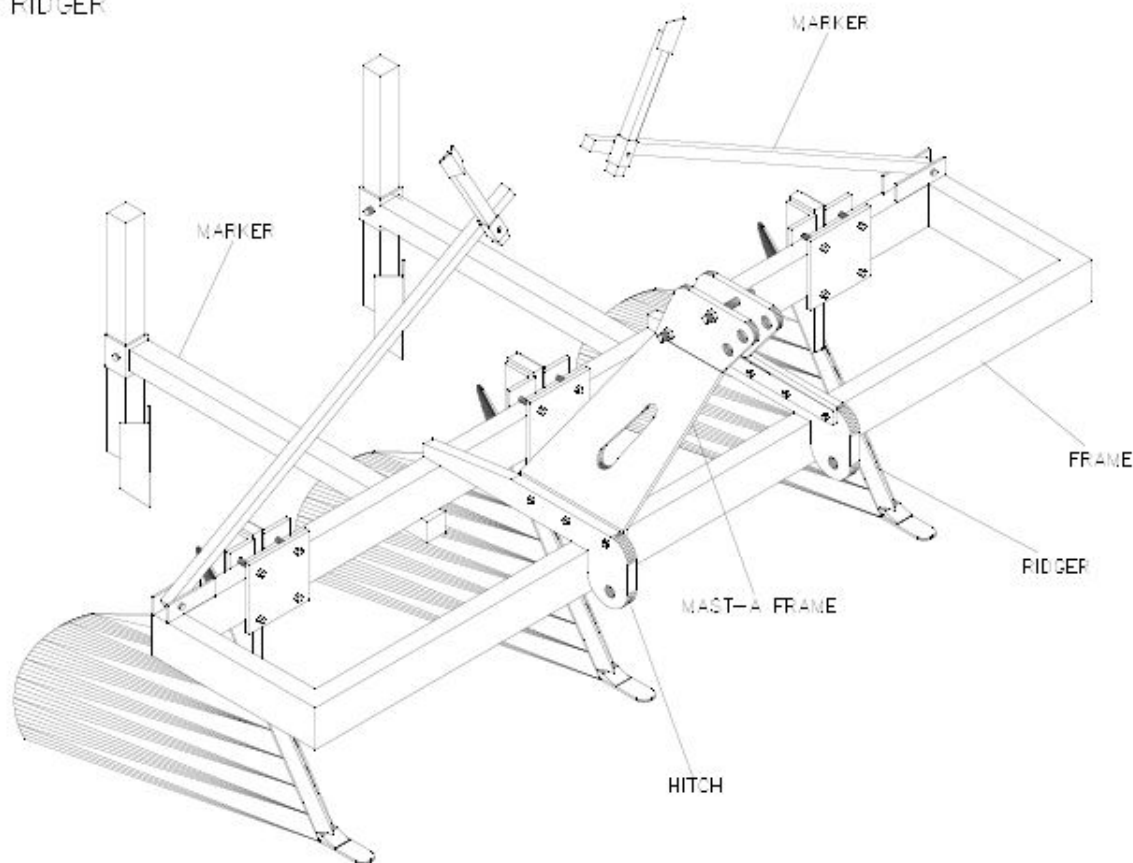
### **MISCELLANEOUS**

22. Paint	Double coat with primer after surface finish
23. Nuts and bolts	To be tightened with spring washers
24. Bearings	European Standard or Equivalent
25. Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 6. VEGETABLE RIDGER

#### VEGETABLE RIDGER



#### GENERAL

- |                  |                                    |
|------------------|------------------------------------|
| 1. Application   | To make ridges for vegetable crops |
| 2. Ridger tines  | 03 Nos.                            |
| 3. Row marker    | Provided                           |
| 4. Ridge spacing | 762 mm, adjustable                 |
| 5. Tractor power | ≥ 50 hp                            |

#### OVERALL DIMENSIONS

- |                  |                 |
|------------------|-----------------|
| 6. Length        | 1100 mm ± 10 mm |
| 7. Width         | 2340 mm ± 20 mm |
| 8. Height        | 1100 mm ± 10 mm |
| 9. Weight (min.) | 250 kg ± 5 kg   |

#### MATERIAL SPECIFICATIONS

- |                    |                            |
|--------------------|----------------------------|
| 10. Main Frame     | 75x75x5 mm M.S channel box |
| 11. Mast (A-frame) | 8 mm, MS formed sheet      |
| 12. Hitch          | 25 mm, MS plate            |
| 13. Tine           | 75x25 mm, MS plate         |
| 14. Wings          | 8 mm, MS formed sheet      |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

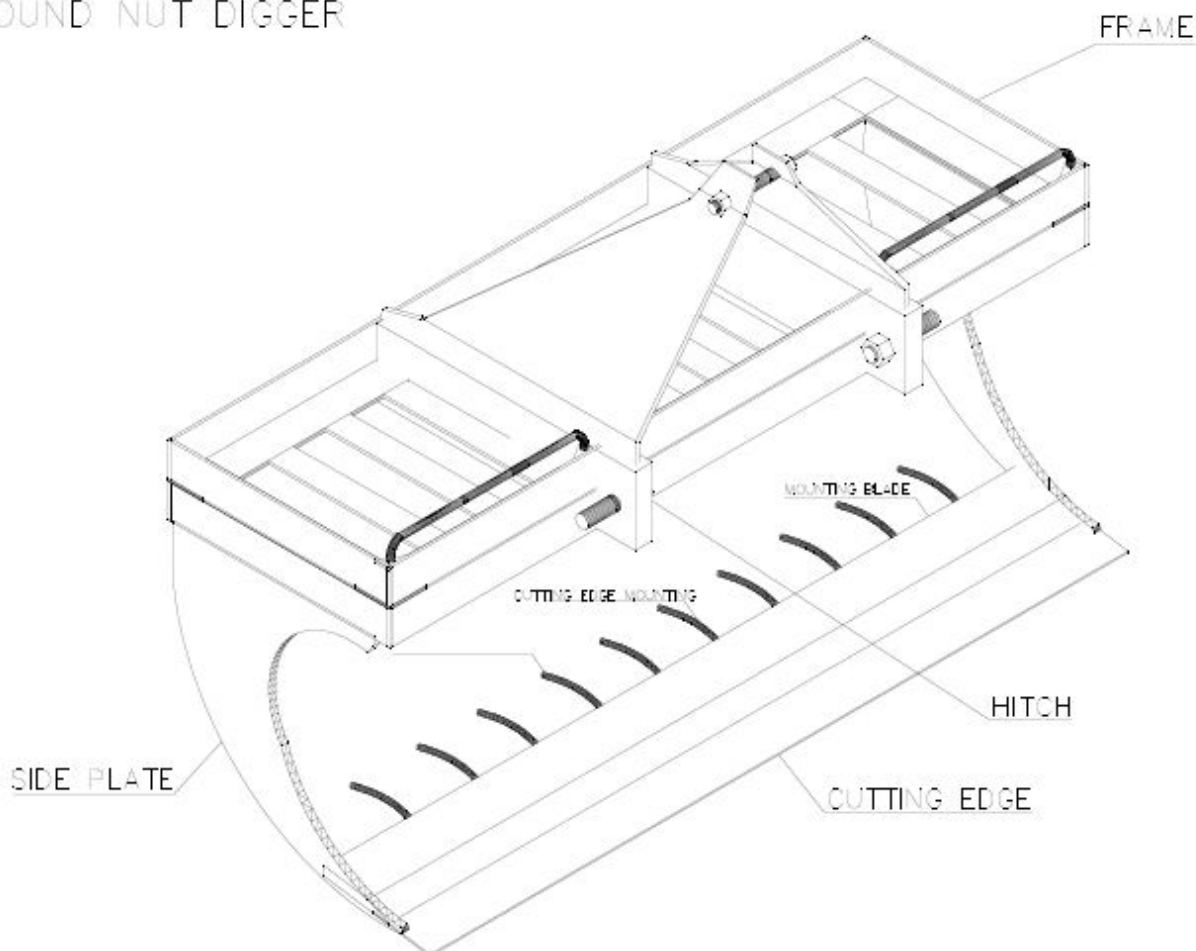
15. Share 10 mm Steel Cast

### **MISCELLANEOUS**

16. Paint Double coat after primer and surface finish  
17. Nuts & bolts To be tightened with spring washers  
18. Warranty Free: 1 year for parts and service  
Extended: 5 year for parts supply on payment

## 7. TRACTOR DRAWN GROUNDNUT DIGGER

### GROUND NUT DIGGER



### GENERAL

- |                  |                          |
|------------------|--------------------------|
| 1. Application   | For digging of groundnut |
| 2. Tractor power | $\geq 50$ hp             |

### OVERALL DIMENSIONS (min. )

- |                  |                     |
|------------------|---------------------|
| 3. Length        | 580 mm $\pm$ 10 mm  |
| 4. Width         | 1800 mm $\pm$ 20 mm |
| 5. Height        | 1100 mm $\pm$ 15 mm |
| 6. Weight (min.) | 200 kg $\pm$ 5 kg   |

### MATERIAL SPECIFICATIONS

- |                   |  |
|-------------------|--|
| 7. Main frame     | M.S. box 50x50x6 mm with cross bars 50x4.5 mm M.S. flat      |
| 8. Mast (A-frame) | M.S. flat 75x12 mm with 50x9 mm support or M.S. sheet 8-9 mm |
| 9. Hitch          | Box type, 6 mm M.S sheet                                     |
| 10. Side Plates   | 10 mm M.S. plate, bolted                                     |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

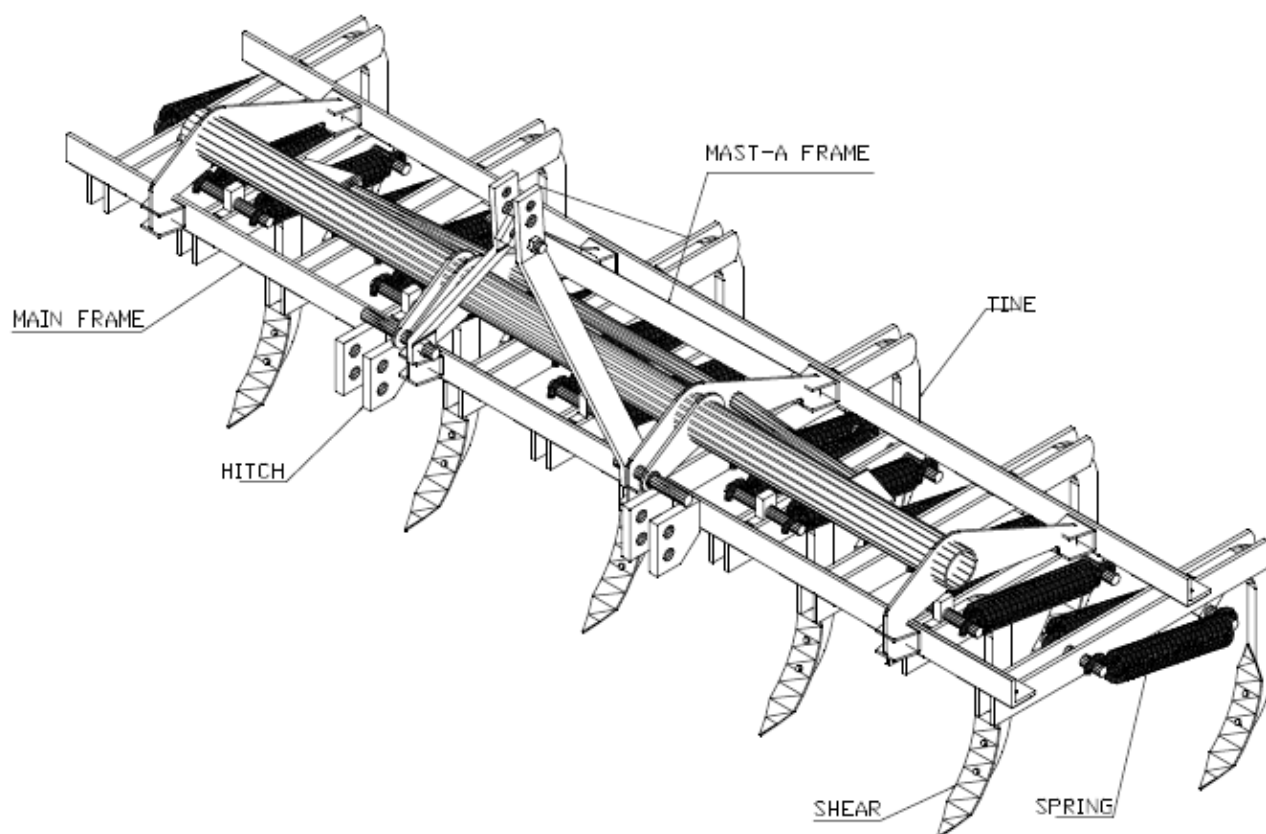
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|--------------------|---|
| 11. Blade Mounting | 25 mm M.S. plate with 9-10 spikes of 16 mm MS round |
| 12. Cutting edge   | Reversible, 150x6 mm hardened steel (HRC $\geq$ 30) |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 13. Paint          | Double coating with primer after surface finish |
| 14. Nuts and bolts | To be tightened with spring washers             |
| 15. Warranty       | Free: 1 year for parts and service              |
|                    | Extended: 5 years for parts supply on payment   |

## 8. CULTIVATOR

### CULTIVATOR ( 11 TINE )



### GENERAL

- |                            |                             |
|----------------------------|-----------------------------|
| 1. Application             | To cultivate the soil       |
| 2. Type                    | Rear mounted, spring loaded |
| 3. No. of tines (optional) | 13                          |
| 4. Tine spacing            | 228-240 mm                  |
| 5. Tractor power           | ≥ 60 hp                     |

### OVERALL DIMENSIONS

- |                  |                 |
|------------------|-----------------|
| 6. Length        | 940 mm ± 10 mm  |
| 7. Width         | 3000 mm ± 30 mm |
| 8. Height        | 1050 mm ± 10 mm |
| 9. Weight (min.) | 450 kg ± 10 kg  |

### MATERIAL SPECIFICATIONS

- |                    |   |
|--------------------|---|
| 10. Main Frame     | 62x9 mm M.S. angle or Z-section with torsion tube 88 mm OD, 6 mm wall thickness |
| 11. Mast (A-frame) | 62x12 mm M.S. flat, supports 50x12mm M.S. flat or M.S. sheet 8                  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

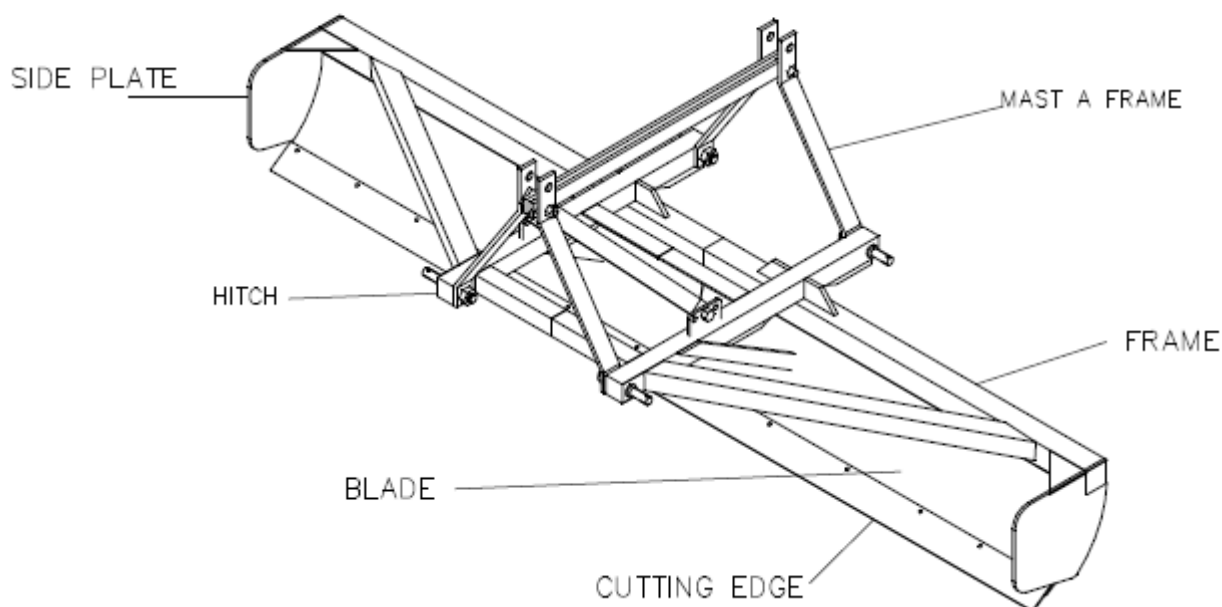
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|------------|---|
| 12. Tine   | Forged, 55x30 mm                                |
| 13. Shovel | Forged, 275x60x8 mm, reversible (HRC $\geq$ 40) |
| 14. Spring | 28 Nos. springs steel, 10 mm wire dia.          |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 15. Paint          | Double coat with primer after surface finish  |
| 16. Nuts and bolts | To be tightened with spring washers   |
| 17. Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 9. LAND LEVELLER (KARAH)/Front and Rear Blade

### REAR BLADE



### GENERAL

- |                  |                                     |
|------------------|-------------------------------------|
| 1. Application   | For earth moving and land levelling |
| 2. Working Width | 2435 mm                             |
| 3. Tractor power | $\geq 50$ hp                        |

### OVERALL DIMENSIONS

- |                  |                     |
|------------------|---------------------|
| 4. Length        | 900 mm $\pm$ 10 mm  |
| 5. Width         | 2434 mm $\pm$ 25 mm |
| 6. Height        | 950 mm $\pm$ 10 mm  |
| 7. Weight (min.) | 300 kg $\pm$ 5 kg   |

### MATERIAL SPECIFICATIONS

- |                   |  |
|-------------------|--|
| 8. Main Frame     | 100x50x5 mm M.S. box                                       |
| 9. Mast (A-frame) | 62x12 mm M.S. flat with M.S. box 50x50x5 mm                |
| 10. Blade body    | 6 mm formed M.S. sheet, reinforced with M.S. angle 62x6 mm |
| 11. Cutting edge  | 150x10 mm, Hardened steel (HRC $\geq 35$ )                 |
| 12. Parking stand | G.I pipe or M.S box  |

### MISCELLANEOUS

- |           |  |
|-----------|--|
| 13. Paint | Double coat with primer after surface finish |
|-----------|--|



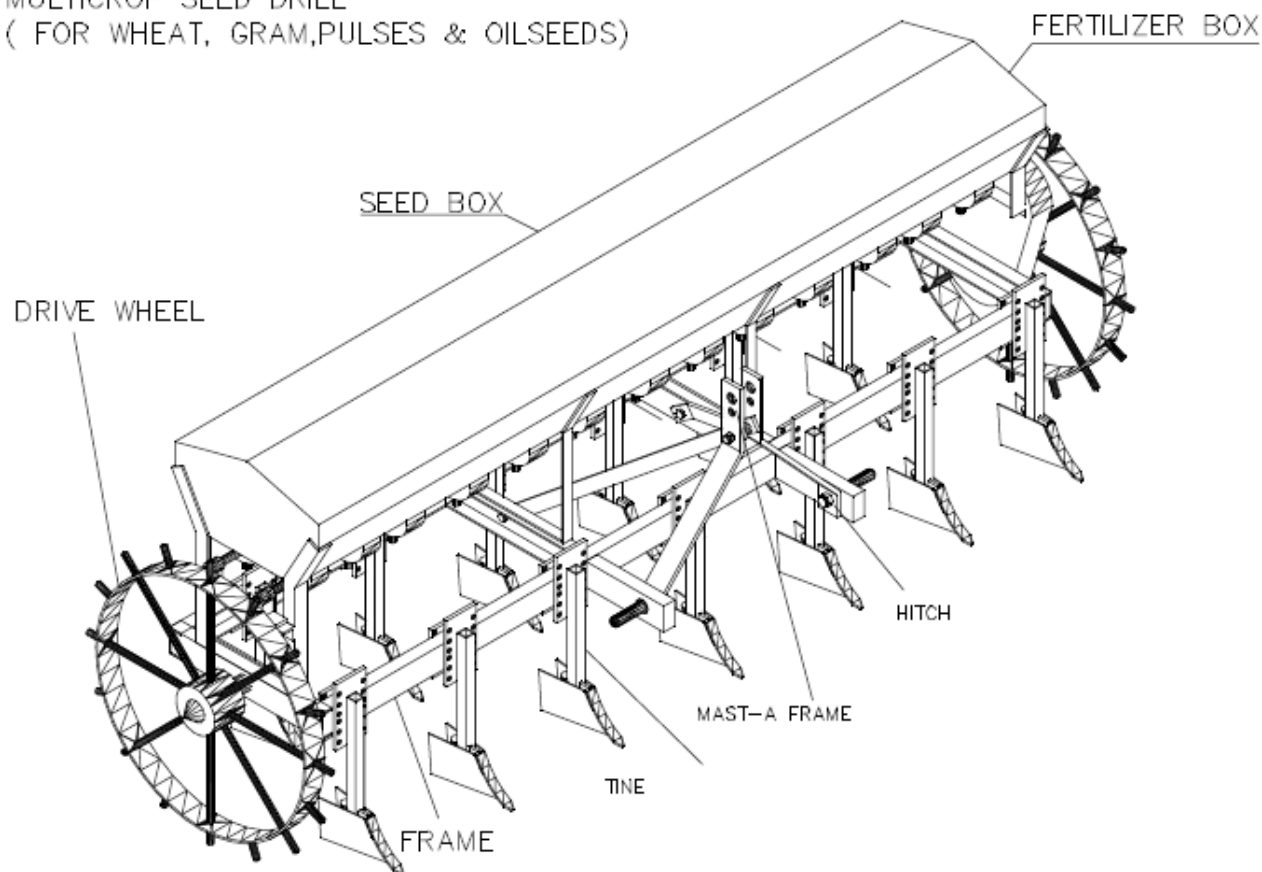
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                    |   |
|--------------------|---|
| 14. Nuts and bolts | To be tightened with spring washers           |
| 15. Warranty       | Free: 1 year for parts and service            |
|                    | Extended: 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 10. SEED DRILL WITH FERTILIZER ATTACHMENT (RABI)

MULTICROP SEED DRILL  
( FOR WHEAT, GRAM,PULSES & OILSEEDS)



#### GENERAL

1. Application	For sowing of wheat with fertilizer application
2. No. of rows	13
3. Furrow opener	Hoe type
4. Metering device mechanism	Ground wheel through gear train
5. Metering system	Fluted wheel
6. Seed/ fert. Hopper capacity	125-140 kg each
7. Row marker	Provided
8. Tractor power	$\geq 50$ hp

#### OVERALL DIMENSIONS

9. Length	850 mm $\pm$ 10 mm
10. Height	1000 mm $\pm$ 10 mm
11. Width	2500 mm $\pm$ 20 mm
12. Weight (min.)	350 kg $\pm$ 5 kg

#### MATERIAL SPECIFICATIONS

13. Main frame	62x62x5 mm M.S. box with cross members
----------------	--

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

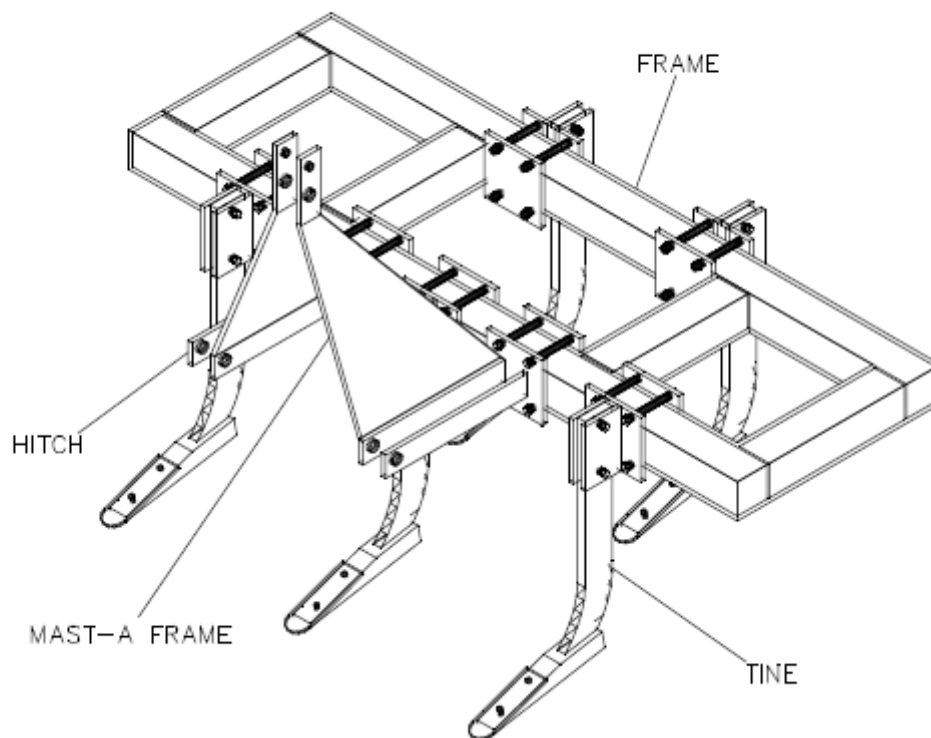
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|----------------------------------|--|
| 14. Mast (A-frame)               | 62x12 mm with 50x12 mm M.S. flat support   |
| 15. Seed & Fert. Hopper with lid | 18 gauge M.S. sheet  |
| 16. Land wheel                   | 62x6 mm M.S. flat rim, 35 mm M.S round axle, 4 mm M.S. sheet or spokes 16 mm, M.S. round |
| 17. Fluted wheel drive shaft     | 22 mm dia. M.S. round, cold drawn  |
| 18. Tines (adjustable)           | 13 Nos. M.S. box 38x38x5 mm or 50x15 mm, forged flat                                     |
| 19. Seed & Fert. Tubes           | Flexible, transparent, plastic and wire impregnated                                      |
| 20. Gears                        | Cast iron or M.S, 25 mm face width   |
| 21. Bearings                     | 04 Nos. 6207<br>03 Nos. 6205   |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 22. Paint          | Double coat with primer after surface finish  |
| 23. Nuts and bolts | To be tightened with spring washers   |
| 24. Bearings       | European standards or Equivalent  |
| 25. Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 11. CHISEL PLOW

### CHISEL PLOW



#### GENERAL

- |                  |                                |
|------------------|--------------------------------|
| 1. Application   | For deep plowing               |
| 2. No. of tines  | 05 Nos., 2 at front, 3 at rear |
| 3. Tine spacing  | 455 mm, adjustable             |
| 4. Tractor power | ≥ 50 hp                        |

#### OVERALL DIMENSIONS

- |                  |                 |
|------------------|-----------------|
| 5. Length        | 900 mm ± 10 mm  |
| 6. Width         | 1800 mm ± 20 mm |
| 7. Height        | 1100 mm ± 10 mm |
| 8. Weight (min.) | 325 kg ± 5 kg   |

#### MATERIAL SPECIFICATIONS

- |                    |   |
|--------------------|---|
| 9. Main frame      | 100x100x6 mm M.S. box, 02 gangs with side support of 100x50x6 mm M.S. box |
| 10. Mast (A-frame) | 9 mm M.S. formed sheet formed, reinforced with 16 mm M.S. plate           |
| 11. Hitch frame    | 62x18, mm M.S. plate  |
| 12. Tine bracket   | 160x160x15 mm, M.S. plate and M.S. angle 75x9 mm.                         |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

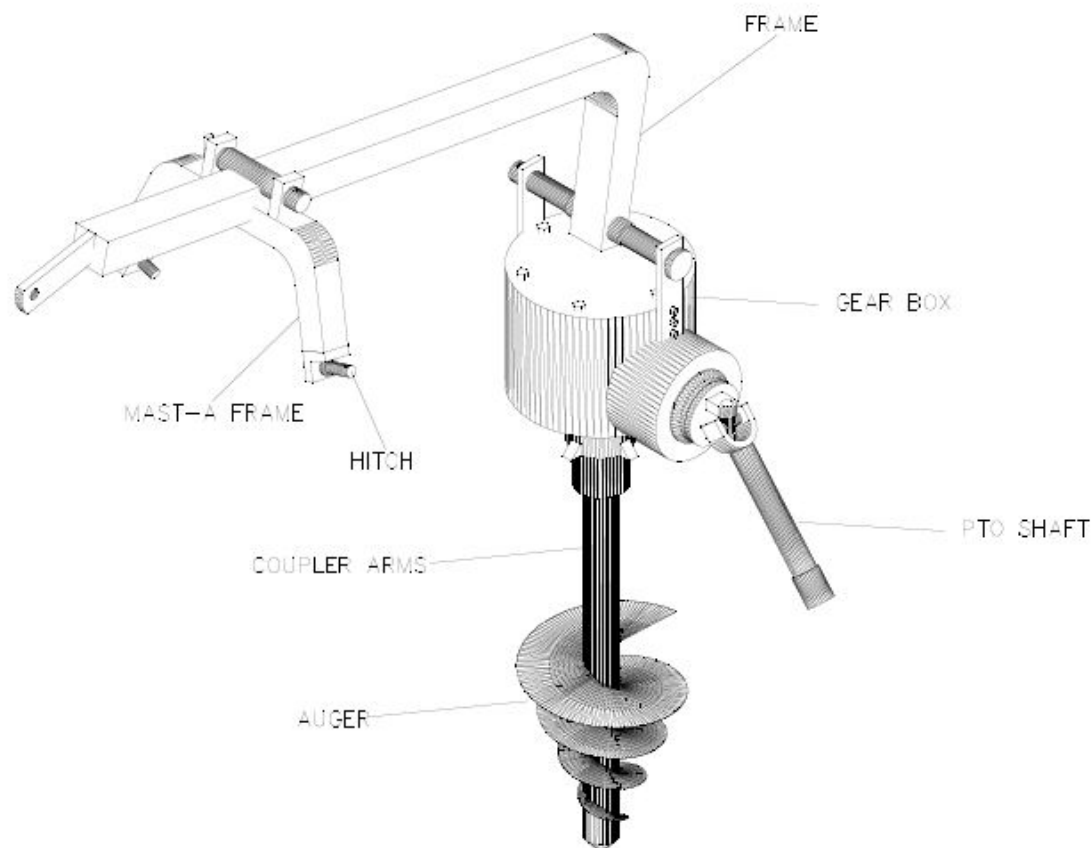
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|------------|--|
| 13. Tine   | 100x30 mm, MS Plate, 75x9 mm M.S angle and 12 mm thick M.S plate |
| 14. Shovel | 275x60x20 mm hardened steel (HRC $\geq$ 30)                      |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 15. Paint          | Double coat with primer after surface finish  |
| 16. Nuts and bolts | To be tightened with spring washers   |
| 17. Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 12. TRACTOR MOUNTED POST HOLE DIGGER

### POST HOLE DIGGER



### GENERAL

1. Application	Digging pits for planting
2. Working depth (min.)	456 mm
3. Auger size (optional)	228 mm, 300 mm, 456 mm and 600 mm
4. U.J Shaft	Provided
5. Depth gauge	Provided
6. Storage bucket	Provided
7. Weight (min.)	200 kg $\pm$ 5 kg
8. Tractor power	$\geq$ 50 hp

### MATERIAL SPECIFICATIONS

9. Main Frame	6 mm, M.S box / pipe
10. Mast (A-frame)	6 mm, M.S box / pipe
11. Auger	
Shaft	60 mm OD, M.S pipe, 15 mm wall thickness
Screw	7 mm M.S sheet
Cutting edge	12 mm, hardened steel (HRC $\geq$ 40), replaceable
12. Gear Box	Steel cast with 3:1 ratio

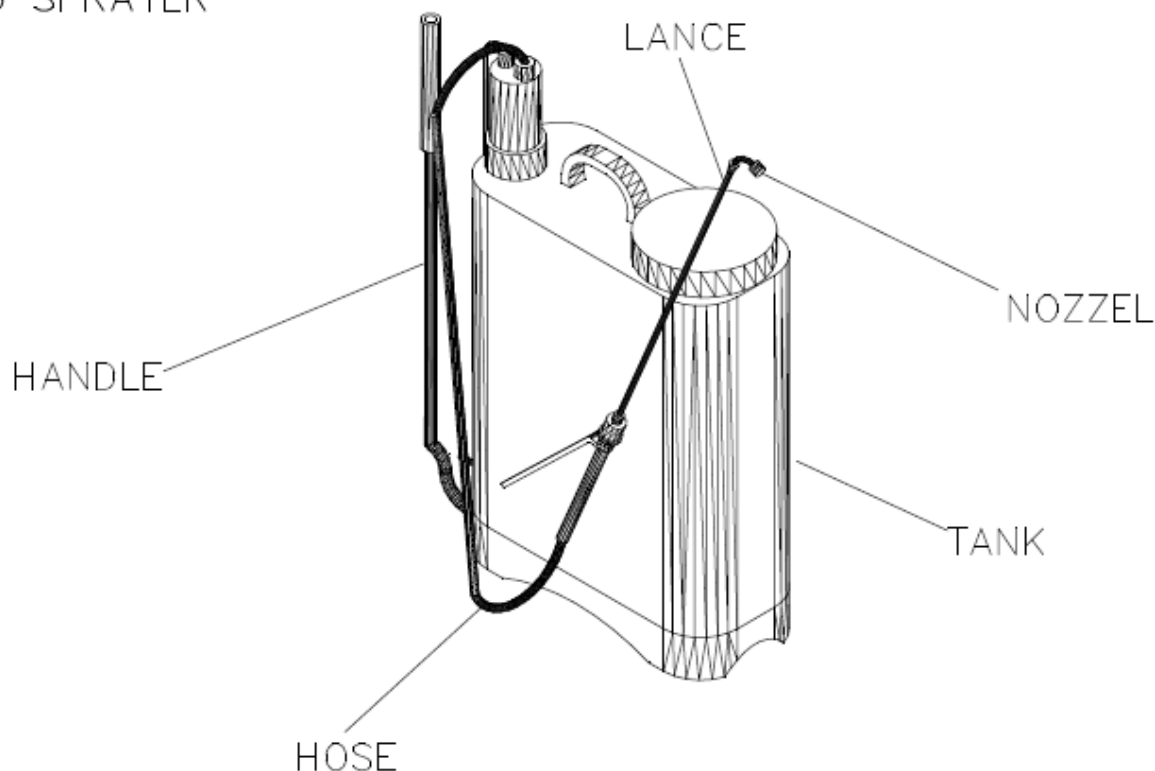
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MISCELLANEOUS**

- |                  |   |
|------------------|---|
| 13. Paints       | Double coat after primer and surface finish   |
| 14. Nuts & bolts | To be tightened with spring washers           |
| 15. Warranty     | Free: 1 year for parts and service            |
|                  | Extended: 5 years for parts supply on payment |

## 13. KNAPSACK MANUAL SPRAYER

### HAND SPRAYER



### GENERAL

1. Application	Spraying of Field Crops and Vegetables
2. Tank Capacity	16-20 lit.
3. Volumetric efficiency	> 80%
4. Weight (min.)	4-5 kg
5. Pump pressure (min.)	6 bar
6. Pressure retaining time	5 min
7. Residual liquid	< 100 ml
8. CF valve	Provided
9. Tank Filter	Provided
10. Lance/nozzle filter	Provided

### MATERIAL SPECIFICATIONS

11. Tank	High density, polyethylene / polypropylene (PP*)
12. Lance	Gooseneck type, Fiber / Aluminum
13. Pump	PP* / Brass, Piston type
14. Gasket / washer	Rubber
15. Strap with shoulder pads	Synthetic, Non-absorbent
16. Nozzle tips (imported)	



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

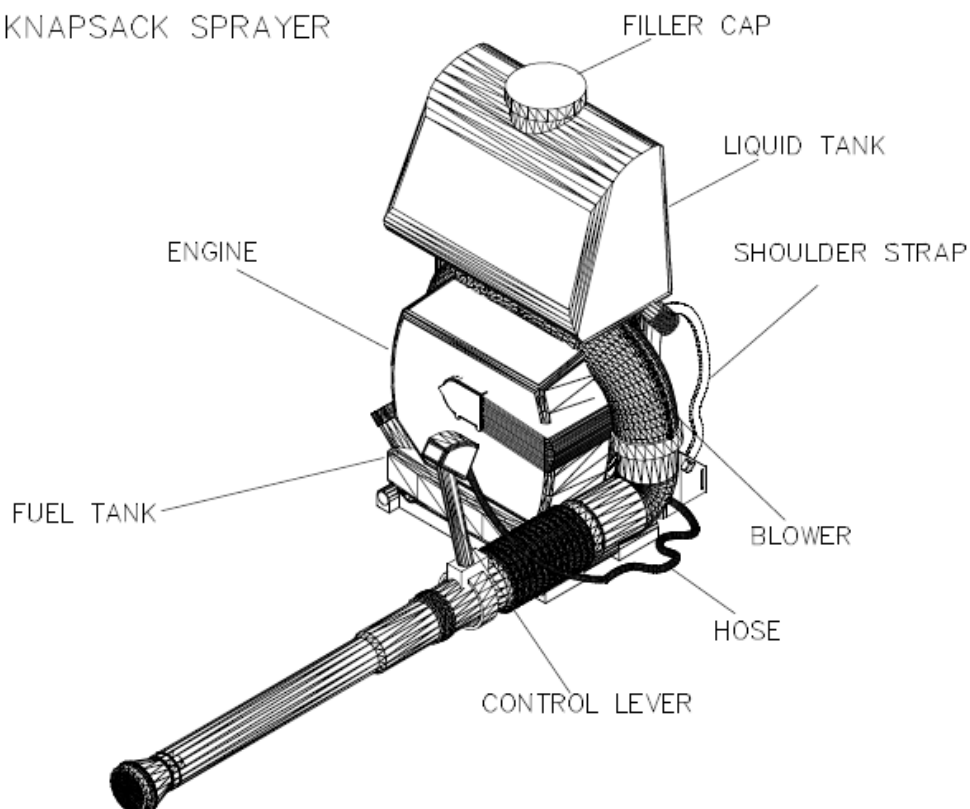
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|--------------------------|------------------------------|
| i) Hollow cone           | 01 No. @ 0.6 L/min at 3 bar  |
|                          | 01 No. @ 0.8 L/min at 3 bar  |
| ii) Flat fan             | 01 No. @ 1.0 L/min. at 2 bar |
| iii) Flood jet/deflector | 01 No. @ 1.0 L/min at 1 bar  |

### **ACCESSORIES**

- |                |  |
|----------------|--|
| 17. Origin     | Mealy bug lance, mask, gloves rubber washers and tool kit (screw driver, pliers, screw wrench) and pump repair kit |
| 18. Literature | Imported / Local (Embossed)<br>English/Urdu  |
| 19. Warranty   | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment                                |

## 14. KNAPSACK POWER MIST BLOWER SPRAYER

POWER KNAPSACK SPRAYER



### GENERAL

1. Application	Spraying of Field Crops, Vegetables and Orchards
2. Tank capacity (min.)	15 lit.
3. Filler hole dia.	90 mm
4. Noise level (max.)	90 db
5. Horizontal throw (min.)	10 m
6. Vertical throw (min.)	6 m
7. Atomizer	Provided
8. Discharge rate (max.)	3.50 lit/min
9. Nozzle	Diffuser type
10. Weight (min.)	12 kg

### MATERIAL SPECIFICATIONS

11. Tank	High density, polypropylene (PP*)
12. Engine	Air cooled, 4 stroke, petrol, displacement 35 cc (min)
13. Strap with shoulder pads	Synthetic, Non-absorbent
14. Filler hole mesh	$\leq 0.5 \text{ mm}$ or 8 perforations per $\text{cm}^2$

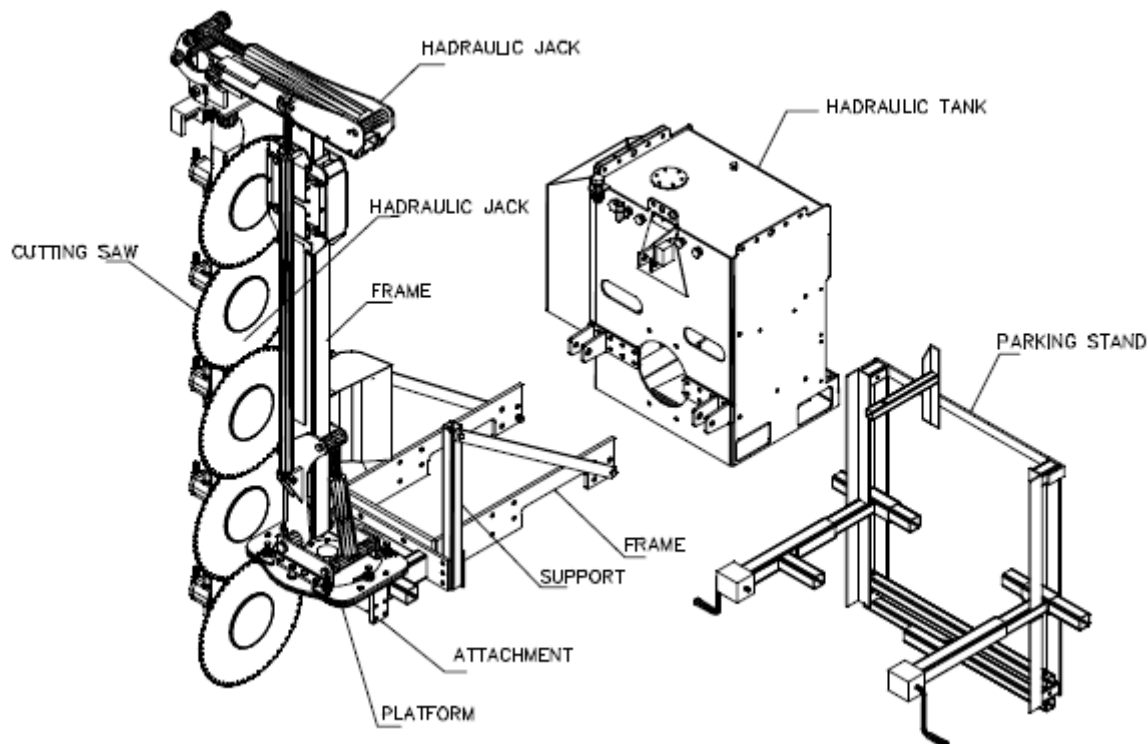
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **ACCESSORIES**

- |                |  |
|----------------|--|
|                | As per manufacturer's standard including tool kit (Screw driver, pliers, screw wrench 200 mm), fuel filter, spark plug and petrol/oil mixing bottle, mask. Glasses, ear plug and hand gloves |
| 15. Origin     | Imported   |
| 16. Literature | Instruction manual in English or Urdu  |
| 17. Warranty   | Free: 1 year for parts and Service   |
|                | Extended: 5 year for parts on payment  |

## 15. CITRUS/GUAVA/MANGO/POMEGRANATE TREE PRUNER-Revised

### CITRUS/GUAVA/MANGO/POMEGRANATE PRUNER



#### **GENERAL**

- |                                |  |
|--------------------------------|--|
| 1. Application                 | Used for canopy management of Citrus/Guava/ Mango/ Pomegranate trees               |
| 2. Controls                    | Electronic   |
| 3. Cutting ability             | up to 100 mm (branch dia.)   |
| 4. Hydraulic oil tank capacity | 150 liters   |
| 5. Hydraulic pump              | Discharge 66 liters/min @ 540 rpm (PTO), 270-300 bar pressure with hydraulic lines |
| 6. Cooling system              | Provided   |
| 7. Tractor power               | $\geq 60$ hp preferably 4WD  |
| 8. Working height              | $\geq 6500$ mm   |
| 9. Type                        | Tractor Front mounted  |

#### **OVERALL DIMENSIONS**

- |                     |                                   |
|---------------------|-----------------------------------|
| 10. Length          | 8000 mm $\pm$ 80 mm               |
| 11. Width           | 810 mm $\pm$ 10 mm                |
| 12. Height (max)    | 7600 mm $\pm$ 80 mm               |
| a) Lower arm height | 1500 mm $\pm$ 20 mm               |
| b) Upper arm height | 2700 mm $\pm$ 30 mm               |
| 13. Weight          | $\geq 1100$ kg with hydraulic oil |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

- |                            |  |
|----------------------------|--|
| 14. Main frame             | 03 Nos. 150x75x5 mm, 120x60x5 mm, 60x60x5 mm MS box, 02 Nos. 90x85x16 mm MS plate  |
| 15. Tractor attachment     | 02 Nos. 200x20 mm and 180x16 mm MS plate with 02 Nos. 60x60x4.5 and 50x50x4.5 mm and 50x19 mm MS flat  |
| 16. Platform               | 03 Nos. 12 mm thick MS base plate, 02 Nos. 100x60x12 mm MS angle for hydraulic jack mounting, 02 Nos. 70 mm OD MS bush and 45 mm dia. pin for hydraulic jack and main frame mounting |
| 17. Hydraulic jack frame   | 180x100x6 mm MS channel box (Female), 150x75x6 mm MS channel box (Male), 16 mm and 9 mm thick MS plate   |
| 18. Hydraulic jack         | 85 mm OD housing, 30 mm ram dia. 300 mm long and 60 mm OD housing, 40 mm ram dia. 1400 mm long and 85 mm OD housing, 50 mm ram dia. 450 mm long                                      |
| 19. Disc                   | 05 Nos., 600 mm dia. 3 mm thick with 54 No. of carbide tips with HRC $\geq$ 50, hydraulic motors 40-50 bar for each disc   |
| 20. Hydraulic pump frame   | 1100x810x625 mm, M.S. sheet 6mm thick, with 12mm thick with oil tank hitch plate   |
| 21. Control valve assembly | Double action with jointer release valve 350-400 bar   |
| 22. Parking stand          | 02 Nos. 72x72x4.5 mm, 60x60x4.5 mm MS box and 02 Nos. 62x62x6 mm, 50x50x4.5 MS angle and 62x12 MS flat   |
| 23. Accessories            | 01 No. set of blades, tool box, tools and operational manual   |

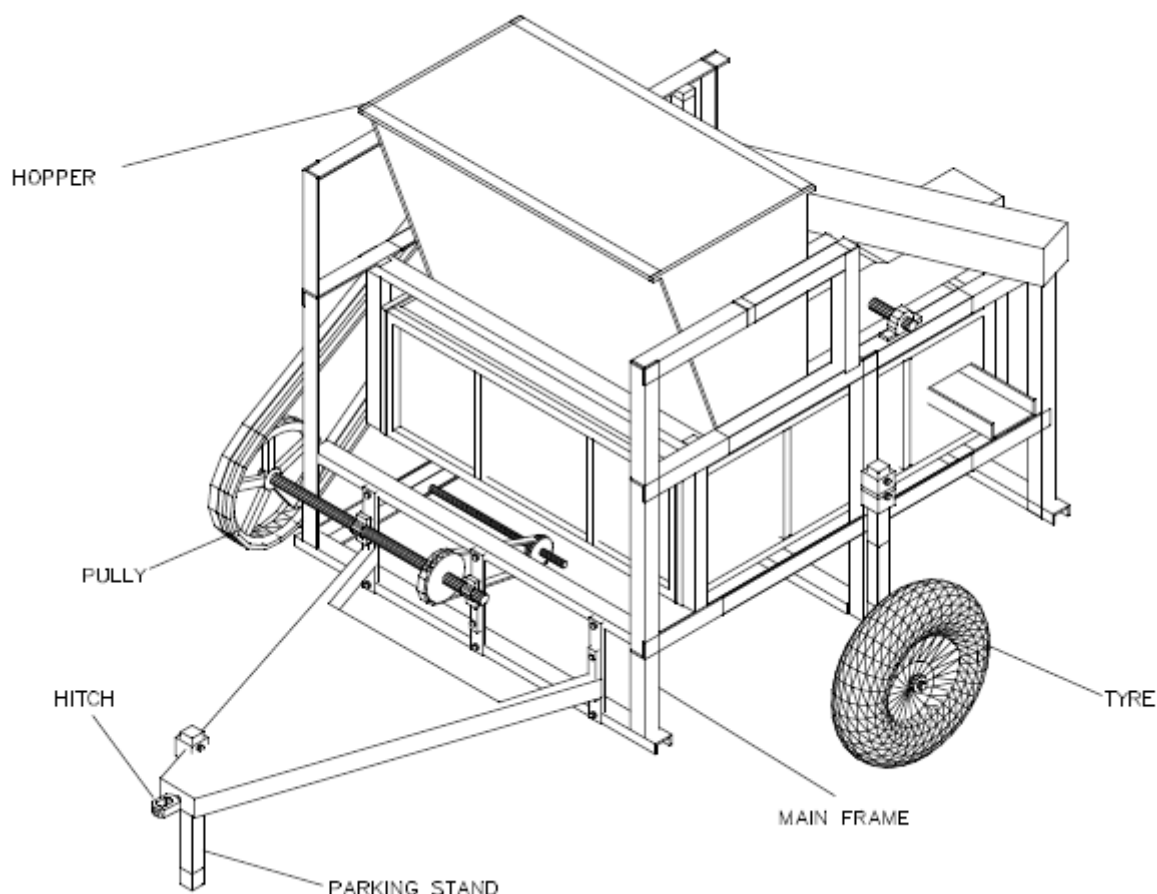
### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 24. Paint          | Double coat with primer after surface finish  |
| 25. Bearings       | European standard or Equivalent   |
| 26. Nuts and bolts | To be tightened with spring washers   |
| 27. Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 16. WHEAT SEED CLEANER/GRADER

WHEAT SEED GRADER CUM CLEANER



#### GENERAL

- |                                 |   |
|---------------------------------|---|
| 1. Application                  | For cleaning and grading the wheat seed.  |
| 2. Type of machine              | Tractor-trailed   |
| 3. Drive system                 | 02 hp electric motor 220 V, single phase, $1460 \pm 25$ rpm with on/off switch and PTO drive shaft of tractor |
| 4. Cleaning/grading system      | Pre-sieving   |
| 5. Feeding hopper capacity      | 100 kg, with adjustable feed control  |
| 6. Crank displacement & strokes | 23 mm @ $250 \pm 5$ strokes/min   |
| 7. Grain/fraction outlets       | 04 Nos. chute type  |
| 8. Cradle inclination control   | Adjustable  |
| 9. Aspiration blower (balanced) | 1 No., paddle type  |
| 10. UJ shaft                    | provided  |
| 11. Tractor power               | 50 hp   |
| 12. Cleaning/grading capacity   | $\geq 0.5$ tons/h   |
| 13. Cleaning/grading efficiency | $\geq 80$ %   |

#### OVERALL DIMENSIONS

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                        |                    |
|-----|------------------------|--------------------|
| 14. | Length (with tow hook) | 3000 mm $\pm$ 30mm |
| 15. | Width (with wheels)    | 1675 mm $\pm$ 15mm |
| 16. | Height (with wheels)   | 1500 mm $\pm$ 15mm |
| 17. | Weight (Approx.)       | 500 kg $\pm$ 10 kg |

### **MATERIAL SPECIFICATIONS**

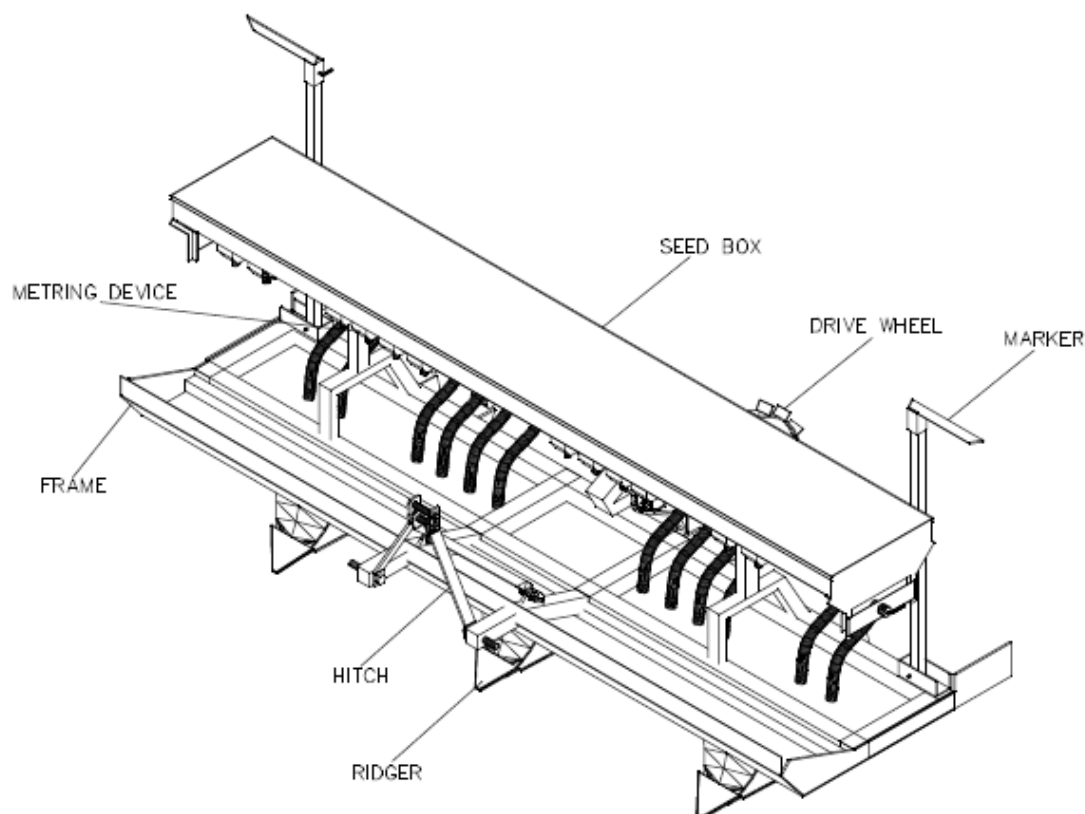
- |     |                                    |   |
|-----|------------------------------------|---|
| 18. | Frame                              | M.S channel 75x35x5 mm and M.S. angle 50x6 mm with diagonal braces on the top and bottom  |
| 19. | Hopper, cradle, blower and housing | 16 gauge M.S. sheet metal   |
| 20. | Connecting rod (adjustable)        | M.S. round 19 mm, cold drawn  |
| 21. | Sieves (replaceable)               | 18 gauge M.S. sheet metal   |
| 22. | Upper sieve (metallic frame)       | 915x915 mm, holes of 3mm dia. (10%), holes of 5 mm dia. (40%) round perforations and 50% blind  |
| 23. | Middle (wooden frame)              | 1065x915 mm, holes of 3 mm dia. (80%) and holes of 3.5 mm dia. (20%) round perforations (with 80 bouncing balls and 2 mm weld/woven wire mesh screen with 12 mm pitch |
| 24. | Lower wooden frame                 | 915x915 mm, 2.5 mm dia. round perforations (with 64 bouncing balls and 2 mm weld/woven wire mesh screen with 12 mm pitch)   |
| 25. | Blower and cam shaft               | 35 mm M.S. cold drawn   |
| 26. | PTO drive shaft                    | M.S. pipe o.d. 35 mm, wall thickness 3 mm and length 1750 mm with universal joints  |
| 27. | Sheaves                            | V-groove, C.I./M.S. balanced, with 2 mm wire or expanded metal mesh cover   |
| 28. | Transport wheels                   | 02 Nos., 4.50-12 with telescopic mounting assembly  |
| 29. | Cradle suspension                  | 04 Nos. 50x2 mm M.S flat with bushes  |
| 30. | Tow hitch with hook stand          | M.S. channel 75x35x5 mm and M.S. plate 5 mm, 20 mm M.S hook and 50x5 mm M.S. square box stand   |
| 31. | Bearings                           | With brackets and grease system   |
|     | i. Cam shaft                       | 02 Nos. UCP 207   |
|     | ii. Cam                            | 01 No. 6215   |
|     | iii. Connecting rod                | 02 Nos. 6205  |
|     | iv. Blower                         | 02 Nos. 6206  |
| 32. | Wheels                             | 02 Nos. 6206 & 02 Nos. 6205   |

### **MISCELLANEOUS**

- |     |              |   |
|-----|--------------|---|
| 33. | Paint        | Double coat with primer after surface finish  |
| 34. | Nuts & bolts | To be tightened with spring washers   |
| 35. | Bearings     | European Standard or equivalent   |
| 36. | Warranty     | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 17. WHEAT BED AND FURROW DRILL

### WHEAT BED FURROW DRILL



### GENERAL

- |                        |  |
|------------------------|--|
| 1. Application         | For sowing of wheat on bed   |
| 2. Type of machine     | Tractor rear mounted   |
| 3. Tractor Power       | $\geq 50$ hp   |
| 4. Linkage type        | Cat-II   |
| 5. No. of rows         | 12 Nos.  |
| 6. Drive mechanism     | Through ground wheel   |
| 7. Furrow and bed size | Furrow size: 280 mm width and 180 mm depth<br>Bed size: 560 mm width |
| 8. Field capacity      | $\geq 0.75$ acre/h   |
| 9. Field efficiency    | $\geq 70$ %  |

### OVERALL DIMENSIONS

- |                      |                     |
|----------------------|---------------------|
| 10. Length           | 1850 mm $\pm$ 20 mm |
| 11. Width            | 2975 mm $\pm$ 30 mm |
| 12. Height           | 1200 mm $\pm$ 10 mm |
| 13. Weight (Approx.) | 450 kg $\pm$ 10 kg  |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

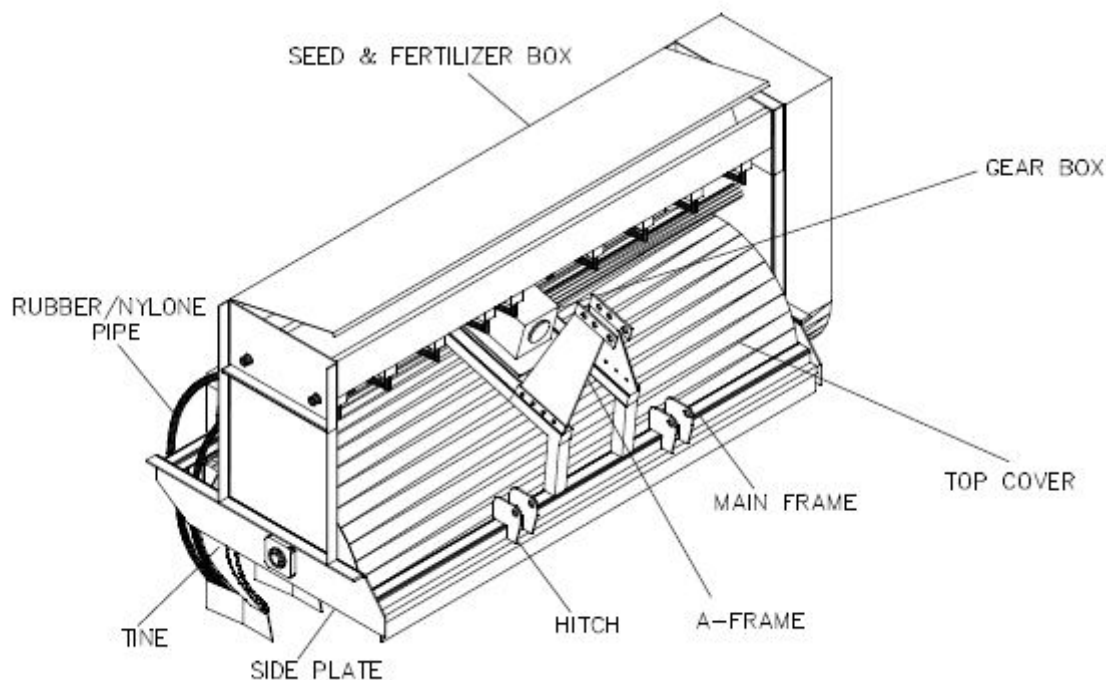
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|---------------------------------|--|
| 14. Frame                       | M.S. angle 62x62x5 mm, M.S. channel 75x38x4.5 mm   |
| 15. Mast (A-Frame)              | M.S. flat 62x12 mm and 50 x12 mm   |
| 16. Hitch                       | M.S. box 62x62x5 mm  |
| 17. Seed tine cum furrow opener | M.S. plate 190x80x5 mm, M.S. pipe 32 mm dia. and 16 gauge thickness  |
| 18. Wings furrow opener/ridger  | M.S. sheet 6 mm  |
| 19. Bed shaper plate            | M.S. formed sheet 4 mm, 2570 mm long   |
| 20. Side plate                  | M.S. sheet 3 mm  |
| 21. Seed box                    | M.S. sheet 16 gauge  |
| 22. Seed metering device        | 12 Nos. fluted type  |
| 23. Metering shaft              | M.S. cold drawn 22 mm dia.   |
| 24. Ground wheel                | M.S. flat 75x6 mm, 450 mm dia. with 10 Nos. spokes of 16 mm dia. M.S. round having chain # 50 and spokes for seed drive mechanism with ground wheel frame 50x50x6 mm M.S. angle with 02 Nos. bearing bracket of UCP 207. |
| 25. Row marker                  | M.S. box 38x38x4.5 mm  |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 26. Paint          | Double coat with primer after surface finish  |
| 27. Nuts and bolts | To be tightened with spring washer  |
| 28. Bearings       | European Standard or equivalent   |
| 29. Warranty       | Free: 01 year for parts and service<br>Extended: 05 years for parts supply on payment |

## 18. PAK SEEDER

### PAK SEEDER



### GENERAL

1. Application	For sowing of wheat crop in rice stubble field after combine harvesting
2. Type of machine	Tractor rear mounted
3. Linkage type	Cat-II
4. Number of Rows	10
5. Row spacing	200-225 mm adjustable
6. Seed and Fertilizer. box	Placed above the main frame and fixed with rotor side plates
7. Seed and fertilizer box capacity	60 kg each
8. Universal shaft	Provided
9. Effective field capacity	1.0 acre/h
10. Field efficiency	≥ 65 %

### OVERALL DIMENSIONS

11. Overall width	2325 mm ± 20 mm
12. Working width	1990 mm ± 20 mm
13. Overall length	1340 ± 15 mm

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                      |                     |
|----------------------|---------------------|
| 14. Height           | 1280 mm $\pm$ 10 mm |
| 15. Weight (Approx.) | 700 kg              |

### **MATERIAL SPECIFICATIONS**

- |                               |  |
|-------------------------------|--|
| 16. Main frame                | M.S box 85x85x6 mm welded with MS plate on both ends and bolted with side sheets   |
| 17. Side plates               | 8 mm MS plate on both sides  |
| 18. Rotor shield cover        | 3 mm MS sheet welded with side plates, angle iron box on front side and MS strip at back side  |
| 19. Rotor (drum) with shaft   | M.S pipe 1960 mm long, outer diameter of 140 mm and 5 mm thick fitted with bubs and shafts of 40 mm diameter for mounting bearings   |
| 20. Cutter blade/flails       | 20 pairs Y type or U-type (40 blades) 2-knives welded with bush and pivoted with high tensile bolt 12 mm with lock nuts on rotor in 4 rows at alternate intervals  |
| 21. Knife size                | 185 mm x 50 mm x 7 mm (spring steel HRC $\geq$ 40) sharpened edge on both side   |
| 22. Tines and shanks          | 10 tines semi-circular in shape made of M.S plate 16 mm at sharpened front face, 5 mm thick MS sheet for furrow opener with carbon steel tips (HRC > 50) or T-type opener welded on the cutting edge                                 |
| 23. Tine clamps               | 20 U-shaped spring steel clamps of 10 mm diameter with nut and spring washer   |
| 24. Depth control             | 02 steel wheels or rubber wheels, outer diameter of 340 mm or as per manufacturer's standard for tines depth control   |
| 25. Power transmission        | Gear box 1:1.72, 1200 to 1350 RPM and transmission shaft of 60 mm diameter covered in casing. Triple grooved pulleys at transmission and rotor shaft with C-type belts with proper belt adjuster. MS 16 gauge sheet cover for belts. |
| 26. Seed-cum fertilizer box   | M.S sheet 18 gauge 2335 mm long trapezoidal shape divided in two box halves, box side width 510 mm, height 250 mm  |
| 27. Boxes lids                | M.S sheet 18 gauge with reinforced at center with hooked type locks  |
| 28. Delivery tubes            | Seed and fertilizer plastic tubes 3 mm wall thickness, transparent flexible, fixed with clamp on both sides seed and fertilizer metering device  |
| 29. Fluted rollers            | Nylon stator and brush   |
| 30. Roller drive shaft        | M.S round 22 mm  |
| 31. Seed rate                 | Adjustable through calibrated slide lever  |
| 32. Rotor shaft bearing       | 02 Nos. UCF-208 sealed with grease filling facility  |
| 33. Seed and fertilizer shaft | 02 Nos. UCL-205 sealed with grease filling facility  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

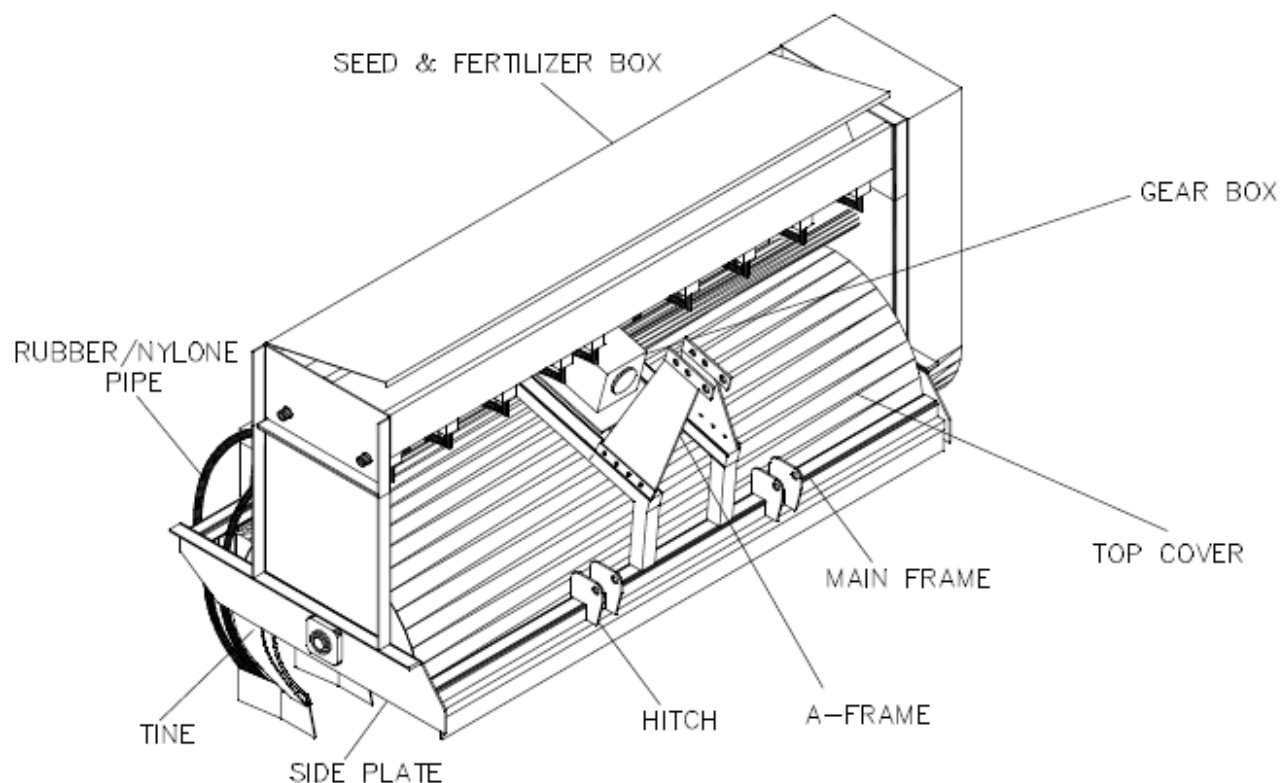
bearings

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 34. Paint          | Double coat with primer after surface finish   |
| 35. Nuts and Bolts | To be tightened with spring washers  |
| 36. Bearings (New) | NTN,SKF, NSK or equivalent   |
| 37. Lubrication    | Filled with proper lubrication of PSO lubricant of requisite grade and quantity        |
| 38. Warranty       | Free : 01 year for parts and service<br>Extended: 05 years for parts supply on payment |

## 19. HAPPY SEEDER

### HAPPY SEEDER



### GENERAL

- |                              |   |
|------------------------------|---|
| 1. Application               | For sowing of wheat crop in Rice Stubble Field after combine harvesting |
| 2. Type of machine           | Tractor rear mounted  |
| 3. Linkage type              | Cat-II  |
| 4. Number of Rows            | 10  |
| 5. Row spacing               | 200-225mm adjustable  |
| 6. Seed and Fertilizer. box  | Placed above the main frame and fixed with rooter side plates           |
| 7. Seed box capacity         | 60 kg   |
| 8. Fertilizer box capacity   | 60kg  |
| 9. Universal shaft           | Improved quality  |
| 10. Rotor (Knives/cutter)    | M.S   |
| 11. Gear box ratio           | 1:1.72  |
| 12. Effective field capacity | $\geq 0.75$ acre/h  |
| 13. Field efficiency         | $\geq 65$ %   |

### OVERALL DIMENSIONS

- |                   |                    |
|-------------------|--------------------|
| 14. Overall width | 2387mm $\pm$ 100mm |
| 15. Working width | 2235mm $\pm$ 100mm |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                       |                    |
|-----|-----------------------|--------------------|
| 16. | Front two back length | 1525mm $\pm$ 100mm |
| 17. | Height                | 1400mm $\pm$ 100mm |
| 18. | Weight (Approx.)      | 660 kg $\pm$ 10 kg |

### **MATERIAL SPECIFICATIONS**

- |     |                         |   |
|-----|-------------------------|---|
| 19. | Tins holding frame      | M.S box 75x75x6mm welded with MS plate on both ends and bolted with side sheets   |
| 20. | Side plates             | 6mm MS plate on both sides  |
| 21. | Rotor shield sheet      | 16 Gauge welded with side plates, angle iron box on front side and MS strip at back side  |
| 22. | Rotor shaft (Drum)      | M.S Pipe 2235mm $\pm$ 50mm long, o.d. 140mm $\pm$ 10mm with all thickness 5mm, both portion of box top covered with trays, hinges, box sheet thickness of M.S 18 SWG  |
| 23. | Cutter blade/flails     | 20 pairs y type (40 blades) 2-knives welded with bush and pivoted with high tensile bolt 12mm with lock nuts on rotor in 4 rows at alternate intervals  |
| 24. | Knife size              | 150x50x6mm (spring steel) sharp edge on both side, HRC $\geq$ 40  |
| 25. | Tines and shanks        | 10 Nos. cast iron molded 16 mm thickness arc-type towards the front cutter blades with sharp edge and shoe type furrow openers (hardened steel) are bolted at their bottom  |
| 26. | Tine clamps             | 20 Nos. of 10mm U shaped spring steel clamps with nut and spring washer   |
| 27. | Depth control           | 02 Nos. of tires size as per manufacturer standard for tines depth control  |
| 28. | Power transmission      | Light weight gear box hinged with bottom plate of 1:1.72 ratio and rotor RPM 1200 to 1350 with air vent nipple and bearing with proper oil seals at both shaft (drive and driven)<br>Transmission MS shaft of 60mm dia. Triple grooved pulleys at transmission and rotor shaft with C3 type belts with proper belt adjuster. MS 16 SWG sheet cover for belts. |
| 29. | Seed-cum Fertilizer box | M.S sheet 18SWG 2335mm long trapezoidal shape divided equal in two box halves, box side width 510mm, height 250mm & length  |
| 30. | Boxes lids              | M.S sheet 18 Gauge with reinforced at center with hooked type locks   |
| 31. | Boxes mounting          | With M.S. side plates of machine on both side   |
| 32. | Delivery tubes          | Seed and Fertilizer plastic tubes (min.3mm Wall thickness), transparent flexible, fixed with clamp on both side seed and fertilizer metering device   |
| 33. | Fluted rollers          | Nylon stator and brush  |
| 34. | Roller drive shaft      | M.S Round 22mm  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

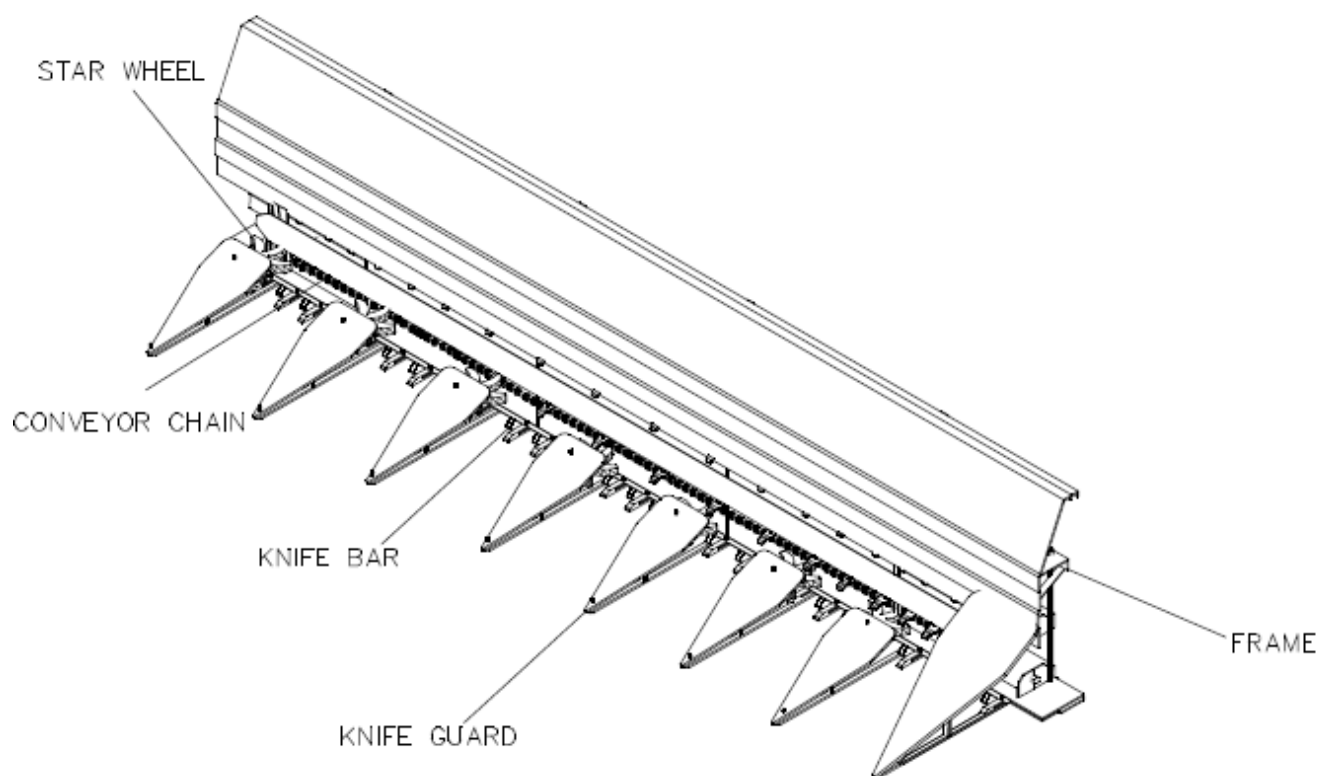
- |     |                                    |   |
|-----|------------------------------------|---|
| 35. | Seed rate                          | Adjustable through calibrated slide lever |
| 36. | Bearing                            | Sealed with grease filling facility       |
| 37. | Rotor shaft bearing                | 02 Nos. UCF-210                           |
| 38. | Gear box bearing                   | 04 Nos. or more accordingly               |
| 39. | Seed and fertilizer shaft bearings | 02 Nos. UCL-205                           |

### **MISCELLANEOUS**

- |     |                     |   |
|-----|---------------------|---|
| 40. | Paint               | Double coat with primer after surface finish  |
| 41. | Nuts and Bolts      | To be tightened with spring washers   |
| 42. | Bearings (New)      | NTN,SKF,NSK or equivalent   |
| 43. | Lubrication         | Filled with proper lubrication of PSO lubricant of requisite grade and quantity     |
| 44. | Minor modifications | To be carried out free of cost if required  |
| 45. | Warranty            | Free : 1 year for parts and service<br>Extended: 5 year for parts supply on payment |

## 20. WHEAT REAPER

### WHEAT REAPER



#### GENERAL

1. Application	For cutting of wheat and rice crop
2. Type of machine	Tractor front mounted
3. Linkage type	Cat-II
4. Attachment	Provided as per demand
5. Cutting width	2180 mm
6. Tractor power	$\geq 50$ hp
7. Effective field capacity	$\geq 0.75$ acre/h
8. Field efficiency	$\geq 75$ %

#### OVERALL DIMENSIONS

9. Length	680 mm $\pm$ 10 mm
10. Width	2285 mm $\pm$ 20 mm
11. Height	660 mm $\pm$ 10 mm
12. Weight (Approx.)	300 kg $\pm$ 5 kg

#### MATERIAL SPECIFICATIONS

13. Frame	
Lower box	01 No. M.S. 125x30x4.5 mm



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

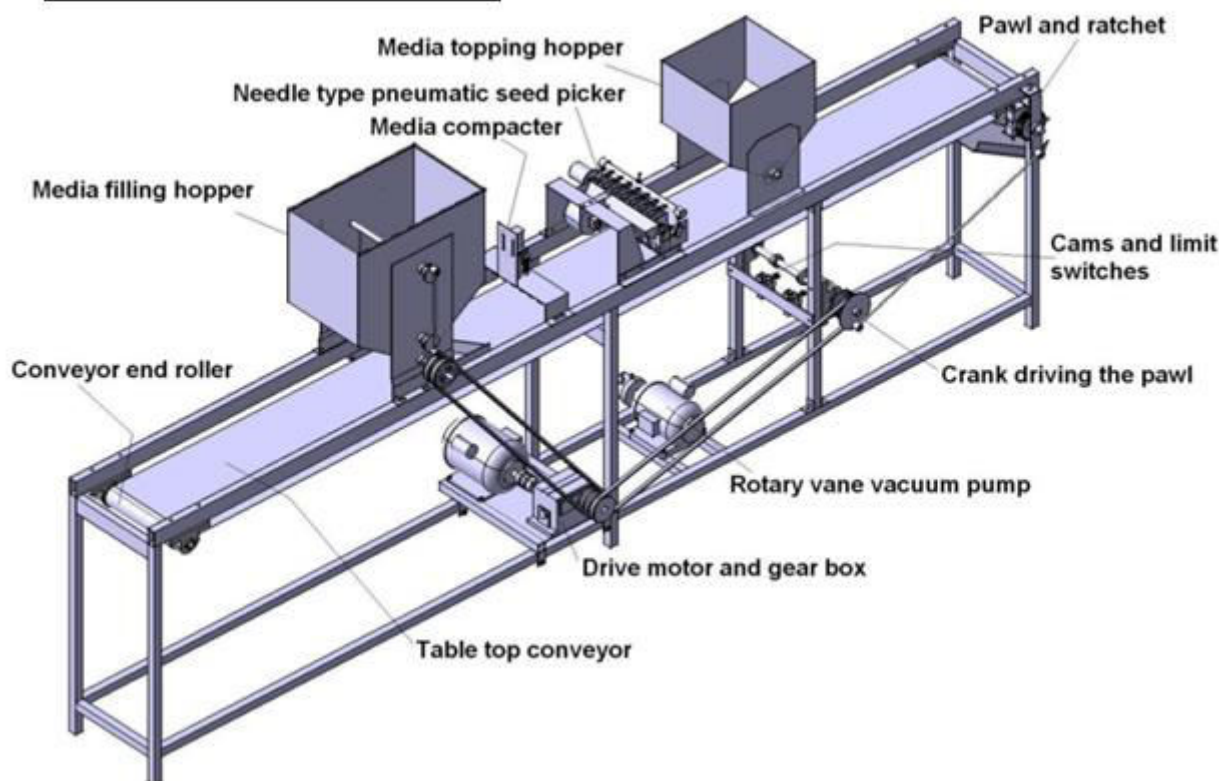
Vertical boxes	02 Nos. M.S. 100x30x4 mm
Front panel	M.S. 18 gauge
Conveyor chain	04 Nos. channels, 60 # chain with 38 Nos. lugs fitted on chain, made of M.S. formed sheet
14. Cutter bar assembly	
Knife bar	02 Nos. 22x6 mm M.S. flat
Blades	28 Nos. triangular 75 mm, HRC 50-60
Knife Guard Fingers	Steel cast
Hold down clips	06 Nos., steel cast/steel plate
Drive lever end	01 No. cam type, M.S.
Gear box	02 Nos. Cast Iron
Chain sprockets	04 Nos. cast iron/M.S. formed sheet for 60 # chain
15. Header Assembly	
Pipes	M.S pipe, 21 mm sq. rod 21 mm, and M.S. flat 30x5 mm, 18 gauge M.S. formed sheet
Star wheels	Polypropylene plastic with bearings
Pressure spring	14 Nos. 4 mm dia. Spring steel
16. Tractor attachment	M.S. box of 60x60x5 mm
17. Lifting and lowering assembly	
Legs front and back	04 Nos. legs made of steel cast or steel plate
Pulleys	100 mm dia. cast iron with pins
Steel rods	02 Nos. steel rods, 17 mm dia.
Power transmission	PTO shaft pulley 150 mm dia., cast iron
Propeller shaft	39 mm dia. M.S. pipe, 3 mm wall thickness

### **MISCELLANEOUS**

18. Paint	Double coat with primer after surface finish
19. Nuts and bolts	To be tightened with spring washers
20. Bearings (new)	European Standard or equivalent
21. Warranty	Free: 01 year for parts and service Extended: 05 years for parts supply on payment

## 21. NURSERY RAISING MACHINE (MOVING)

### NURSERY RAISING MACHINE



Sr. #	Parameter	Description
1.	Application	Used for seedling, Trays including preparation of bed soil, seeding, covering with soil and its irrigation.
2.	Type	Automatic electric motor operated (moving)
3.	Power	200-300 W (approx. 2-hp motor)
4.	Working capacity	≥ 400 Trays/hour
5.	Hopper capacity of bed soil	≥ 52 Liters
6.	Hopper capacity of bed seed	≥ 30 Liters
7.	Hoper capacity of covering soil	≥ 52 Liters
8.	Amount of irrigated water	0.5-1.4 L/Tray
9.	Amount of bed soil	2.4-4.0 L/Tray (15-25 mm thickness)
10.	Amount of covering soil	0.8-1.53 L/Tray (5-9 mm thickness)
11.	Sowing rate	50-315 gm/Tray

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

12.	Tray size	280 mm x 600 mm
13.	Weight	160 kgs.
14.	Accessories	Literature, standard tools etc.
15.	Origin	Imported/Local
16.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

## 22. WALK-BEHIND RICE TRANSPLANTER



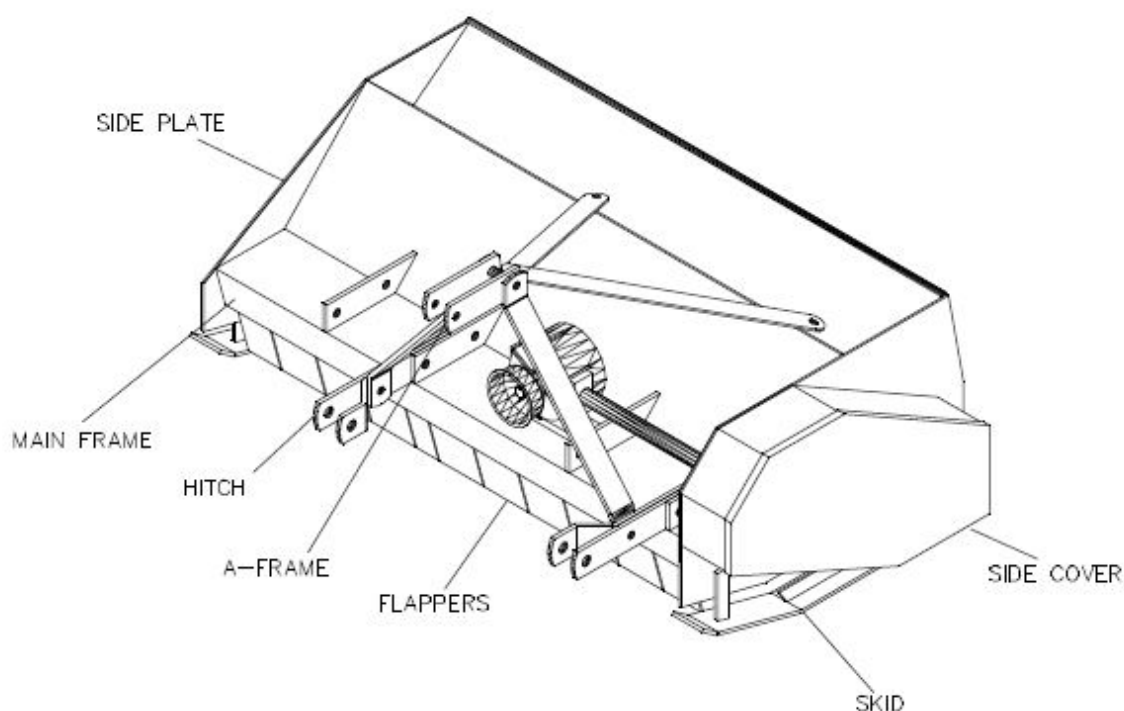
Sr. #	Parameter	Description
1.	Application	Rice transplanter is specialized transplanter fitted to transplant rice seedlings onto paddy field.
2.	Type	Walk-Behind Type self-propelled diesel/gasoline engine operated
3.	Number Of Planting Rows (min.)	6
4.	Distance Between Rows (min.)	300 mm
5.	Transplanting Depth (min.)	15-35 mm
6.	Transplanting Speed (min.)	0.28-0.05 m/s
7.	Transplanting Capacity (min.)	0.25-0.6 acre/h
8.	Engine Power (min.)	4.5 hp
9.	Planting method	Crank forced planting
10.	Plants per hill	2-5 adjustable
11.	Seeding distance	120, 140, 160, 180 and 210 mm
12.	Weight	180 kgs
13.	Planting fork arm	Cam operated

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |          |  |
|-----|----------|--|
| 14. | Origin   | Imported   |
| 15. | Warranty | Free : 01 year for parts and service<br>Extended: 05 year for parts supply on payments |

## 23. RICE STRAW SHREDDER

### RICE STRAW SHREDDER



#### GENERAL

- |                             |                               |
|-----------------------------|-------------------------------|
| 1. Application              | For chopping of paddy straw   |
| 2. Working width            | 1800 $\pm$ 20 mm              |
| 3. Rotor speed              | $\geq 2000$ rpm @ 540 PTO rpm |
| 4. Universal Joint shaft    | Provided                      |
| 5. Type of machine          | Tractor rear mounted          |
| 6. Linkage type             | Cat-II                        |
| 7. Effective field capacity | $\geq 0.75$ acre/h            |
| 8. Field efficiency         | > 80%                         |

#### OVERALL DIMENSIONS

- |                      |                    |
|----------------------|--------------------|
| 9. Length            | 1400 $\pm$ 20 mm   |
| 10. Width            | 2130 $\pm$ 20 mm   |
| 11. Height           | 960 $\pm$ 20 mm    |
| 12. Weight (Approx.) | 450 kg $\pm$ 10 kg |

#### MATERIAL SPECIFICATIONS

- |                |  |
|----------------|--|
| 13. Main Frame | M.S plate 4 mm welded with MS square pipe 75x6 mm at front |
|----------------|--|

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- and welded with MS plates 9 mm on sides, reinforced with 50x6 mm angle box at top, MS flat 50x6 mm at right angle with side plates. Top cover of MS plate 4 mm reinforced with MS flat 50x6 mm pivoted with main frame and adjustable at rear end. MS pipe of 75 mm O.D, 6 mm wall thickness welded at rear end with side plates.
14. A frame (Mast) MS rect. boxes 75x50x6 mm with support of MS angle box 50x6 mm
  15. Hitch MS plate 15 mm thickness
  16. Flappers MS sheet 180x145x3 mm (LxWxT) each pivoted with MS round 25 mm.
  17. Rotor MS pipe outer diameter 160 mm, 6 mm wall thickness and 60 mm dia. M.S axle on both ends.
  18. Cutter Blades 112 No's, 5 mm thick 40 mm width, 180 mm long and edge sharpened up to 100 mm from bottom & Widthwise Sharpening up to 10 mm, J-type 14 pairs of blades (HRC $\geq$ 40) hinged in four rows with brackets of MS Flat of 50x50x8 mm with spacer bush of length 22 mm, 10 mm apart, spacer bush 35 mm outer dia. and side collar length 6 mm on both with outer diameter 22 mm.
  19. Rear Roller MS pipe 114 mm dia. 6 mm wall thickness and 40 mm axle ends welded on sides fitted with MS plate 12 mm for adjustment with M.S Angle Scraper.
  20. Gear box Cast iron with Air Vent
  21. Gears Steel gears, heat treated
  22. Belt Tightener Proper Belt Tightener will be Provided
  23. Drive system 03 Nos. belts, three groove C type, 355 mm dia. pulley on gear side and 175 mm dia. on rotor
  24. Belt cover 2 mm sheet
  25. Bearings 01 No. 7512 and 7309 and 6210 in gear box  
02 Nos. 6312 of main rotor and 02 UC 208 of roller  
02 No. 6210 at drive shaft and 02 Nos. 6205 at belt tightener
  26. Parking Stand MS box 50x50x6 mm, with MS plate 6 mm welded at bottom

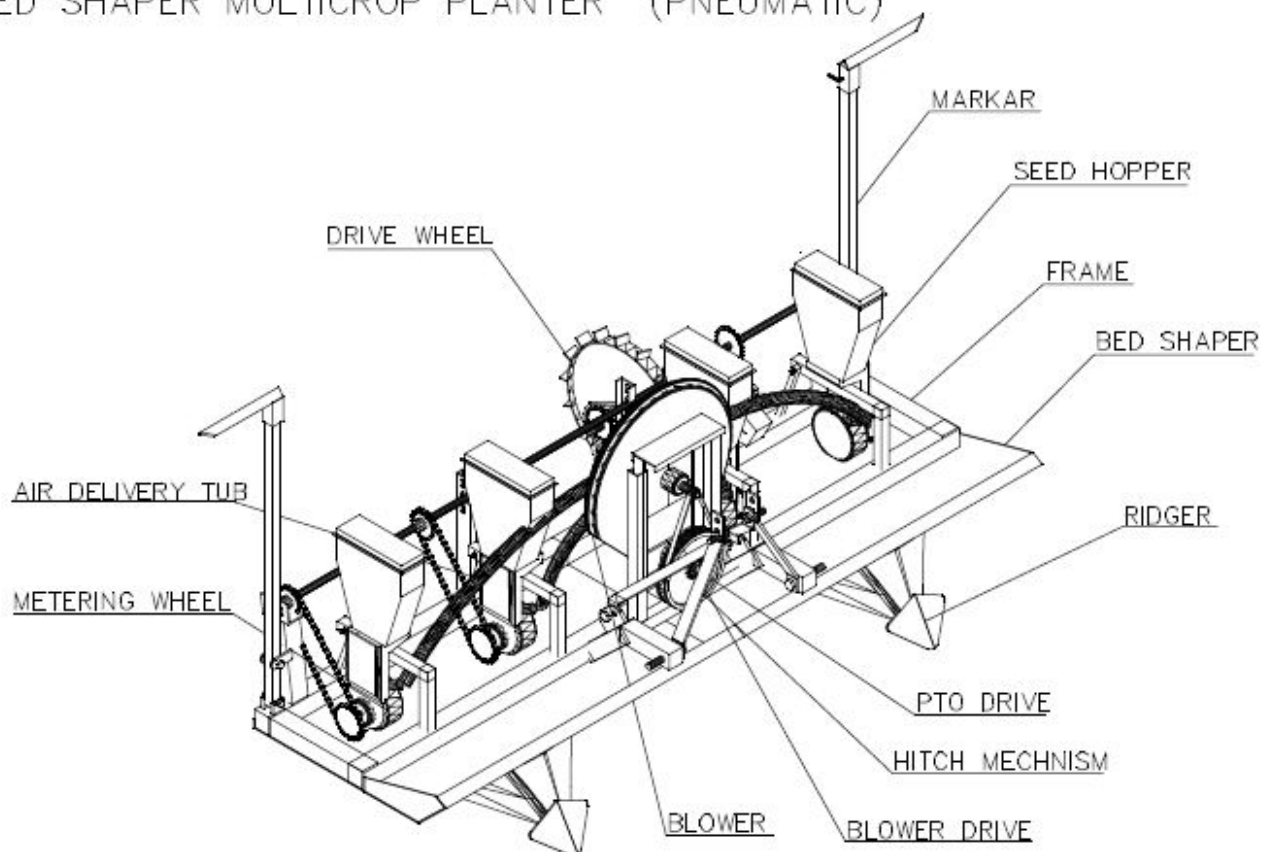
### **MISCELLANEOUS**

27. Paint Double coat with primer after surface finish
28. Nuts and bolts To be tightened with spring washers
29. Bearings European Standard or equivalent
30. Accessories 02 Nos. sets of belts, 01 No. set of blades with nuts & bolts
31. Warranty Free: 1 year for parts and service  
Extended: 5 years for parts supply on payment



## 24. PRECISION PNEUMATIC PLANTER

### BED SHAPER MULTICROP PLANTER (PNEUMATIC)



### GENERAL

1. Application	For planting of cotton, maize, sunflower & soybeans etc. on beds
2. Type of machine	Tractor rear mounted
3. Linkage type	Cat-II
4. Nos. of rows	04
5. Row spacing	687-762 mm (adjustable)
6. Seed metering	Plate type (pneumatic)
7. Drive mechanism	through ground wheel
8. Effective field capacity	$\geq 0.75$ acre/h
9. Field efficiency	$\geq 75\%$

### OVERALL DIMENSIONS

10. Length	1910 mm $\pm$ 20 mm
11. Height	1600 mm $\pm$ 10 mm
12. Width	2760 mm $\pm$ 20 mm
13. Weight (Approx.)	425 kg $\pm$ 10 kg

### MATERIALS SPECIFICATIONS

14. Frame	02 Nos. M.S. boxes 62x62x6 mm
-----------	-------------------------------



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

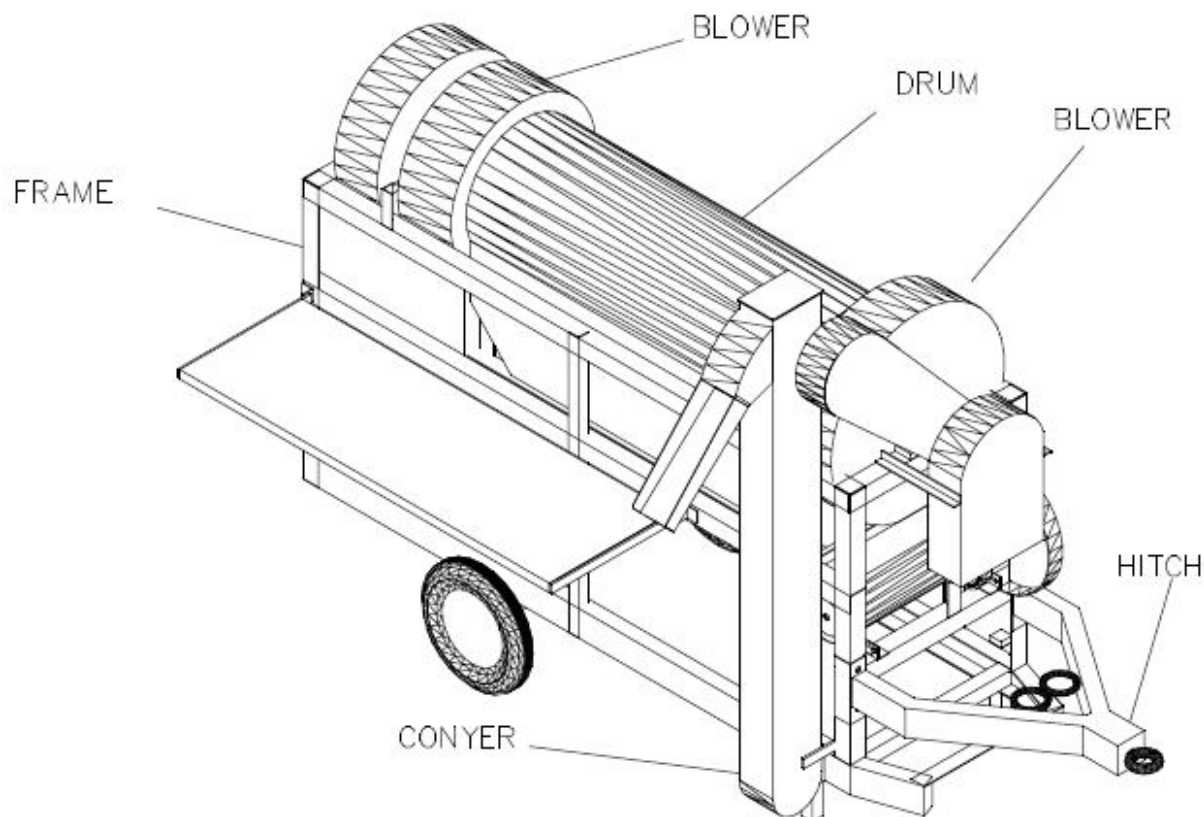
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|------------------------------|--|
| 15. Mast (A-frame)           | 62x12 mm M.S. flat & 50x12 mm M.S. flat  |
| 16. Hitch                    | 62x62x6 mm M.S. box  |
| 17. Bed shaper plate         | 2440x1220x5 mm M.S. formed sheet   |
| 18. Furrow opener with wings | M.S. plate 6 mm of tip and M.S. plate 5 mm for furrow with wings   |
| 19. Seed metering system     | Pneumatic type molded complete (aluminum), the unit should have an air tight suction chamber fitted with revolving vertical seed plate (stainless steel) having holes near its periphery according to crop seed. |
| 20. Seed box metering frame  | 04 Nos. 37x37x4 mm M.S. box 05 Nos. with support 25x25x3mm M.S. box  |
| 21. Blower frame             | 02 Nos. M.S. angle 45x45x4 mm with supports of M.S. sheet 3 mm   |
| 22. Blower                   | 01 No. blower speed 4500 rpm, Blower fan body M.S. sheet 10 swg. Blower fan 400mm dia of MS sheet 14 swg, blower shaft 30 mm dia.  |
| 23. Air suction Pipe         | MS sq. pipe 60x60x4 mm with 04 nos. vent pipe o.d. 38mm x 16swg, Flexible vinyl pipes main 62 mm dia. and distributor pipe 38 mm dia. with steel wire impregnated  |
| 24. Seed box                 | 04 Nos. fiber glass boxes 8 kg each  |
| 25. Seed plate               | 04 sets 215 mm dia. With 13 Nos. tips for each crop  |
| 26. Seed drive shaft         | 22 mm M.S. round   |
| 27. Drive mechanism          | 02 No. ground wheels 6.00-12 with lugs (8 ply), MS box 50x6 mm with 50# chain and 24 nos. of sprockets   |
| 28. Row marker               | 02 Nos. 35x35x6 mm M.S. box hoe type   |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 29. Paint          | Double coat with primer after surface finish  |
| 30. Nuts and bolts | To be tightened with spring washers   |
| 31. Bearings (new) | European Standard or equivalent   |
| 32. Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## 25. **MAIZE DEHUSKER CUM SHELLER**

### MAIZE DEHUSKER CUM SHELLER



#### **GENERAL**

- |                                 |                            |
|---------------------------------|----------------------------|
| 1. Application                  | For shelling of maize crop |
| 2. Power requirement            | 50+ hp tractor             |
| 3. Threshing capacity           | ≥2.0 ton/hr                |
| 4. Type of machine              | Tractor trailed            |
| 5. De-husking/shelling capacity | 90% above                  |

#### **OVERALL DIMENSIONS**

- |           |                 |
|-----------|-----------------|
| 6. Length | 3600 mm ± 30 mm |
| 7. Width  | 1800 mm ± 20 mm |
| 8. Height | 2460 mm ± 20 mm |
| 9. Weight | ≥1000 kg        |

#### **MATERIAL SPECIFICATIONS**

- |                    |   |
|--------------------|---|
| 10. Main frame     | 125x62x6 mm M.S. channel, 75x75x5.5 mm M.S. angle, 60x60x4.5 mm 38x38x4.5 mm M.S. angle |
| 11. Hitch bracket  | 125x62x6 mm, M.S. channel reinforced with M.S. rod 34 mm dia.                           |
| 12. Feeding hopper | M.S. sheet of 16 gauge  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                                    |   |
|-----|------------------------------------|---|
| 13. | Grain Chute                        | M.S. sheet 16 gauge with grain lifting auger dia. 32 mm and 2 mm M.S. sheet   |
| 14. | Shelling drum                      | 1600 mm long 320 mm outer dia. 5 mm wall thickness  |
| 15. | Drum cover                         | M.S. sheet 10 gauge   |
| 16. | Bits/page                          | 78 Nos., 52 x 18 mm M.S. stud welded in zigzag spiral form on the MS flat 50 x 10 mm thick  |
| 17. | Sieve                              | 02 Nos. 1 mm M.S. sheet with 12 mm dia. holes, M.S. sheet of 16 gauge with 3 mm dia. holes  |
| 18. | Blower                             | Pedal type, 03 Nos. Blades, 2 mm thick  |
| 19. | Thrower                            | Pedal type, 04 Nos. blades with 12 gauge of M.S. sheet  |
| 20. | Pulley cover                       | M.S. sheet 16 gauge   |
| 21. | Shaft                              |   |
|     | Main                               | 60 mm M.S. round  |
|     | Blower                             | 60 mm M.S. round  |
|     | Thrower                            | 60 mm M.S. round  |
| 22. | Standing Platform                  | M.S. Box 35x35 x 4.5 mm thickness, M.S. Flat 40 x 12 mm, M.S. Sheet of 14 gauge   |
| 23. | Pulleys                            | (02 nos.) C-type, 3 grooves with 300 mm dia. And 250 mm dia.<br>B-type, 2 grooves with 100 mm dia.<br>B-type, single groove with 400 mm dia.<br>B-type, single groove with 70 mm dia.<br>Cam pulley B-type with 150 mm dia. |
| 24. | Transport wheels with rims and hub | (02 Nos.) 6.00-16 Nylon   |

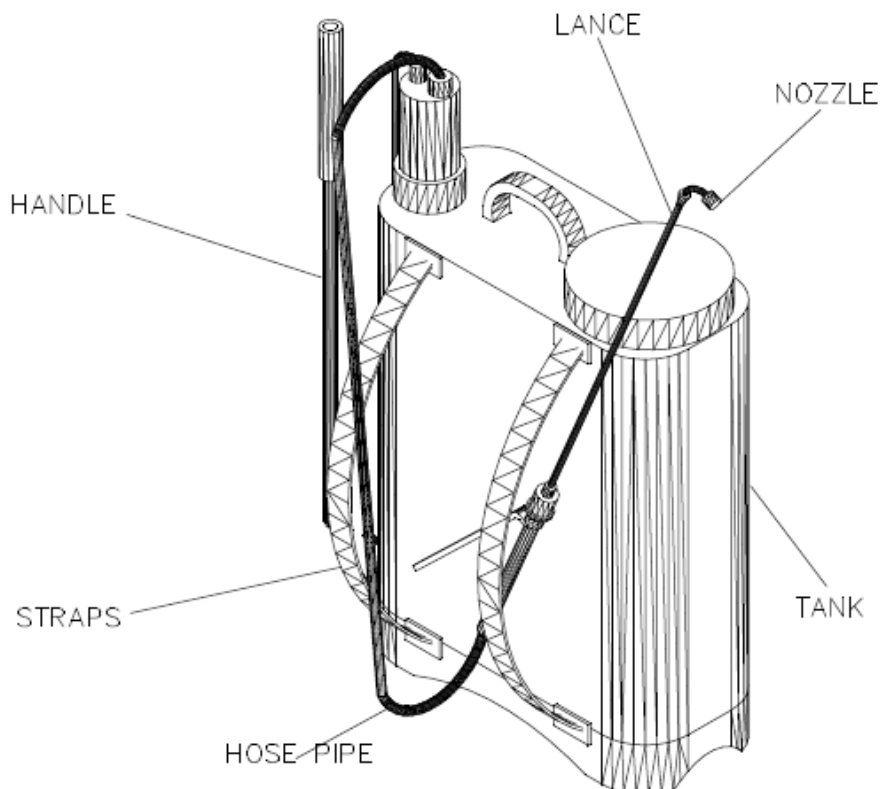
### **MISCELLANEOUS**

- |     |                |  |
|-----|----------------|--|
| 25. | Paint          | Double coat with primer after surface finish   |
| 26. | Bearings       | European Standard or equivalent  |
| 27. | Nuts and bolts | To be tightened with spring washers  |
| 28. | Warranty       | Free : 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 26. KNAPSACK HYDRAULIC POWER SPRAYER (BATTERY OPERATED)

KNAP SACK HYDRAULIC POWER SPRAYER  
(BETTERY OPERATED)



#### GENERAL

1. Applications	Field Crops and Vegetables
2. Type	Battery operated/ two in one
3. Tank Capacity (Lit)	20
4. Tank Material	polypropylene
5. Lance	Gooseneck/telescopic type
6. Pump	
Type	Electric diaphragm, Piston type
Material	Plastic / Brass
Discharge (L/min)	>3
7. Volumetric efficiency	> 85%

#### MATERIAL SPECIFICATIONS

8. Pressured developed (min.)	>6 bar
9. Operating pressure	3 bar
10. Retaining time for 6bar pres.	5 min.
11. Stroke to achieve 3bar pres.	16 - 18 strokes/min
12. Gasket/washer	Rubber material
13. Operating pressure	adjustable (variable)
14. Tank Filter	Provided

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

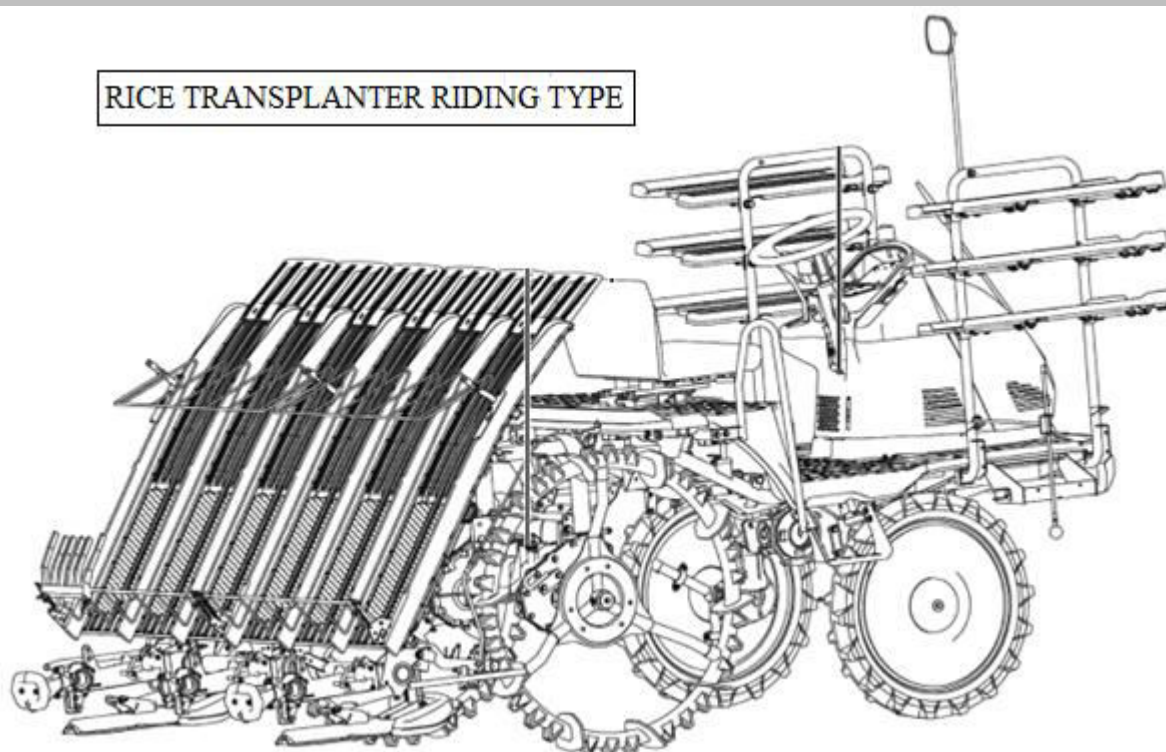
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|-----|-----------------------------------|--|
| 15. | Nozzles provided with the sprayer |  |
|     | Hollow cone                       | Discharge 0.6 L/min at 3 bar 01 No. 0.8 L/min at 3 bar 01 No.                              |
|     | Flat fan                          | Discharge 1.0 L/min. at 2 bar 01 No.   |
|     | Flood jet/deflector               | Discharge 1.0 L/min at 1 bar 01 No.  |
| 16. | Battery                           | 12 V, 09Ah, sealed lead acid   |
| 17. | Battery working time              | 09 hrs   |
| 18. | Pressure / flow control valve     | 1.5 - 2 bar rating (01 No. with adapter)   |
| 19. | Accessories                       | Mealy bug lance, Mask, Gloves rubber washers and tool kit<br>(Screw driver, Plier, Wrench) |
| 20. | Charger                           | 110-220 V, 1.7A  |
| 21. | Weight (Approx.)                  | 8 kg   |

### **MISCELLANEOUS**

- |     |            |   |
|-----|------------|---|
| 22. | Origin     | Imported  |
| 23. | Literature | English/Urdu  |
| 24. | Warranty   | Free: 01 year for parts and service<br>Extended: 05 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

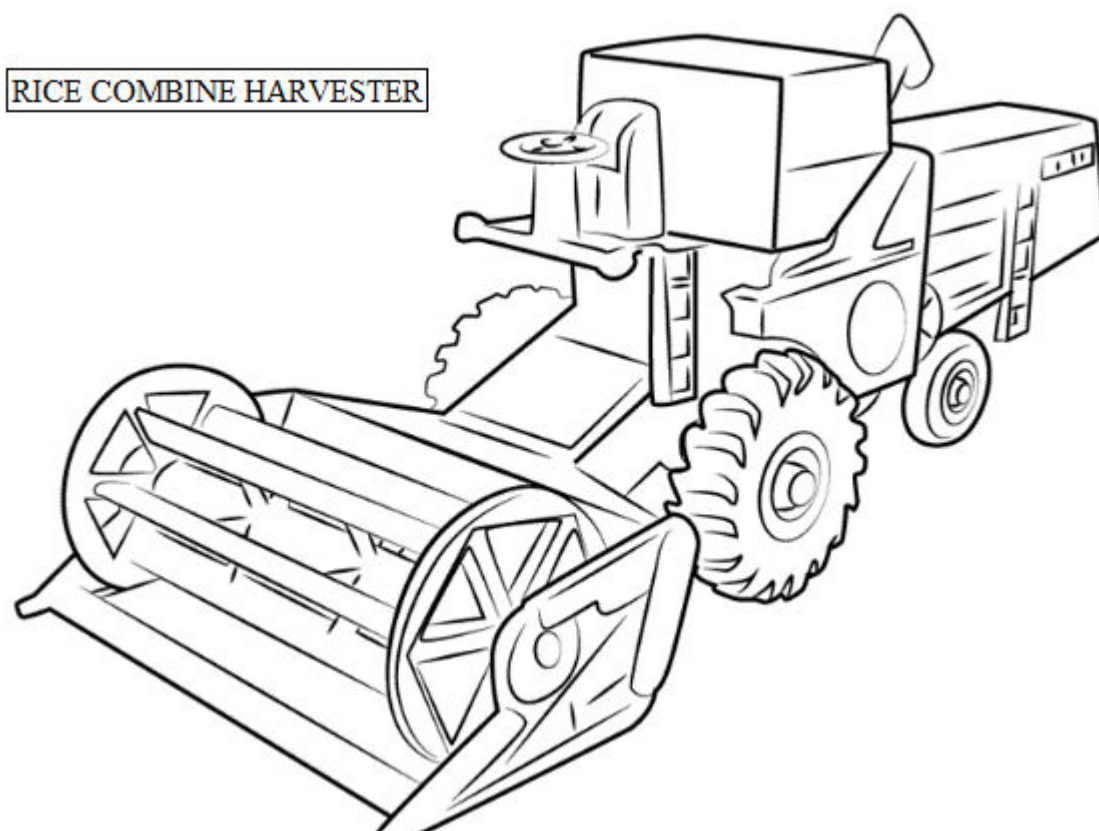
### 27. RICE TRANSPLANTER RIDING TYPE



Sr. #	Parameter	Description
1.	Application	Used for transplant rice seedlings onto paddy field.
2.	Type	Riding Type self-propelled engine operated
3.	Number Of Planting Rows (min.)	8
4.	Row to row distance	300 mm
5.	Transplanting Depth (min.)	15-35 mm
6.	Transplanting Speed (min.)	0.35-0.58 m/s
7.	Traveling Speed (min.)	7-10 km/h
8.	Transplanting Capacity (min.)	0.5-0.8 acre/h
9.	Engine Power (min.)	5 hp (diesel/gasoline)
10.	Overall dimensions	3050x2220x2600 (LxWxH) or according to manufacturer's design
11.	Hill spacing	120, 140, 160, 180, 210 and 240 mm
12.	Origin	Imported
13.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments



## 28. A) RICE COMBINE HARVESTER

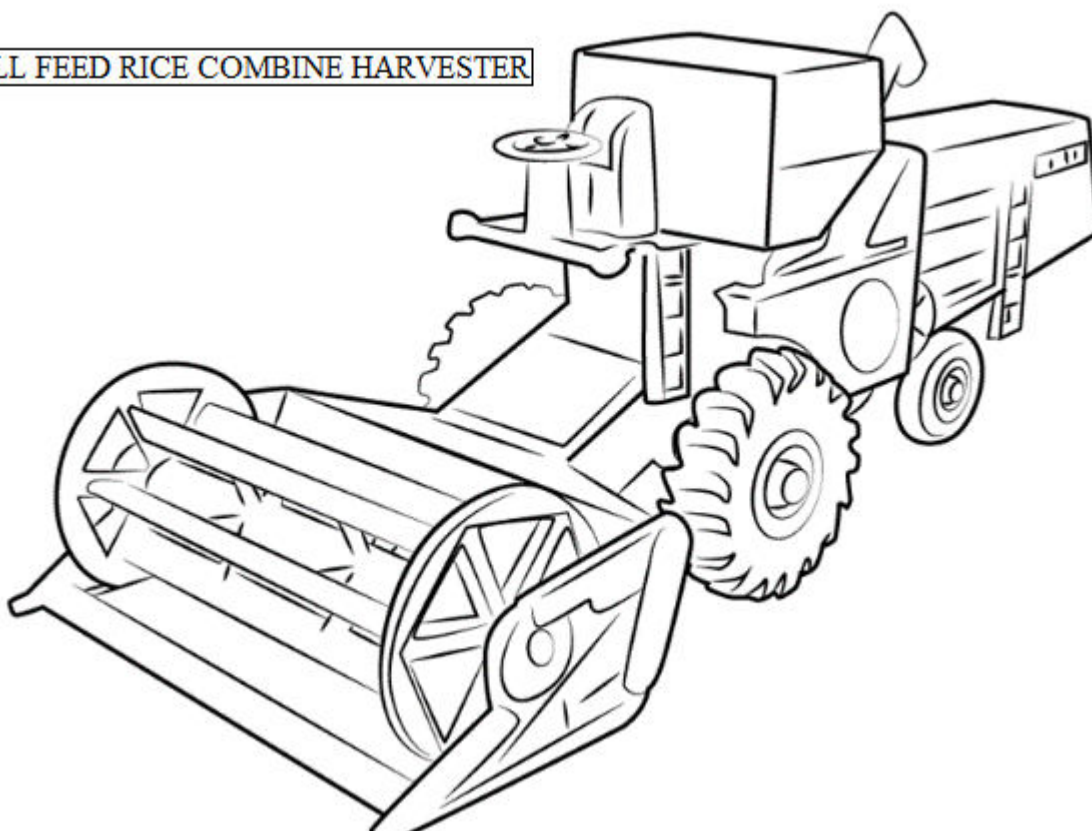


Sr. #	Parameter	Description
1.	Application	For harvesting of rice crop
2.	Type	Full feed self-propelled wheel type with shredder
3.	Driven type	Gear drive
4.	Cutting width	$\geq 2360$ mm
5.	Feed quantity	$\geq 6.0$ kg/s
6.	Field Capacity	$\geq 1.4$ acre/hour
7.	Grain unloading way	Mechanical unloading
8.	Engine power	$\geq 125$ HP
9.	Literature	Provided
10.	Origin	Imported
11.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### B) FULL FEED RICE COMBINE HARVESTER

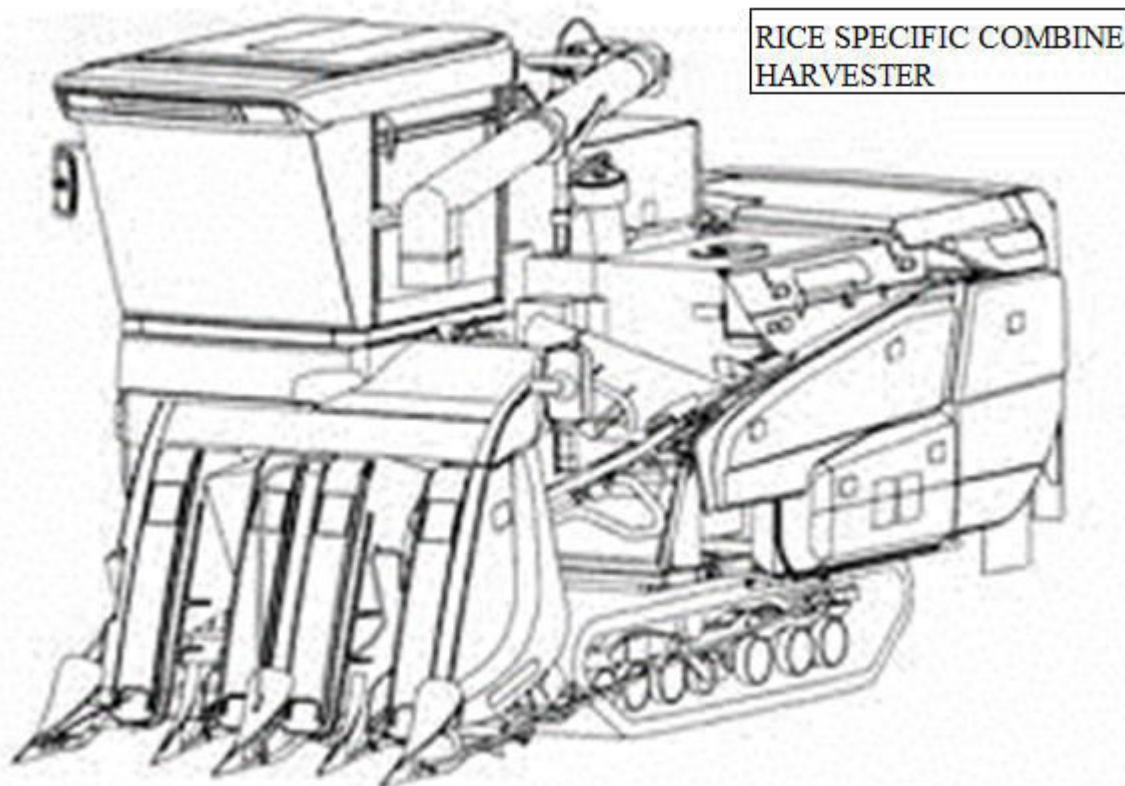
**FULL FEED RICE COMBINE HARVESTER**



Sr. #	Parameter	Description
1.	Type	Full Feed, Crawler Type, Self-Propelled
2.	Application	For harvesting of rice
3.	Width	$\geq 2272$ (mm)
4.	Engine Horse Power	$\geq 73$ (hp)
5.	Max. Work Speed	1.86 m/s or above
6.	Grain tank capacity	$\geq 1250$ (L)
7.	Field Capacity	$\geq 1.0$ acre/hour
8.	Threshing Cylinder Diameter	620 (mm)
9.	Threshing type	Axial Flow
10.	Fuel	Diesel
11.	Fuel Tank Capacity	$\geq 87$ liter
12.	Automation device	Provided
13.	Accessories	As per manufacturer's standard
14.	Origin	Imported
15.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments



## C) RICE SPECIFIC COMBINE HARVESTER



Sr. #	Parameters	Description
1.	Type	Self-Propelled, Head Feeding, Straw handling lay flat, Crawler Type
2.	Application	For harvesting of rice
3.	Cutting width	$\geq 1500$ (mm)
4.	Engine Horse Power	$\geq 70$
5.	Working Speed	1.5 m/s or above
6.	Field capacity	$\geq 1.00$ acre/hr
7.	Grain tank capacity	$\geq 800$ Kg
8.	Threshing Cylinder Diameter	$\geq 424$ (mm)
9.	Threshing type	Axial Flow Type
10.	Fuel Tank Capacity	$\geq 70$ liter
11.	Automation	Auto operational controls, provided
12.	Accessories	As per manufacturer's standard
13.	Origin	Imported
14.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

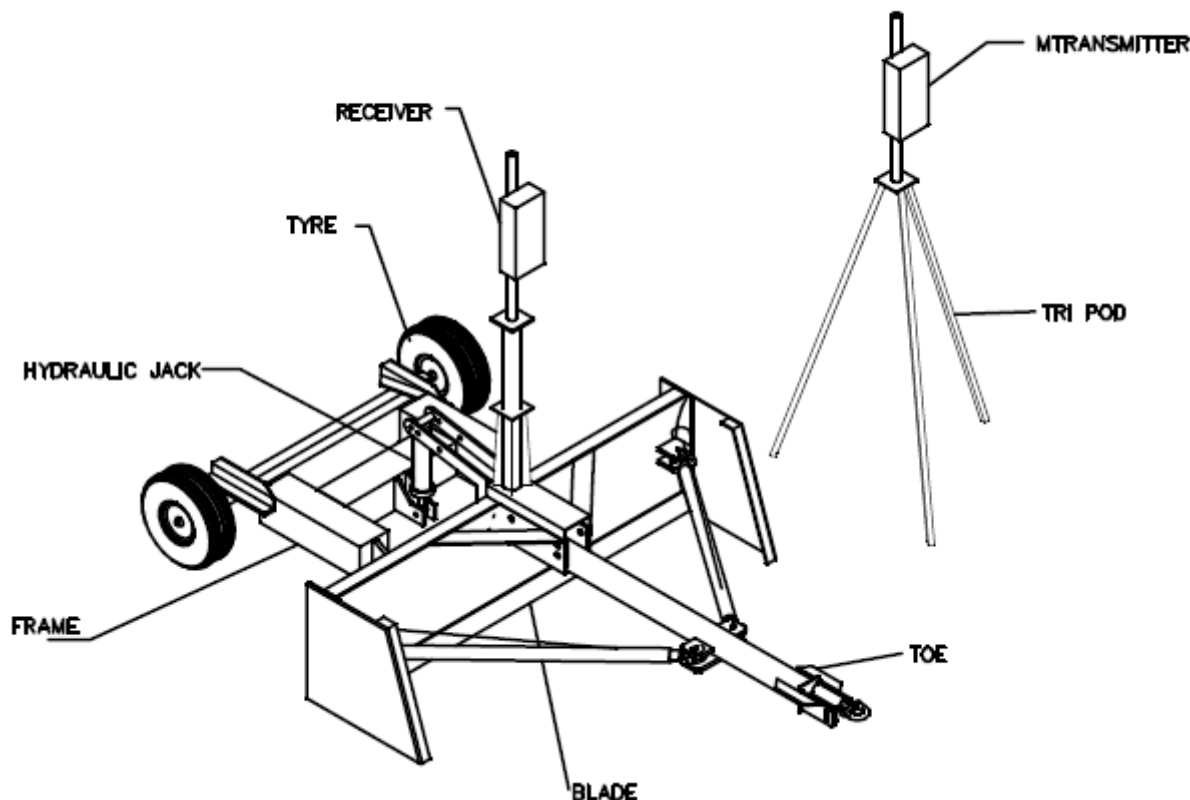
## 29. WHEAT COMBINE HARVESTER



Sr. #	Parameter	Description
1	Application	For harvesting of wheat crop
2	Type	Self propelled combine harvester
3	Driven mechanism	Gear drive
4	Working width	$\geq 4600$ mm
5	Field Capacity	$\geq 2$ acre/hour
6	Threshing drum size	$\geq 1200 \times 600$ mm
7	Separation system	Rotary separator system
8	Cleaning System	Double sieve system , blower fan
9	Engine power	$\geq 130$ hp
10	Literature	Provided
11	Origin	Imported
12	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

## 30. LASER LEVELER

### LASER LEVEL



### GENERAL

- |                      |  |
|----------------------|--|
| 1. Type              | Semi trailed   |
| 2. Application       | Used for earthmoving and precision land leveling   |
| 3. Power Requirement | 55 HP or above   |
| 4. Hitching          | Tow hook attached with tractor over PTO (part of tractor) 50hp   |
| 5. Tyres             | No.4 tyres with 6.50-14 (10 Ply)   |
| 6. Rolling Capacity  | ≥ 1.0 cubic meter  |
| 7. Bearings          | 04 Nos. tapered roller with grease housing 02 Nos. Size 7511 & 7509 or 32209 & 32211 or equivalent with external dust cover seal |

### OVERALL DIMENSIONS

- |            |                         |
|------------|-------------------------|
| 8. Length  | 4150 mm ± 20 mm         |
| 9. Height  | 1600 mm ± 20 mm         |
| 10. Width  | 2470 mm (8 ft.) ± 20 mm |
| 11. Weight | 900 kg ± 10 kg          |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATION**

#### **I. Bucket**

- |                                    |   |
|------------------------------------|---|
| 12. Body                           | 2440*700*7 mm M.S. sheet bucket height 700 mm, reinforced at top with Z-type sheet made from 2440*380*7 mm M.S. sheet                                   |
| 13. Internal Side Walls            | 02 Nos. 700*215*10 mm M.S. sheet welded to bucket body  |
| 14. External Side Walls            | 02 Nos. 700*565*10 mm M.S. sheet bolted to internal side walls. reinforced at front with 750*60 mm L-Key bend   |
| 15. External Adjustable Side Walls | 02 Nos. 500*125*10 mm M.S. sheet bolted with external side walls adjustable according to scrapper angle   |
| 16. Braces                         | 02 Nos. 570*50*7 mm M.S. flat   |
| 17. Cutting Edge                   | Reversible double side edge 2430*150*16 mm  |
| 18. Draw Bar pipe                  | M.S pipe 138 mm dia. 2030 mm long, 5 mm wall thickness. Ends closed with M.S. plates 140*140*15 mm  |
| 19. Draw bar Tong                  | 02 Nos. 230*100*15 mm M.S. plates reinforced with 02 Nos. 360*60*12 mm M.S. plate   |
| 20. Draw Bar Hook                  | Forged steel 350 mm long hook outer dia. 100-110 mm, inner hole dia. 40 mm, out pipe dia. 80 mm wall thickness 6 mm (02 Nos. M.S. plates 230*100*15 mm) |

#### **II. Diagonal links**

- |                               |   |
|-------------------------------|---|
| 21. Eyeball screws            | 02 Nos. left hand threads, 38 mm dia., 02 Nos. right hand threads 38 mm dia.  |
| 22. Pipe                      | 02 Nos. M.S pipe 58 mm dia. 1370 mm long, 4 mm wall thickness including eye ball and screw  |
| 23. Eyeballs                  | 04 Nos.   |
| 24. Pins                      | 04 Nos. M.S. round 23 mm dia. 125 mm long with safety pins  |
| 25. Links Buckets (on pipe)   | Upper plates 02 Nos., 152*100*15 mm welded to draw bar pipe with lower 01 No. M.S. plate (lower) 345*100*15 mm with pin holes   |
| 26. Links Buckets (on bucket) | 04 Nos. M.S. plates 100*85*15 mm welded to the bucket plate & side walls, with pin holes  |
| 27. Tow bar coupling          | 02 Nos. M.S. plates welded to pipe 420*150*10 mm  |
| 28. Attachment                | 02 Nos. M.S. plates 540*200*10 mm welded to bucket body, with adjustable tow bar height, 02 Nos. bolts 25 mm dia., 02 Nos. reinforcement plates 390*100*10 mm from lower side, 01 No. 200*200*6 mm M.S. plates welded at bucket base for reinforcement of above plate, 02 Nos., reinforcement plates 670*100*10 mm at top |

#### **III. Hydraulic Assembly**

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

29. Electric mast attachment base M.S. pipe 100 mm dia., 1000 mm long, 3 mm wall thickness with extendable SS pipe (operated by DC electric motor) compatible to mount receiver at top

### **IV. Electric Mast**

30. Length 1450 mm, extended up to 2250 mm (approx.) provided with control box to be mounted at tractor raise or lower the receiver height
31. Weight 25 kg $\pm$ 10%
32. Foundation Inverted U-type 300\*200\*10 mm M.S. plate/channel adjustable base for fixing electric mast

### **V. Hydraulic Jack Rear Attachments**

33. Frame 02 Nos. 800\*85\*18 mm M.S. flat L-shaped or angle that makes right position of jack welded to bucket on Z-reinforcement sheet at center.  
01 No. bolt/pin 28 mm dia. 200 mm long, with scraper pipe.  
02 Nos., M.S. flat 200\*85\*18 mm welded in line with above two pieces below Z-reinforcement sheet along bucket curve
34. Hydraulic Jack 01 No. 90 mm dia. 410 mm long, piston dia. 40 mm double acting with two jacks pins M.S. round 28 mm dia. 140 mm and 190 mm long,
35. H-Frame Boxes 02 Nos. 200\*200\*6 mm MS sheet, 800 mm long. Ends closed with 04 Nos., MS sheet 200\*200\*6 mm and  
01 No. box, MS sheet 200\*200\*6 mm, 800 mm long each
36. Coupling Assembly 02 Nos. hooks, 40 mm hole dia. 120 mm long, and M.S. sheet 140\*40 mm.  
02 Nos. M.S. plates 200\*40\*40 mm welded at bolt ends of H-frame to fix the above hooks.  
02 Nos. pins, 40 mm dia., 145 mm long  
02 Nos. M.S. plates 200\*120\*25 mm welded below Z-reinforcement present on bucket at two places to hold above  
02 Nos. hooks, having 40 mm dia. hole for fixing pins
37. Hydraulic jack Bracket 02 Nos., M.S. plates 200\*80\*15 mm welded to H-frame reinforced at base with M.S. plate 170\*170\*6 mm
38. Axle attachment 02 Nos. M.S. sheet 430\*270\*10 mm and L-key bend measuring 65 mm
39. Axle 01 No. M.S. square/round bar 2050\*63 mm with ends to mount 04 Nos., bearings bolted to H-frame using 200\*50\*16 mm flats welded with axle.
40. Hydraulic Hoses/ delivery hose 02 Nos., hydraulic pipe minimum pressure 3500 PSI inner dia. 12-13 mm of suction/delivery hoses of 15 ft. length

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

41. Hoses for cylinder each  
02 Nos. hydraulic pipe minimum pressure 3500 PSI inner dia. 12-13 with 4 feet long each

### **VI. Solenoid Control Valve**

42. Type Electric control spool type  
43. Compatibility For Hydraulic control of LASER scrapper  
44. Power source 12 V DC through LASER control panel  
45. Operating pressure 500-3000 psi (max.)  
46. Flow control valve 1 inch line

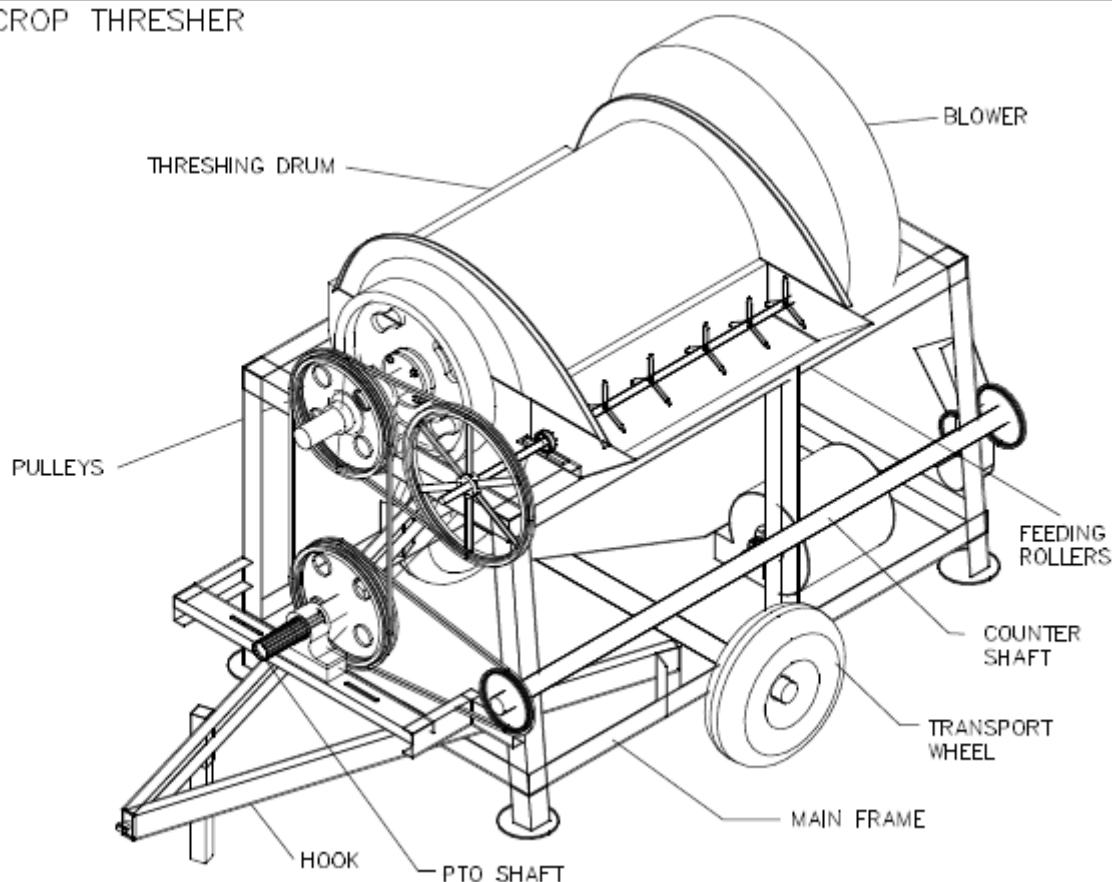
### **MISCELLANEOUS**

47. Paint Double coating after red oxide and surface finish  
48. Nut & Bolt To be tightened with spring washers  
49. Bearings SKF/ NTN or equivalent  
50. Modifications To be carried of free of cost, if required  
51. Warranty 1 year for parts and service  
5 years for parts supply on payment



## 31. MULTI CROP THRESHER

### MULTICROP THRESHER



### GENERAL

- |                       |  |
|-----------------------|--|
| 1. Application        | Threshing for Wheat, Gram, Pulses and other similar Crops. |
| 2. Type of machine    | Tractor trailed  |
| 3. Threshing Capacity | 1600-2000 kg/ hr.  |
| 4. Power Requirement  | Tractor, $\geq 50$ hp                                      |
| 5. Drum Speed         | Adjustable, 540 & 750 rpm                                  |
| 6. Wheels             | 02 Nos. rims with tyres size 6.00-16                       |

### OVERALL DIMENTIONS

- |                      |                     |
|----------------------|---------------------|
| 7. Total Length      | 4300 mm $\pm$ 40 mm |
| 8. Total Width       | 2100 mm $\pm$ 20 mm |
| 9. Total Height      | 2400 mm $\pm$ 20 mm |
| 10. Weight (Approx.) | 1800 kg $\pm$ 10 kg |

### MATERIAL SPECIFICATION

- |                    |  |
|--------------------|--|
| 11. Frame          | 75x75x9 mm, 75x75x6 mm & 62x62x6mm M.S Angle.  |
| 12. Hitch          | 125x60x6 mm, M.S. channel  |
| 13. Threshing Drum | 850 mm dia. 1320 mm long, 05 Nos. Rings 50x8 mm M.S. flat,<br>08 Nos. cutter bars, M.S Flat 50x12mm with 3 mm M.S. sheet |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                      |  |
|----------------------|--|
| 14. Blower           | cover, 100 Nos. beaters of M.S flat 50x6 mm welded with cutting tip 8 mm, HRC 50-60, drum cover 3 mm M.S Sheet<br>01 No. 4 paddles of 4 mm M.S. Sheet. with cover M.S Sheet 6 mm, 2.5 mm on sides                |
| 15. Feeding Chamber  | 01 No. 4 paddles of 16 gauge with cover of same size<br>08 Nos. M.S Feeding Star, 2.5 mm guage M.S Sheet   |
| 16. Concave          | 02 Nos. replaceable, 01 .No. M.S square bar 6x9 mm and<br>01 No.11-guage M.S Sheet with square Hole size 10mm  |
| 17. Shafts           | Threshing 72 mm, PTO 50 mm, feeding roller 45 mm, Cam 40 mm and blower 38 mm M.S. round cold drawn and counter shaft for blower at side 55 mm dia.   |
| 18. No. of Sieves    | 05 Nos. M.S angle 38x38x5 mm, 01 No Fixed of hole size 2.5 mm, 02 Nos. replaceable,<br>02 sets for Gram and similar crop of hole size 11 and 10 mm<br>02 sets for wheat and similar crop of hole size 8 and 6 mm |
| 19. Balancing Wheels | 03 Nos., 01 Cast Iron 850 mm dia. and 02 Cast Iron 750 mm dia.   |
| 20. Bearings         | 04 Nos.6313, 02 Nos. 6310, 02 Nos. 6207, 01 No.6215. 02 Nos. 6209. 02 Nos. 6208. 04 Nos. 6205, 02 Nos.6204 and 02 Nos. 6208. 02 Nos. 6209 for wheels   |
| 21. Parking Stand    | 50x50x6mm M.S Box  |

### **MISCELLANEOUS**

- |              |   |
|--------------|---|
| 22. Paint    | Double coating after primer and smooth surface finish                               |
| 23. Bearings | European Standard or equivalent   |
| 24. Warranty | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |



## 32. SUGARCANE PLANTER



SUGARCANE  
PLANTER

### GENERAL AND TECHNICAL

1. Application	For sowing of sugarcane by cutting in billets
2. Type of machine	Tractor rear mounted semi-automatic
3. Linkage type	CAT-II (3-point hitch)
4. Number of rows	02
5. Power requirement	$\geq 55$ hp
6. Sugarcane loading capacity	$\geq 600$ kg
7. Fertiliser tank capacity	$\geq 50$ kg
8. Working depth	100-300 mm
9. Billet spacing	300 mm
10. Depth control	Adjustable up to six (06) levels
11. Roller	Single/double
12. Field capacity	1.0 acre/h
13. Origin	Imported / Local

### OVERALL DIMENSIONS

14. Length	2100 mm
15. Overall width	1600 mm
16. Overall height	2100 mm
17. Weight	$\geq 740$ kg

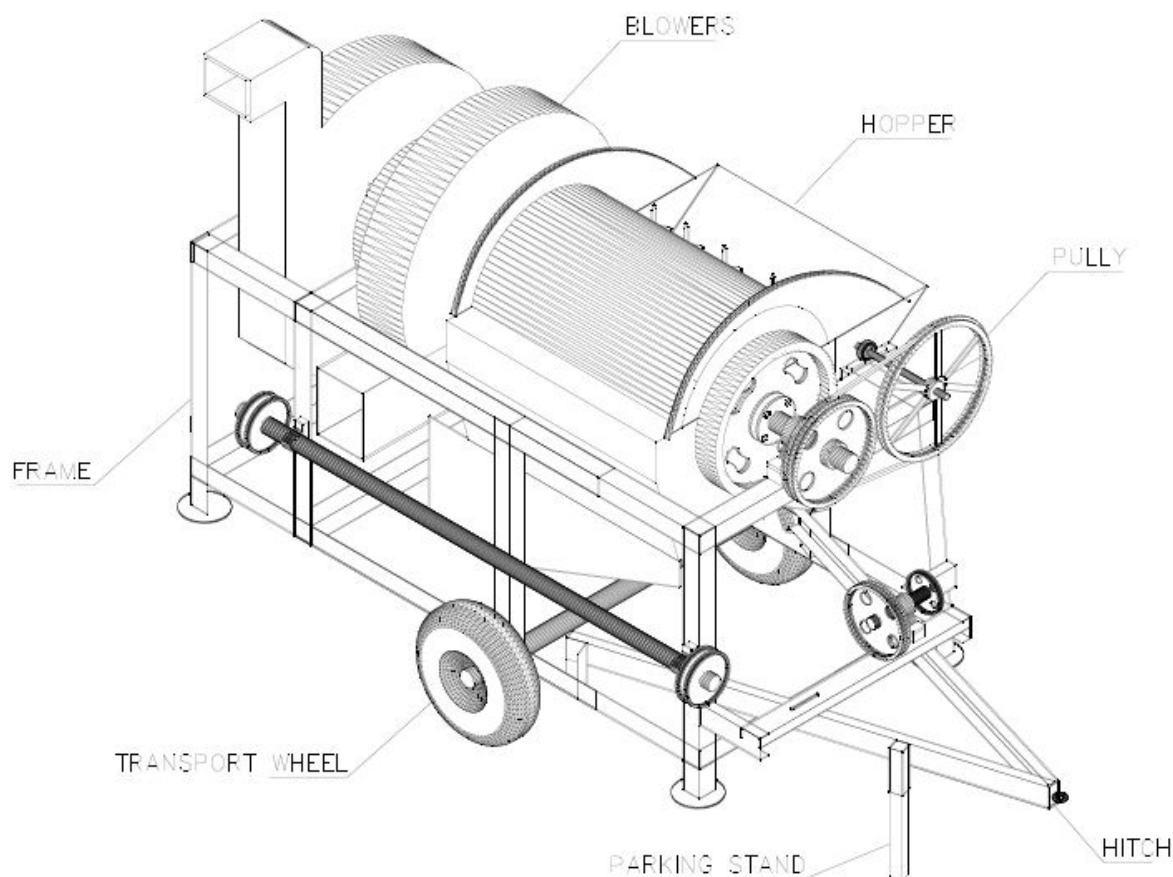
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MISCELLANEOUS**

- |              |   |
|--------------|---|
| 18. Paint    | Double coating after primer and smooth surface finish |
| 19. Bearings | European Standard or equivalent                       |
| 20. Warranty | Free: 1 year for parts and service                    |
|              | Extended: 5 years for parts supply on payment         |

## 33. GROUNDNUT THRESHER

GROUND NUT THRESHER



### GENERAL AND TECHNICAL

- |    |                      |  |
|----|----------------------|--|
| 1. | Application          | For threshing of groundnut crop                          |
| 2. | Type of machine      | Tractor trailed / tractor PTO operated at 540 rpm        |
| 3. | Linkage type         | 1-point hitch drawbar with two (02) transportation tyres |
| 4. | Power requirement    | 50 hp or above tractor                                   |
| 5. | Threshing capacity   | $\geq 800$ kg/h  |
| 6. | Threshing drum speed | 450-500 rpm  |
| 7. | Power transmission   | Through shafts, pulleys and belts                        |

### OVERALL DIMENSIONS

- |     |                           |                                |
|-----|---------------------------|--------------------------------|
| 8.  | Overall length            | $4300 \pm 30$ mm with tow hook |
| 9.  | Overall width with wheels | $1800 \pm 20$ mm               |
| 10. | Overall height            | $1900 \pm 20$ mm               |
| 11. | Weight                    | $\geq 1300$ kg                 |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

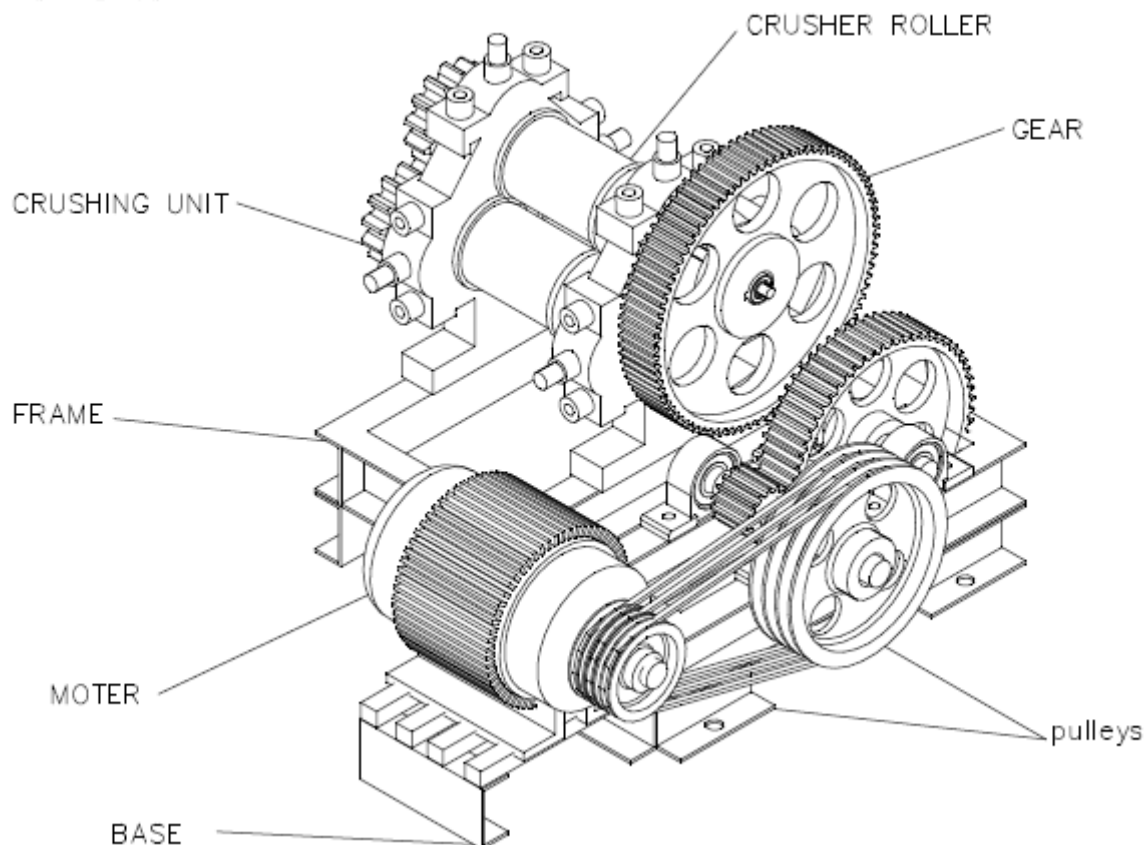
- |     |                         |   |
|-----|-------------------------|---|
| 12. | Main frame              | MS channel 100x44x6 mm, MS angle 75x75x6 mm and MS plate 175x8 mm<br>Axle MS pipe having outer diameter of 56 mm and 6 mm thickness<br>MS channel 200 x 56 x 5 mm for bearing support<br>MS channel 100 x 26 x 4 mm for hitch support                             |
| 13. | Hitch                   | 1270 mm long made of MS channel 75 mm x 75 mm x 5 mm with supports of MS angles 32 mm x 32 mm x 3 mm and 50 mm x 50 mm x 3 mm and MS flat 406 mm x 25 mm x 8 mm   |
| 14. | Blower                  | Having four (04) paddles 4 mm MS sheet, diameter of the blower is 860 mm with square opening of 254 mm x 254 mm and width of blower is 254 mm   |
| 15. | Fly wheel               | Cast iron flywheel of diameter 508 mm, width 75 mm with shaft hub diameter of 57 mm   |
| 16. | Crop feeder             | Feeding tray made of MS sheet 14 gauge and size 1240 mm x 630 mm with opening 608 mm x 225 mm   |
| 17. | Tray for threshed pods  | MS sheet 14 gauge, length 3000 ± 10 mm, width 1000 ± 10 mm, height 100 ± 10 mm having supports of MS angle iron 50 mm x 50 mm x 6 mm and 25 mm x 25 mm x 3 mm   |
| 18. | Threshing cylinder/drum | Drum diameter of 405 mm made of 8 rings of 50 mm MS flat and 6 mm thickness, the cylinder cover of MS 12 gauge sheet, the cylinder contains 80 heat treated and forged MS pegs fixed in spiral shape, the peg length of 75 mm made of round bar of 19 mm diameter |
| 19. | Shafts                  | PTO 50 mm diameter MS round bar cold drawn, cam shaft 50 mm MS round bar cold drawn, drum shaft 60 mm MS round cold drawn, blower shaft 45 mm MS round cold drawn   |
| 20. | Parking stand           | Four (04) parking stands of square/box 50x50x6 mm   |
| 21. | Origin                  | Local   |

### **MISCELLANEOUS**

- |     |                |   |
|-----|----------------|---|
| 22. | Paint          | Double coat with primer after surface finish  |
| 23. | Nuts and bolts | To be tightened with spring washers   |
| 24. | Bearings (new) | European Standard or equivalent   |
| 25. | Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 34. SUGARCANE CRUSHER (HIGH EFFICIENCY)

### SUGARCANE CRUSHER



### GENERAL AND TECHNICAL

- |                                |   |
|--------------------------------|---|
| 1. Application                 | For extraction of sugarcane juice at farm level for making <i>Gur</i> and brown sugar   |
| 2. Type of machine             | Engine-operated or tractor PTO operated containing six (06) horizontal crushing rollers mounted on MS frame and fixed at cemented foundation/platform or fixed at a trolley for moveable operations |
| 3. Linkage type                | 1-point hitch drawbar with two (02) transportation trolley tyres (for moveable machine only)  |
| 4. Power requirement           | 20-25 hp diesel engine or tractor PTO of 50 hp  |
| 5. Sugarcane crushing capacity | 3-4 tonnes per hour   |
| 6. Crushing efficiency         | $\geq 75 \%$  |
| 7. Average juice recovery      | 65 %  |
| 8. Juice tank capacity         | 200 L   |
| 9. Crushing rollers clearance  | Adjustable through overhead screws  |
| 10. Power transmission         | Through gear train, gear box and C-type two V-belts   |

### OVERALL DIMENSIONS

- |                    |                  |
|--------------------|------------------|
| 11. Overall length | 1900 $\pm$ 20 mm |
|--------------------|------------------|

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                           |                  |
|-----|---------------------------|------------------|
| 12. | Overall width with wheels | 1300 $\pm$ 15 mm |
| 13. | Overall height            | 1100 $\pm$ 10 mm |
| 14. | Approximate weight        | 1750 kg          |

### **MATERIAL SPECIFICATIONS**

- |     |                             |  |
|-----|-----------------------------|--|
| 15. | Main frame                  | Foundation MS channel 150 mm x 75 mm x 6 mm<br>Base frame MS channel 175 mm x 75 mm x 6 mm with MS flats 75 mm x 12 mm and 225 mm x 12 mm, square bar 12 mm x 12 mm and polish bar round 37 mm   |
| 16. | Back cover                  | MS plate 625 mm x 480 mm x 9 mm to mount feeding hopper  |
| 17. | Left and right side covers  | MS sheet 885 mm x 810 mm x 2 mm (14 gauge) to cover gears  |
| 18. | Top cover                   | SS 316 sheet 18 gauge food grade   |
| 19. | Juice tray                  | SS 316 (food grade) sheet of 1.59 mm thickness (16 SWG) with dimensions 430 x 1160 mm 165 mm   |
| 20. | Feeding hopper and conveyor | Hopper MS plate 4 mm thick and MS rollers 30 mm outer diameter   |
| 21. | Crushing rollers            | Six (06) horizontal rollers having the outer diameter of 250 mm and length of 500 mm, the outer surface of rollers should be made of SS 316 food grade (at least 25 mm outer thickness) and may be filled with cast iron, the top three (03) rollers placed exactly above the bottom three (03) rollers (first two for feeding and crushing, next two rollers for pressing the crushed cane and third two rollers for final squeezing the pressed cane), the diameter of roller shaft of 82 mm   |
| 22. | Geometry of rollers         | First two deep V-grooved (depth of groove is 12 mm) and others are plain with knurling   |
| 23. | Speed of rollers            | 18-20 rpm  |
| 24. | Gear box                    | Speed reduction gear box having gears of medium carbon steel with HRC $\geq$ 45  |
| 25. | Drive to rollers            | From engine to gear box through C-type V-belts and 608 mm V-grooved pulley mounted on gear box shaft, belts having cover made of MS 16 gauge sheet, and from gear box to drive roller through coupled shaft of 62 mm diameter, from drive roller to all other rollers through gear train of 11 gears mounted with the shafts of rollers on left and right sides, six (06) meshing gears of 280 mm outer diameter, 62 mm width and 26 teeth and five (05) drive gears having outer diameter 175 mm and with 62 mm and 15 teeth, the gear material is medium carbon steel with HRC $\geq$ 45 |
| 26. | Origin                      | Local  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 27. Paint          | Double coat with primer after surface finish  |
| 28. Nuts and bolts | To be tightened with spring washers           |
| 29. Bearings (new) | European Standard or equivalent               |
| 30. Warranty       | Free: 1 year for parts and service            |
|                    | Extended: 5 years for parts supply on payment |



### 35. OLIVE PICKER/HARVESTER (BRANCH SHAKER TYPE)



#### GENERAL AND TECHNICAL

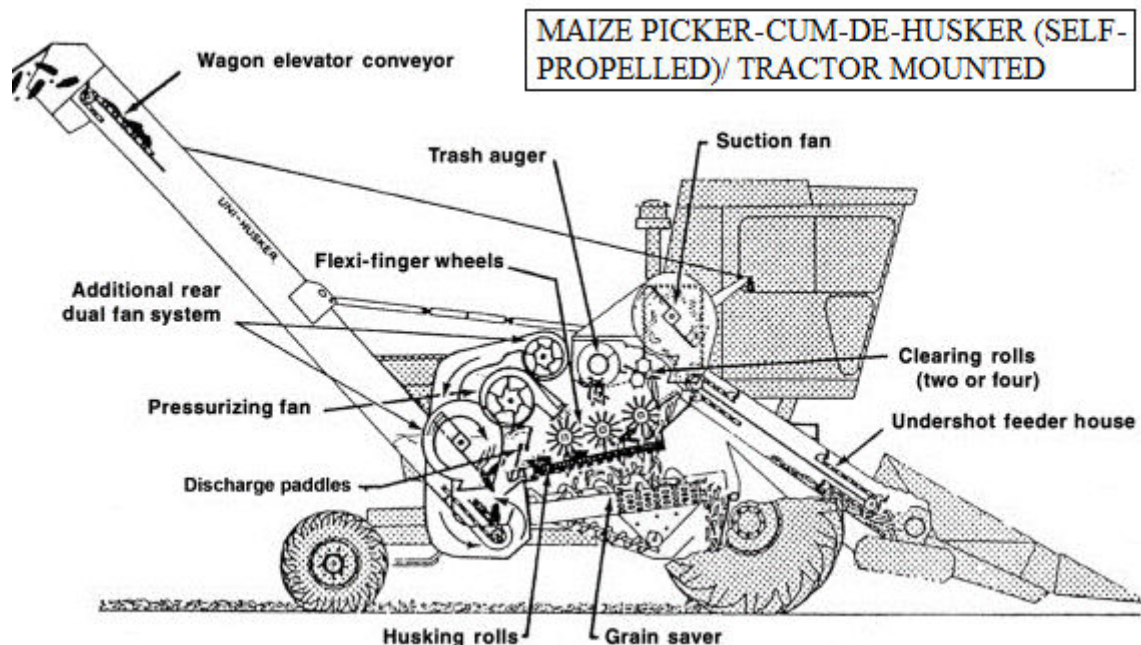
1.	Application	For harvesting of olive fruit
2.	Type of machine	Engine powered and hand operated
3.	Power requirement	2-hp from a gasoline engine
4.	Shaking displacement	50-60 mm
5.	Fuel tank	1 L
6.	Fork width	45 mm
7.	Rod material	aluminium
8.	Fuel mixing rate	25:1
9.	Vibration acceleration	7 m <sup>2</sup> / s
10.	Origin	Imported

#### OVERALL DIMENSIONS

11.	Overall length	2920 mm
12.	Overall width	280 mm
13.	Overall height	260 mm
14.	Weight	≥ 15 kg
15.	Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment



## 36. MAIZE PICKER-CUM-DE-HUSKER (SELF-PROPELLED)/ TRACTOR MOUNTED



### GENERAL AND TECHNICAL

1. Application	For harvesting and de-husking of maize cobs
2. Type of machine	Self-propelled combine
3. Power requirement	Diesel engine 45-hp
4. Engine cylinders	04 No.
5. Harvesting rows	02 No.
6. Cutting width	1135 mm
7. Row spacing	420-890 mm
8. Maximum cutting height	2120 mm
9. Minimum distance from ground	150 mm
10. Working speed	2.2-5.0 km/h
11. Effective field capacity	0.5-0.75 acre /h
12. Peeling roller	Spiral rubber roller
13. Number of peeling rollers	8 No.
14. Chopped straw width	930 mm
15. Front wheel distance	1200 mm
16. Back wheel distance	1300 mm
17. Origin	Imported

### OVERALL DIMENSIONS

18. Overall length	4850 mm
19. Overall width	1450 mm
20. Overall height	2600 mm



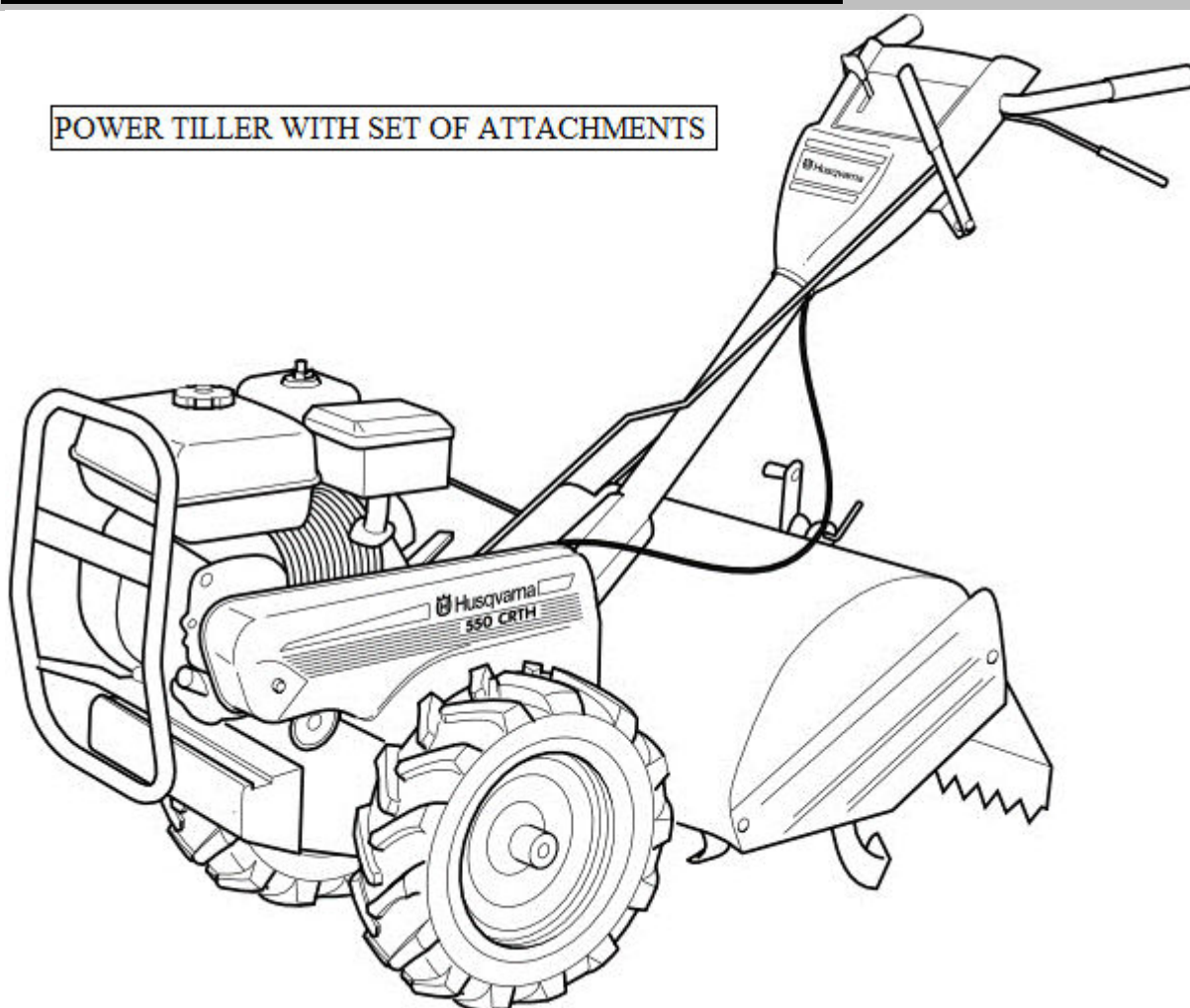
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                |           |                                     |
|-----|----------------|-----------|-------------------------------------|
| 21. | Overall weight | 2680 kg   |                                     |
| 22. | Warranty       | Free:     | 1 year for parts and service        |
|     |                | Extended: | 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### **37. POWER TILLER WITH SET OF ATTACHMENTS**

POWER TILLER WITH SET OF ATTACHMENTS



#### **GENERAL AND TECHNICAL**

1. Application	For cultivation, sowing, weeding and tillage operation for smallholder farmers
2. Type of machine	Walk behind type self-propelled machine
3. Power requirements	Maximum output power 13 hp
4. Attachments	Single plough, double plough, one bottom MB plough, rotary tiller, one ridger and small trolley, de-watering pump
5. Tilling width	800-1100 mm
6. Tilling depth	150-300 mm
7. Gearbox	02 No.
8. Gearbox material	Casing of cast iron, aluminium alloy (HRC >45)
9. Fuel tank capacity	6 L
10. Engine oil capacity	1.1 L
11. Engine starting mode	Recoil / electric
12. Tyres	02 No.
13. Critical components	Tines, cutters, shovel tips, blades made of HRC $\geq 40$

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

14. Origin Imported

### **OVERALL DIMENSIONS**

15. Overall length	980 mm
16. Overall width	570 mm
17. Overall height	760 mm
18. Gross weight	$\geq 135$ kg
19. Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment

### 38. WALK BEHIND MAIZE HARVESTER-WINDROWER

WALK BEHIND MAIZE  
HARVESTER-WINDROWER



#### GENERAL AND TECHNICAL

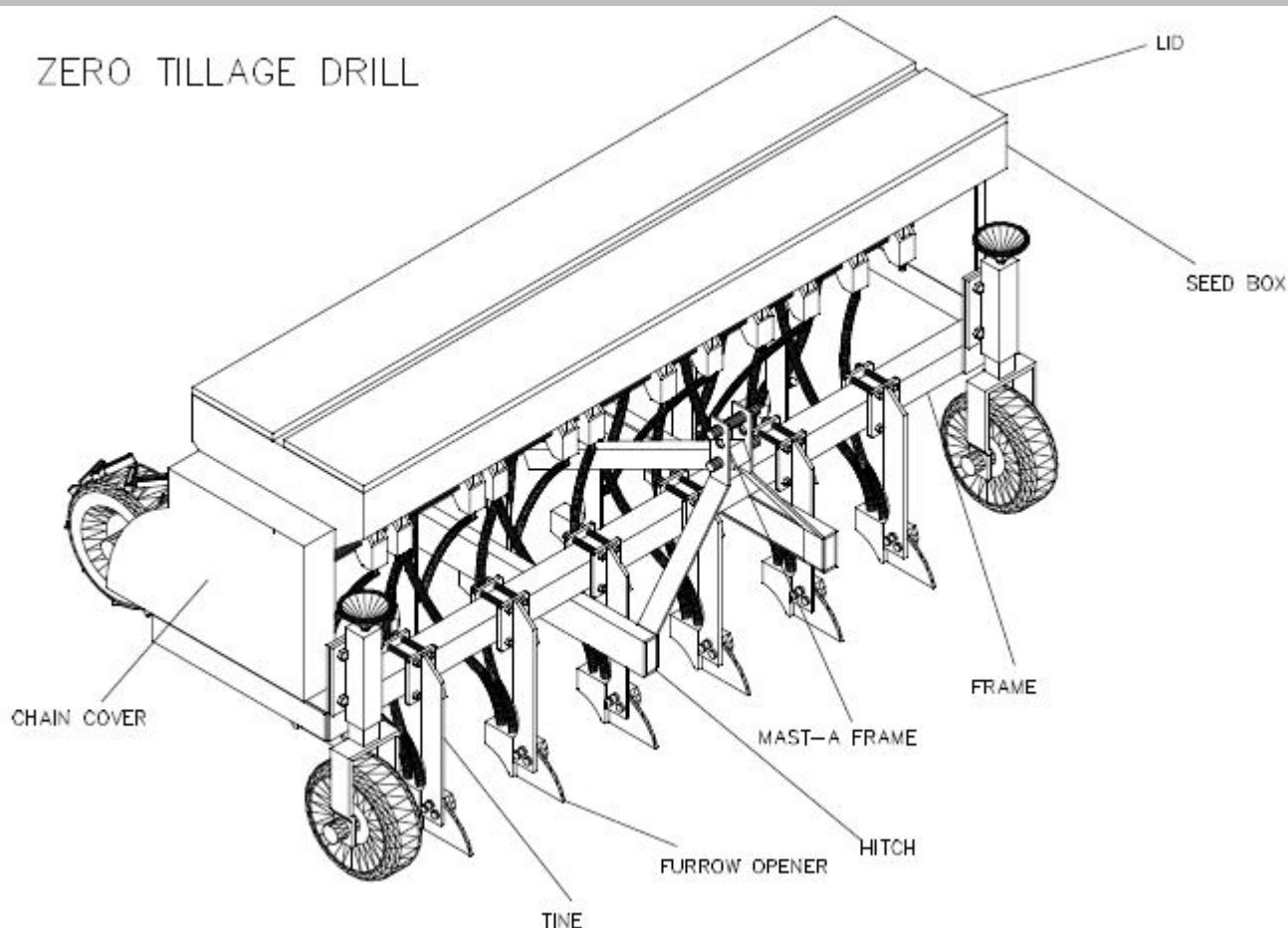
1. Application	For harvesting maize, sorghum , fodder and other crops
2. Type of machine	Self-propelled walk behind type machine
3. Power requirements	15 hp gasoline engine recoil start
4. Attachments	Provided as per demand
5. Cutting width	1000-1200 mm
6. Number of cutting rows	04 for fodder crop
7. Number of swath divider	04
8. Minimum cutting height	50 mm or more
9. Effective field capacity	0.5-0.75 acres/h
10. Placing type	Sidewise or windrower
11. Origin	Imported

#### OVERALL DIMENSIONS

12. Overall length	1470 mm $\pm$ 10 mm
13. Overall width	1070 mm $\pm$ 10 mm
14. Overall height	650 mm $\pm$ 10 mm
15. Gross weight	$\geq$ 340 kg (min)
16. Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment

## 39. ZERO TILLAGE DRILL

### ZERO TILLAGE DRILL



### GENERAL AND TECHNICAL

- |                                       |   |
|---------------------------------------|---|
| 1. Application                        | For sowing of wheat without plough of field   |
| 2. Type of machine                    | Tractor rear mounted                          |
| 3. Linkage type                       | Cat-II (three point hitch)                    |
| 4. Power requirement                  | 50 hp or above tractor                        |
| 5. Number of rows                     | 13  |
| 6. Row spacing                        | 150 mm adjustable                             |
| 7. Working width                      | 1840 mm $\pm$ 10 mm                           |
| 8. Seed and fertiliser boxes          | Placed above the main frame and fixed with it |
| 9. Seed and fertiliser boxes capacity | 100 kg each                                   |
| 10. Working depth                     | Up to 60 mm                                   |
| 11. Field capacity                    | $\geq$ 1.0 acre/h                             |
| 12. Efficiency                        | $\geq$ 75 %                                   |

### OVERALL DIMENSIONS

- |                    |                  |
|--------------------|------------------|
| 13. Overall length | 1700 $\pm$ 20 mm |
| 14. Overall width  | 2460 $\pm$ 20 mm |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                |              |
|-----|----------------|--------------|
| 15. | Overall height | 1050 ± 10 mm |
| 16. | Weight         | ≥ 300 kg     |

### **MATERIAL SPECIFICATIONS**

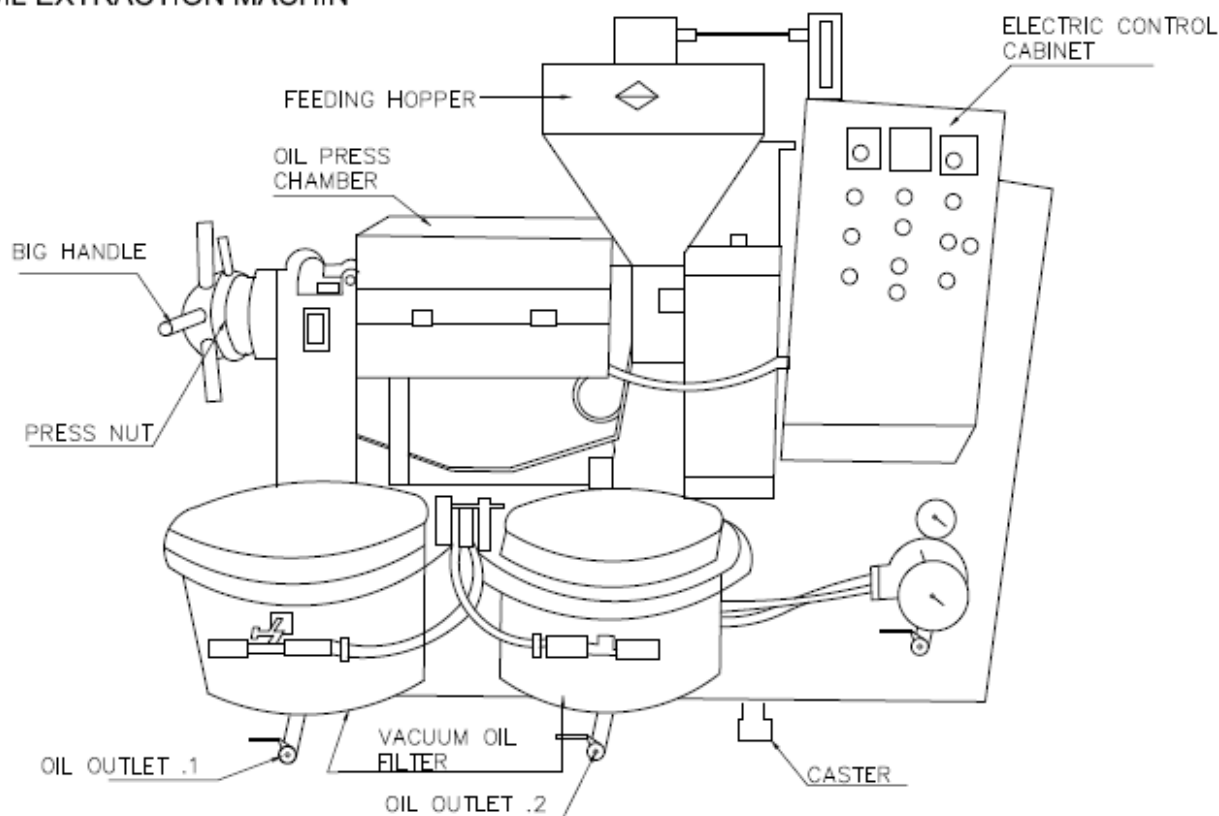
- |     |                              |  |
|-----|------------------------------|--|
| 17. | Main frame                   | MS angle of 68 mm × 68 mm × 5 mm   |
| 18. | Mast (A-frame)               | MS flat 62 mm width and 12 mm thickness  |
| 19. | Hitch                        | MS box or MS square pipe 50 mm x 50 mm x 5 mm  |
| 20. | Seed and fertiliser box      | MS sheet trapezoidal shape 16 gauge having dimensions (L×W×H) of 1820 mm × 265 mm × 305 mm fitted with seed and fertilizer adjustment levers casted of cast iron with scale  |
| 21. | Seed metering mechanism      | Fluted rollers made of plastic and casing made of plastic or MS sheet 18 gauge and have flexible pipe tubes (26 No.) for delivery of seed/fertilizer from metering mechanism to soil, the rollers are driven from the ground wheel and rollers are mounted on MS pipe of 19 mm diameter and 2 mm thickness |
| 22. | Power to the metering system | Through ground wheel 580 mm outer diameter and through chain and sprocket system   |
| 23. | Furrow opener and tine       | T-type 8 mm thick MS sheet with 08 mm tip having HRC > 45 bolted on cast iron casted coulter with seed and fertilizer MS pipes of 25 mm diameter and tine made of MS plate 375 mm x 50 mm x 20 mm  |

### **MISCELLANEOUS**

- |     |                |   |
|-----|----------------|---|
| 24. | Paint          | Double coat with primer after surface finish  |
| 25. | Nuts and bolts | To be tightened with spring washers   |
| 26. | Bearings (new) | European Standard or equivalent   |
| 27. | Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 40. OLIVE OIL EXTRACTION MACHINE

OIL EXTRACTION MACHIN



- |  |  |
|--|--|
| 1. Application                         | For extraction of olive oil from olive fruit   |
| 2. Type of machine                     | All in one type / compact and easy to use olive oil extraction machine   |
| 3. Oil extraction capacity             | 100 kg fruit per hour  |
| 4. Fruit de-leafing and washing system | Complete section with leaf remover with grid, fan and SS tank for fruit collection and washing/resining fitted with olive feeding elevated screw conveyor to mill  |
| 5. Hammer crushing mill                | Fruit crushing four (04) spokes hammer type mill with high rotary speed, strong SS grid (all made of food grade SS 316) fitted with SS screw conveyor with hatch for crushed fruit from mill to malaxer tank                             |
| 6. Malaxer                             | Horizontal malaxer tank made of SS 316 fitted with discharge valve and level sensor, malaxer jacket fitted with hot water circulation system complete with an electrical heating thermostat for maintaining water and paste temperatures |
| 7. Transfer pump for decanter          | Malaxer fitted with transfer pump for paste to decanter  |
| 8. Extraction system                   | 2-phase compact type decanter with all parts of extraction system consist of food grade, corrosive free drop-forged heat   |

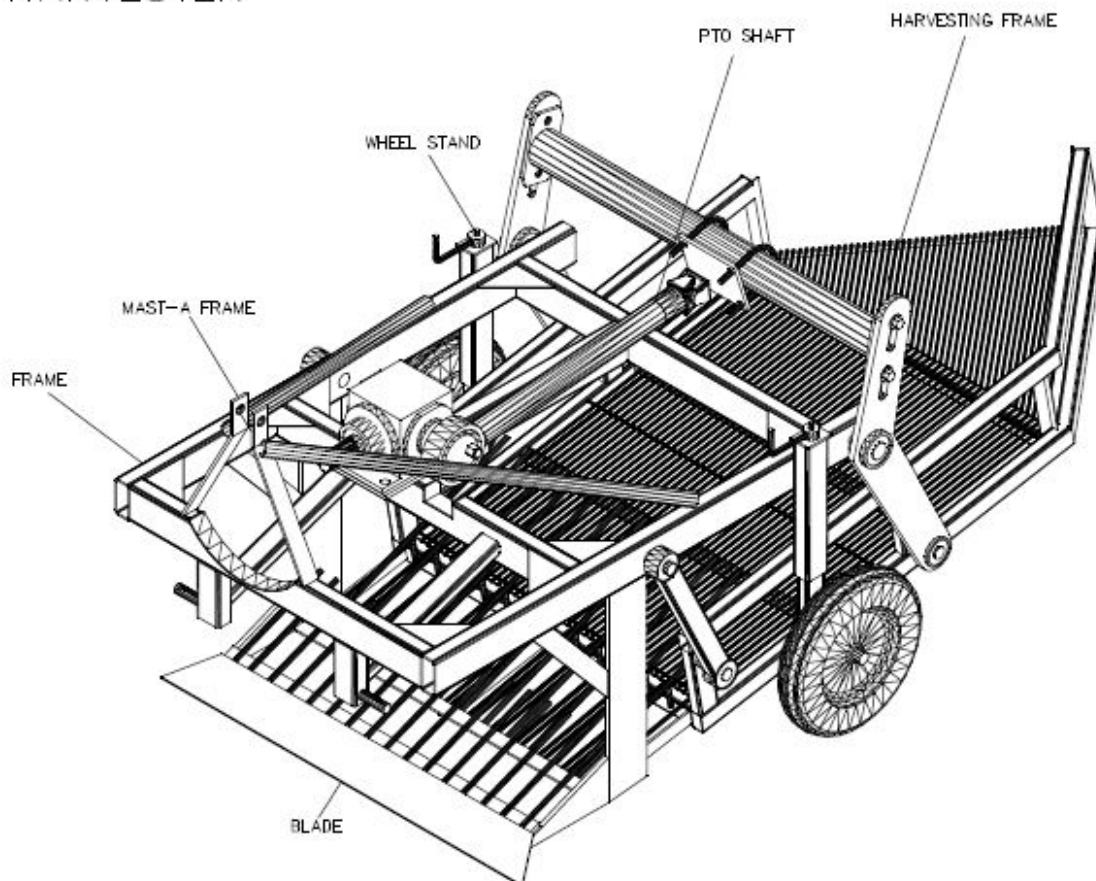


## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

		treated stainless steel. Main motor coupled with it by toothed belt to avoid any slippage. Main motor overload protection safety sensor. Extraction speed with rotation speed control driver
9.	Pump for pomace	Extraction system fitted with pomace evacuation pump with screw conveyor
10.	Oil collector	Extraction system equipped with food grade SS oil collection tank with strainer and oil filtration unit
11.	Electrical control panel	Complete (as per requirement)
12.	Electrical power	220 V AC-50 HZ single phase connection
13.	Accessories	<ol style="list-style-type: none"> <li>1. Onsite rapid oil quality analyzer with for free fatty acid, peroxide value, polyphenols with all tests kit and other operational accessories</li> <li>2. Olive oil filling machine with filling range of 5-3500 mL with single head bottle ALU capping and sealing machine</li> <li>3. Special lubes for all working parts of the olive oil extraction machinery must be supplied at delivery/installation</li> </ol>
14.	Installation	Complete operational installation and commissioning of extraction unit at site including electrical and plumbing as per project requirement under supervision of the foreign manufacturing firm's engineer
15.	Training	2-3 days installation and operational training will be provided at site by the firm's technical staff
16.	Literature	English/Urdu
17.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments
18.	Origin	Imported
19.	Overall length	1610 mm
20.	Overall width	900 mm
21.	Overall height	1670 mm
22.	Weight	400 kg

## 41. GARLIC HARVESTER

### GARLIC HARVESTER



### GENERAL AND TECHNICAL

1. Application	For harvesting of garlic, onion, potato, carrot and others
2. Type of machine	Tractor rear mounted and PTO driven
3. Linkage type	Cat-II (three point hitch)
4. Functions	Digging, shaking and conveying
5. Power requirement	$\geq 50$ -hp
6. Number of rows	02
7. Working depth	150-300 mm
8. Working width	1100 mm
9. Drive to shaker and conveyor	From gearbox
10. Harvesting blade	Blade tip hardened steel having HRC $> 35$
11. Field capacity	$\geq 0.6$ acre/h
12. Origin	Imported / Local

### OVERALL DIMENSIONS

13. Overall length	2500 mm $\pm$ 20 mm
14. Overall width	1400 mm $\pm$ 15 mm
15. Overall height	1100 mm $\pm$ 10 mm

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

16. Gross weight  $\geq 325$  kg

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 17. Paint          | Double coat with primer after surface finish  |
| 18. Nuts and bolts | To be tightened with spring washers           |
| 19. Bearings (new) | European Standard or equivalent               |
| 20. Warranty       | Free: 1 year for parts and service            |
|                    | Extended: 5 years for parts supply on payment |

## 42. POTATO DIGGER-CUM-COLLECTOR

### POTATO DIGGER-CUM-COLLECTOR



#### GENERAL AND TECHNICAL

1.	Application	For harvesting and collecting potatoes
2.	Type of machine	Tractor semi-mounted, trailed and PTO and hydraulic driven
3.	Linkage type	Cat-II (1-point hitch drawbar with four (04) transportation tyres
4.	Functions	Digging, shaking and collecting potatoes
5.	Power requirement	≥ 65-hp
6.	Number of rows	01
7.	Power transmission	PTO shaft, V-belt drive PTO speed 540 rpm
8.	First main web width	750 mm
9.	Second main web width	750 mm
10.	First main web sieving area	105 m <sup>2</sup>
11.	Second main web sieving area	146 m <sup>2</sup>
12.	Separator deviner web width	850 mm
13.	First separator width	900 mm
14.	Second separator width	650 mm
15.	Picking table width	580 mm
16.	Trash web width	280 mm
17.	Tank storage capacity	2000 kg
18.	Unloading height	3300 mm
19.	Transport speed	25 km/h
20.	Origin	Imported

#### OVERALL DIMENSIONS

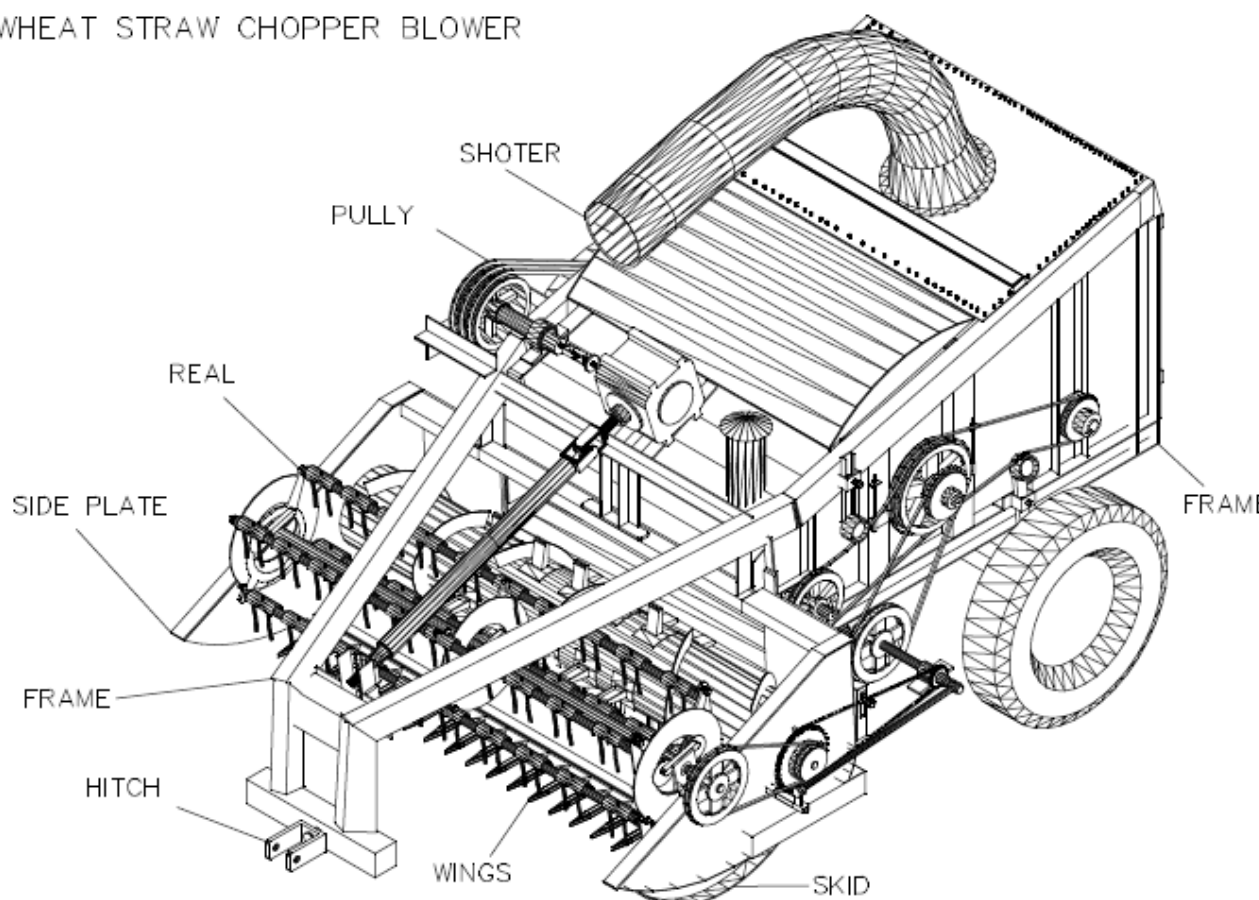
21.	Overall length	7900 mm
-----	----------------	---------

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                |   |
|-----|----------------|---|
| 22. | Overall width  | 3000 mm   |
| 23. | Overall height | 3100 mm   |
| 24. | Weight         | $\geq 3800$ kg  |
| 25. | Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 43. WHEAT STRAW CHOPPER BLOWER

### WHEAT STRAW CHOPPER BLOWER



### GENERAL

- |                   |   |
|-------------------|---|
| 1. Application    | For collecting and chopping of wheat straw after combine harvester operation. |
| 2. Working width  | 2300 mm or above  |
| 3. Wheels         | 02 Nos. 7.50-16, 12 PR  |
| 4. Tractor power  | $\geq 65$ hp  |
| 5. Field Capacity | $\geq 1.0$ acre/hr  |

### OVERALL DIMENSIONS

- |           |                     |
|-----------|---------------------|
| 6. Length | 3700 mm $\pm 30$ mm |
| 7. Width  | 2700 mm $\pm 20$ mm |
| 8. Height | 2100 mm $\pm 20$ mm |
| 9. Weight | $\geq 2100$ kg      |

### MATERIAL SPECIFICATIONS

- |                  |                                 |
|------------------|---------------------------------|
| 10. Hitch        | 100x100x5 mm MS box             |
| 11. Toe hook     | U-type 17 mm MS plate rotatable |
| 12. Trolley hook | U-type 25 mm MS plate rotatable |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                     |                                      |
|---------------------|--------------------------------------|
| 13. Main frame      | 5 mm MS formed sheet on both sides   |
| 14. Back side frame | 150x75x5 mm MS box                   |
| 15. Hydraulic pipes | 02 Nos. 12 mm dia. MS pipe           |
| 16. Gear box        | Cast iron/MS casting, with 1:1 ratio |
| 17. UJ shaft        | 01 No. standard quality forged yokes |

### **REEL ASSEMBLY**

- |                 |  |
|-----------------|--|
| 18. Reel pipe   | 06 Nos. 32 mm dia. MS pipe with 2 mm wall thickness. |
| 19. Reel plates | 03 Nos. 14 gauge MS sheet formed, hexagonal          |
| 20. Reel shaft  | 58 mm dia. MS pipe with 2.5 mm wall thickness        |
| 21. Collectors  | 72 Nos. straw collectors, 5 mm spring steel          |
| 22. Bearings    | 02 Nos. UCP 207.                                     |

### **CUTTER BAR ASSEMBLY**

- |                       |   |
|-----------------------|---|
| 23. Cutter bar length | 2360 mm                                   |
| 24. Blades            | 31-33 Nos. triangular 75 mm, HRC 50-60    |
| 25. Blade guards      | Steel cast/forged steel                   |
| 26. Drive system      | Wobble box of combine harvester 1:1 ratio |
| 27. Skids             | 02 Nos. 62x12 mm MS flat                  |

### **AUGER ASSEMBLY**

- |                                |   |
|--------------------------------|---|
| 28. Auger frame                | 3 mm MS sheet, both sides.  |
| 29. Auger dia.                 | 250 mm MS pipe with 2 mm wall thickness.  |
| 30. Auger flights              | 95x2 mm MS sheet  |
| 31. Auger lugs                 | 20 Nos. semicircular formed MS sheet 100x2 mm fitted with nut & bolts on 2 mm base plate. |
| 32. Auger bearings             | UCP/UCF, 207/208  |
| 33. Auger axle                 | 40 mm dia. MS round axles 02 Nos.   |
| 34. Auger sprocket & chain     | Sprocket 12 mm face width, 60 # chain.  |
| 35. Intermediate & sieve shaft | 40 mm dia. MS round.  |
| 36. Feeder shaft               | 45 mm MS round, with 02 Nos. appropriate size bearings.                                   |

### **THRESHING DRUM ASSEMBLY**

- |                                 |   |
|---------------------------------|---|
| 37. Threshing drum rims & rings | 05 Nos. (03 Nos. rims & 02 Nos. rings) 582 mm dia. MS formed sheet/Steel casting. |
| 38. Threshing drum shaft        | 66 mm MS round with 02 Nos. appropriate size universal type bearings.             |
| 39. Threshing bar               | 16 Nos. 1475x50x9 mm MS flat  |
| 40. Threshing blades & concave  | 280 Nos. 50-60 HRC  |
| 41. Sieve                       | 18 gauge M.S. sheet 4.5 mm holes dia.   |
| 42. Grain tray                  | MS sheet 16-gauge, can hold 40 kg grains.   |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **BLOWER ASSEMBLY**

- |                  |  |
|------------------|--|
| 43. Fan          | 2 Nos. each with 4-wings, MS sheet 4 mm thickness                    |
| 44. Blower shaft | 66 mm MS round with 02 Nos. appropriate size universal type bearings |
| 45. Blower body  | 2 mm and 3 mm MS sheet in front of fan's face                        |
| 46. Blower pipe  | Moveable, 14 gauge MS sheet with extension pipe 16 gauge             |

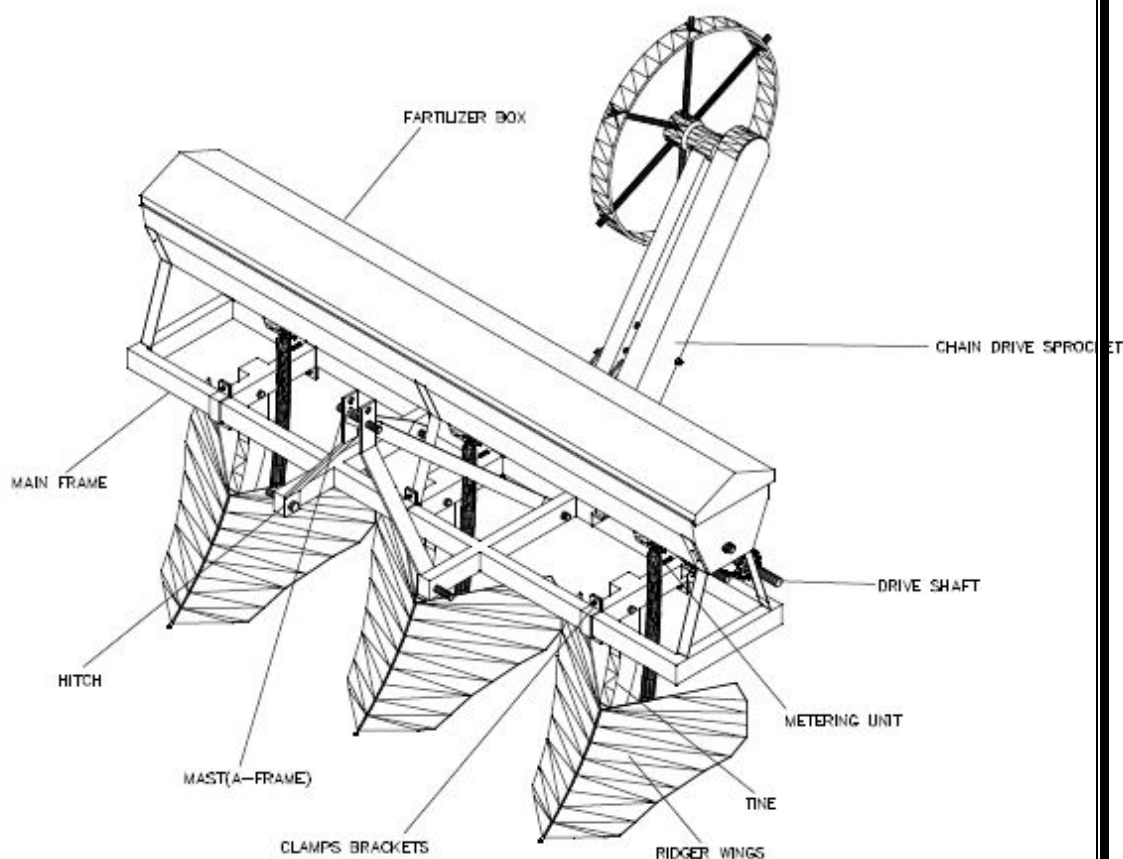
### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 47. Paint          | Double coating after primer and smooth surface finish                                 |
| 48. Nuts and bolts | To be tightened with spring washers   |
| 49. Bearings       | European Standard or Equivalent   |
| 50. Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |



## 44. SUGARCANE RIDGER WITH FERTILIZER ATTACHMENT

SUGARCANE RIDGER WITH FERTILIZER (2½")



### GENERAL

- |                            |                          |
|----------------------------|--------------------------|
| 1. Application             | For sugarcane plantation |
| 2. No. of rows             | 03 (adjustable)          |
| 3. Row spacing             | $762 \pm 5$ mm           |
| 4. Field Capacity          | $\geq 1.0$ acre/hr       |
| 5. Power transmission      | Through ground wheel     |
| 6. Fertilizer box capacity | 4 bags                   |
| 7. Metering mechanism      | Fluted wheel             |
| 8. Tractor power           | $\geq 50$ hp             |

### OVERALL DIMENSIONS

- |            |                     |
|------------|---------------------|
| 9. Length  | 1480 mm $\pm$ 10 mm |
| 10. Width  | 2400 mm $\pm$ 20 mm |
| 11. Height | 1320 mm $\pm$ 10 mm |
| 12. Weight | $\geq 325$ kg       |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

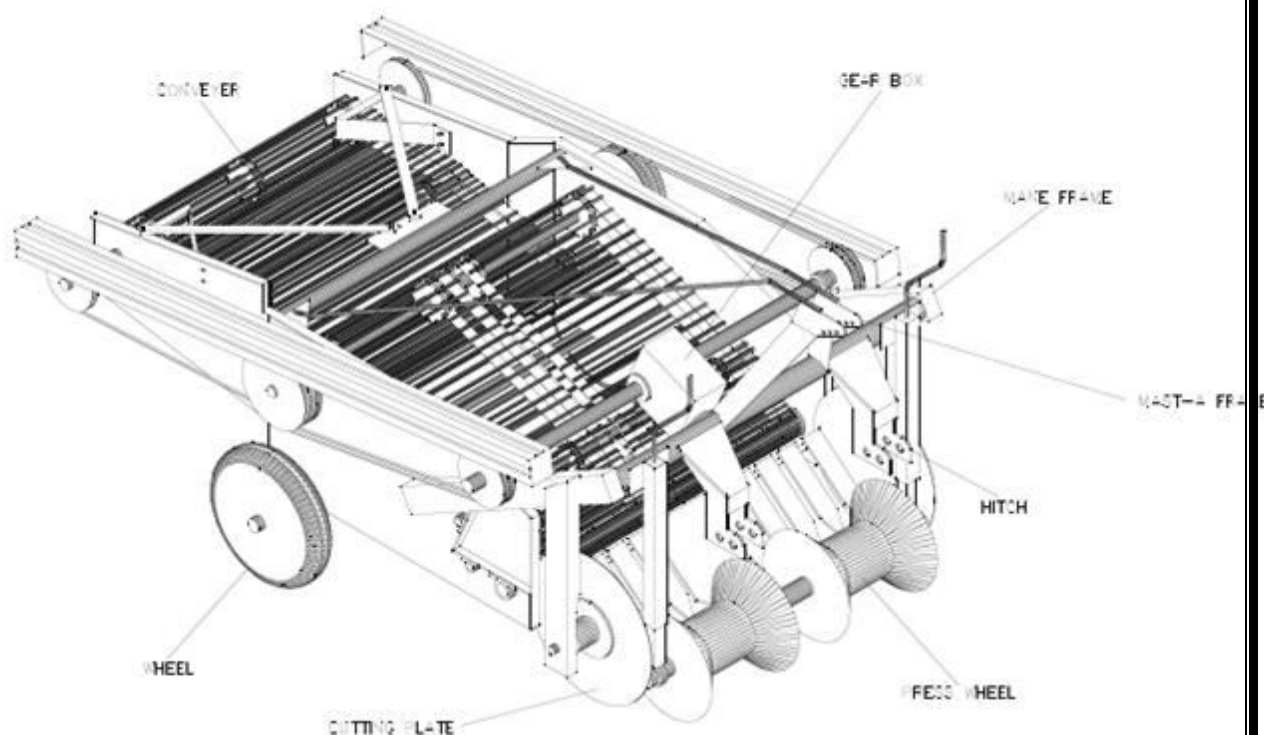
- |                        |   |
|------------------------|---|
| 13. Main frame         | 70*40*6 mm MS box with 2 cross members of same size   |
| 14. Hitch              | 70*40*6 mm MS box welded with main frame  |
| 15. Mast               | 64*8 mm and 50*10 mm MS flat  |
| 16. Tine               | 790*76*23 mm MS sheet   |
| 17. Tine supports      | 70*40*6 mm M.S. box welded with 66*9 mm M.S. flat at ends and bolted with main frame                      |
| 18. Wings              | 6 mm MS sheet supported with 38*8 mm MS flat  |
| 19. Share              | M.S. hardened sheet 205*130*10 mm, HRC 40-45 with bottom plate 125mm wide and 16mm thick                  |
| 20. Fertilizer box     | 18 gauge MS sheet with 22 mm round shaft  |
| 21. Ground wheel       | 508 mm rim dia., 75*6 mm M.S. flat and 38*38*5 mm M.S. angle pegs mounted on 75*75*6 mm MS box adjustable |
| 22. Bearings           | 02 Nos. 6206 sealed with bracket<br>02 Nos. 6205 sealed with bracket                                      |
| 23. Power transmission | 32 mm dia. shaft, Chain 60 #  |
| 24. Parking stand      | 45 mm dia. with wall thickness 4 mm   |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 25. Paint          | Double coat with primer after surface finish  |
| 26. Nuts and bolts | To be tightened with spring washers   |
| 27. Bearings       | European Standard or Equivalent   |
| 28. Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## 45. POTATO DIGGER SHAKER

Potato Digger Shaker



### GENERAL

- |                   |   |
|-------------------|---|
| 1. Application    | For digging out and shaking of potatoes |
| 2. Rows           | 02 Nos.                                 |
| 3. Tractor power  | ≥ 60 hp                                 |
| 4. Field Capacity | ≥ 1.0 acre/hr                           |

### OVERALL DIMENSIONS

- |           |                 |
|-----------|-----------------|
| 5. Length | 3000 mm ± 30 mm |
| 6. Width  | 1950 mm ± 20 mm |
| 7. Height | 1300 mm ± 10 mm |
| 8. Weight | ≥ 900 kg        |

### MATERIAL SPECIFICATIONS

- |                         |   |
|-------------------------|---|
| 9. Main frame           | 88 mm dia. MS pipe, 8 mm wall thickness 100x50x6 mm MS box, 4 mm MS sheet 50x6 mm MS flat, 12 and 10 mm MS plate 60 mm dia. MS pipe               |
| 10. Mast (A hitch)      | 12 mm & 6 mm MS plate and support of 22 mm dia. MS round  |
| 11. Depth control wheel | 8x38x4 mm (male), 50x50x4.5 mm (female) MS box with 18 mm dia. M.S rod for adjustment and with supports of 380x75x10 mm MS flat and 6 mm MS sheet |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

- |   |                             |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
|---|-----------------------------|---|-----------------------|--------------|--------------------------------|--------------|---|-----------------|-------------------------------------|---------------|--------------------------------------|--------------|---------------------|--------------|--------------------------|--|------------|--------------|-------------|--------------|--------------|--------------|---------|--------------|
| 12.                                     | Press wheel                 | Made from 2 mm sheet bolted with 60 mm dia. 3 mm wall thickness MS pipe with axle ends for bearing  |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 13.                                     | Cutting Disc                | 02 Nos. 550 mm dia. 6 mm thick with bearing hub having width and depth adjustment   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 14.                                     | Cutting blades              | 10 Nos. 350x75x10 mm leaf springs and 01 No. 390x255x9 mm MS sheet at Center, bolted with 30x30 mm M.S. square rod welded with 38x38 mm MS sq. rod and main frame   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 15.                                     | Gear box                    | C.I. drive on both sides through 40 mm MS shaft mounted on 9 mm & 6 mm MS sheet   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 16.                                     | Wheel                       | 400 mm dia. 100 mm wide made from MS formed sheet 2.0 mm pressed  |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 17.                                     | Wheel shaft                 | 50x50x4.5 mm MS box with axle at ends   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 18.                                     | Conveyor (1 <sup>st</sup> ) | 2200 mm long and 1350mm wide 60 mm dia. with wall thickness 6 mm MS pipe with 38 mm MS shaft and 30 mm over lapped with conveyor of flat belt 70 mm wide riveted with spring carbon steel rod 12 mm dia. at space of 35 mm in two sections having 04 Nos. sprockets at end 200 mm dia. with face width 40 mm at end 04 Nos. sprocket came type at center 04 Nos. sprockets 120 mm dia. with face width 40 mm at lower   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 19.                                     | Conveyor (2 <sup>nd</sup> ) | 2200 mm long and 1350 mm wide 60 mm dia. with wall thickness 4.5 mm MS pipe with 30 mm dia. MS shaft with same size of sprockets over lapping with flat belt and spring steel rods riveted with it  |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 20.                                     | Belt covers                 | 02 Nos. 16 gauge M.S. sheet   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 21.                                     | Shafts                      | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Gear box drive shafts</td> <td style="width: 50%;">40 mm</td> </tr> <tr> <td>1<sup>st</sup> conveyor shaft</td> <td>40 mm</td> </tr> <tr> <td>1<sup>st</sup> conveyor Support shafts</td> <td>30 mm (02 Nos.)</td> </tr> <tr> <td>2<sup>nd</sup> conveyor shafts</td> <td>35 mm &amp; 30 mm</td> </tr> </table>  | Gear box drive shafts | 40 mm        | 1 <sup>st</sup> conveyor shaft | 40 mm        | 1 <sup>st</sup> conveyor Support shafts | 30 mm (02 Nos.) | 2 <sup>nd</sup> conveyor shafts     | 35 mm & 30 mm |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Gear box drive shafts                   | 40 mm                       |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 1 <sup>st</sup> conveyor shaft          | 40 mm                       |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 1 <sup>st</sup> conveyor Support shafts | 30 mm (02 Nos.)             |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 2 <sup>nd</sup> conveyor shafts         | 35 mm & 30 mm               |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 22.                                     | Bearings                    | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Depth control</td> <td style="width: 50%;">02 Nos. 6307</td> </tr> <tr> <td>Cutting Disc</td> <td>04 Nos. 6307</td> </tr> <tr> <td>Gear box drive shaft</td> <td>02 Nos. 6308</td> </tr> <tr> <td>1<sup>st</sup> conveyor front pipe</td> <td>02 Nos. 6306</td> </tr> <tr> <td>1<sup>st</sup> conveyor drive shaft</td> <td>02 Nos. 6207</td> </tr> <tr> <td>Intermediate shafts</td> <td>04 Nos. 6206</td> </tr> <tr> <td>2<sup>nd</sup> conveyor</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Front pipe</td> <td>02 Nos. 6307</td> </tr> <tr> <td style="padding-left: 20px;">Drive shaft</td> <td>02 Nos. 6206</td> </tr> <tr> <td style="padding-left: 20px;">Center shaft</td> <td>02 Nos. 6206</td> </tr> <tr> <td style="padding-left: 20px;">Pulleys</td> <td>04 Nos. 6206</td> </tr> </table> | Depth control         | 02 Nos. 6307 | Cutting Disc                   | 04 Nos. 6307 | Gear box drive shaft                    | 02 Nos. 6308    | 1 <sup>st</sup> conveyor front pipe | 02 Nos. 6306  | 1 <sup>st</sup> conveyor drive shaft | 02 Nos. 6207 | Intermediate shafts | 04 Nos. 6206 | 2 <sup>nd</sup> conveyor |  | Front pipe | 02 Nos. 6307 | Drive shaft | 02 Nos. 6206 | Center shaft | 02 Nos. 6206 | Pulleys | 04 Nos. 6206 |
| Depth control                           | 02 Nos. 6307                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Cutting Disc                            | 04 Nos. 6307                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Gear box drive shaft                    | 02 Nos. 6308                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 1 <sup>st</sup> conveyor front pipe     | 02 Nos. 6306                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 1 <sup>st</sup> conveyor drive shaft    | 02 Nos. 6207                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Intermediate shafts                     | 04 Nos. 6206                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| 2 <sup>nd</sup> conveyor                |                             |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Front pipe                              | 02 Nos. 6307                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Drive shaft                             | 02 Nos. 6206                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Center shaft                            | 02 Nos. 6206                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |
| Pulleys                                 | 04 Nos. 6206                |   |                       |              |                                |              |   |                 |                                     |               |                                      |              |                     |              |                          |  |            |              |             |              |              |              |         |              |

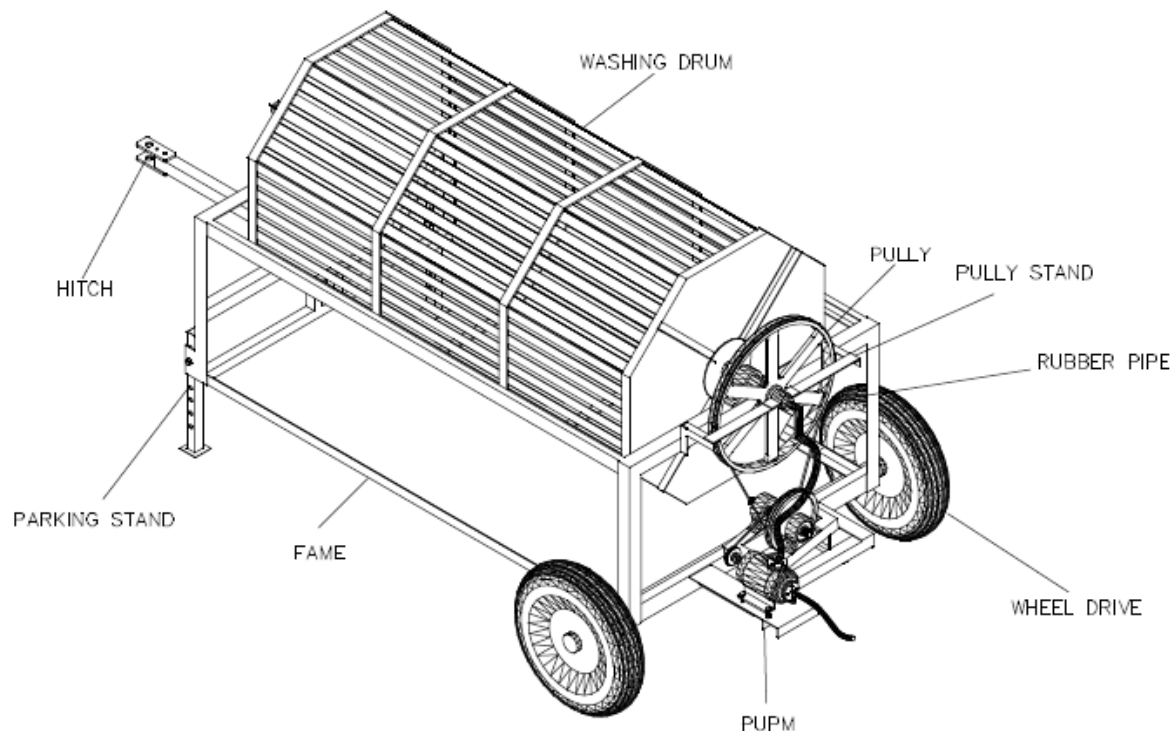
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MISCELLANEOUS**

- |     |                |  |
|-----|----------------|--|
| 23. | Paint          | Double coat with primer after surface finish   |
| 24. | Nuts and bolts | To be tightened with spring washers            |
| 25. | Bearings       | European Standard or Equivalent                |
| 26. | Warranty       | Free : 1 year for parts and service            |
|     |                | Extended : 5 years for parts supply on payment |

## 46. TRACTOR OPERATED CARROT WASHER

### CARROT WASHER



### GENERAL

- |                       |  |
|-----------------------|--|
| 1. Application        | To wash the carrots  |
| 2. Type               | Octagonal Drum type, Tractor PTO shaft driven, Continuous feeding Type |
| 3. Washing Capacity   | 2 tons/hr. or above  |
| 4. Washing drum speed | 20-25 rpm @ 1500 rpm of tractor  |
| 5. Tyres              | 02 Nos. 6.50-16 LT   |

### OVERALL DIMENSIONS

- |           |                     |
|-----------|---------------------|
| 6. Length | 5200 mm $\pm$ 50 mm |
| 7. Width  | 1600 mm $\pm$ 20 mm |
| 8. Height | 1800 mm $\pm$ 20 mm |
| 9. Weight | $\geq$ 850 kg       |

### MATERIAL SPECIFICATIONS

- |                  |   |
|------------------|---|
| 10. Main Frame   | 62x5 mm with 50x5 mm MS angle supports  |
| 11. Hitch        | 62x62x5 mm MS box   |
| 12. Washing drum | 2400 mm long, 1200 mm wide, 50x3 mm MS flat with 4 mm spacing, 2400x1200 mm octagonal 440 mm each sides, 02 Nos. 50x50x5 mm MS angle supports, 04 Nos. wood strips 55x20 mm on each sides, 09 Nos. 50x50x4 mm MS angle equal to the length of drum, 04 Nos of 16 mm S.S pipe on each side of drum |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                     |  |
|-----|---------------------|--|
| 13. | Washing Tray        | 2400x540x3 mm MS sheet, 38x38x4 mm MS angle  |
| 14. | Window              | Feeding: 1750x1150x3 mm MS Sheet with 25x3 mm MS angle<br>Exit: 1230x400x3 mm MS sheet with 25x3 mm MS angle |
| 15. | Exit Hopper         | 1540x1150x3 mm MS Sheet  |
| 16. | Pump                | Centrifugal  |
| 17. | Pump Discharge rate | 01 lit/sec or above  |
| 18. | Suction pipe        | Wire impregnated Pipe 5 m long, 75 mm dia. flexible with check valve.  |
| 19. | Delivery Pipe       | 50 mm dia. GI, though out the cylinder with water openings as per drum length                                |
| 20. | Bearings            | 02 Nos. P214 on Drum, 02 Nos. P208, 04 Nos. P208 for pulleys   |
| 21. | Parking Stand       | 02 Nos. 62x62x4 mm MS box, adjustable  |

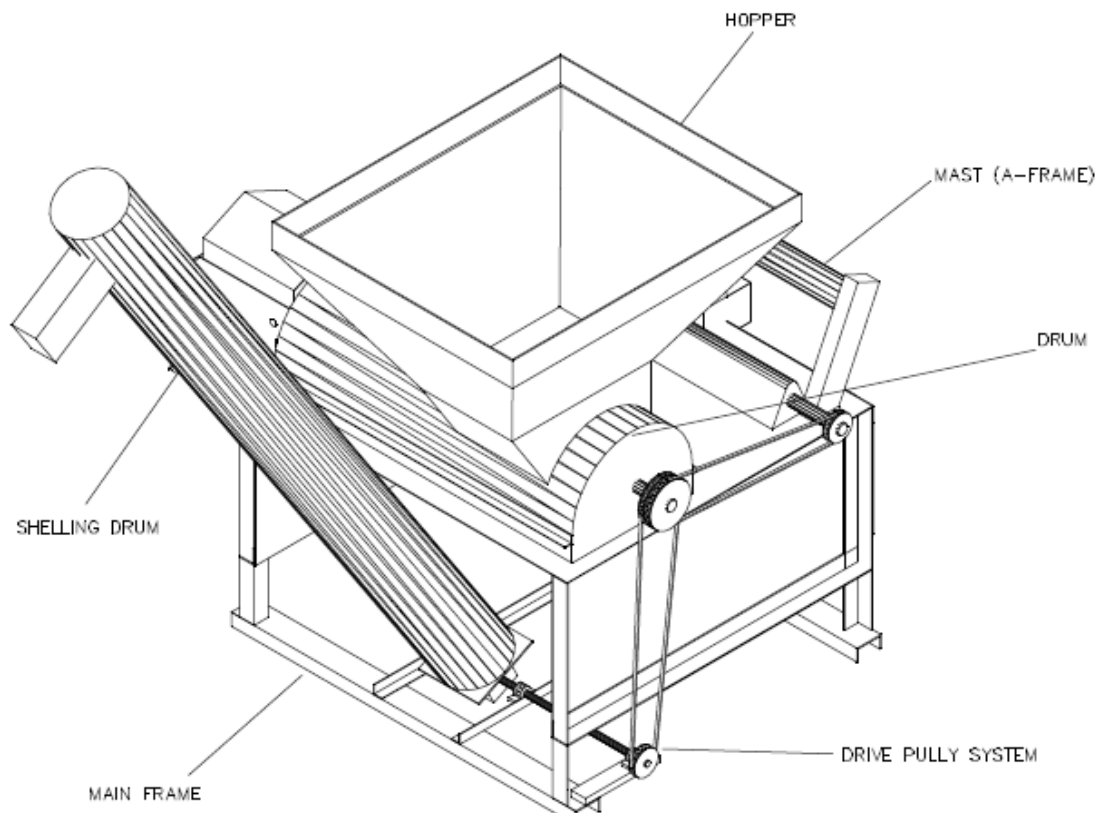
### **MISCELLANEOUS**

- |     |                |   |
|-----|----------------|---|
| 22. | Paint          | Double coat with primer after surface finish                                      |
| 23. | Nuts and bolts | To be tightened with spring washers   |
| 24. | Bearings       | European Standard or Equivalent   |
| 25. | Warranty       | Free: One year for parts and service<br>Extended: Five years on payment for parts |



## 47. MAIZE SHELLER WITH CONVEYOR

MAIZE SHELLER



### GENERAL

- |                      |                            |
|----------------------|----------------------------|
| 1. Application       | For shelling of maize crop |
| 2. Drum clearance    | 50 mm                      |
| 3. Auger             | Screw type                 |
| 4. Shelling capacity | $\geq 8.0$ ton/hr          |
| 5. Tractor power     | $\geq 50$ hp               |

### OVERALL DIMENSIONS

- |           |                     |
|-----------|---------------------|
| 6. Length | 1770 mm $\pm$ 20 mm |
| 7. Width  | 2130 mm $\pm$ 20 mm |
| 8. Height | 1550 mm $\pm$ 10 mm |
| 9. Weight | $\geq 540$ kg       |

### MATERIAL SPECIFICATIONS

- |                    |   |
|--------------------|---|
| 10. Main frame     | 100x50x4.5 mm MS channel, 62x62x6 mm and 50x50x4.5 mm MS angle, 14 gauge MS sheet                                   |
| 11. Hitch bracket  | 75x12 mm, M.S. flat reinforced with M.S. pipe 80 mm OD 4.5 mm wall thickness, 100x50x4.5 mm and 50x50x4.5 mm MS box |
| 12. Feeding hopper | 16 gauge MS sheet reinforced with 50x50x4.5 mm MS angle   |
| 13. Grain Chute    | 16 gauge MS sheet   |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

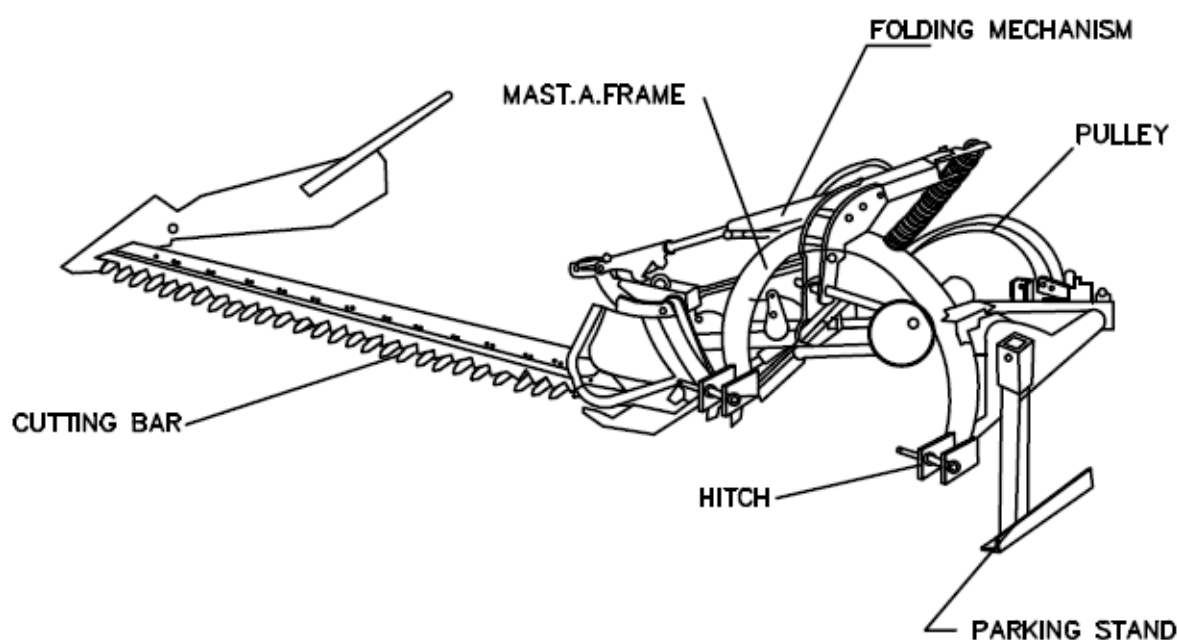
14.	Conveyor	14 gauge MS sheet
15.	Shelling drum	1350 mm long 150 mm OD 6 mm wall thickness
16.	Drum cover	10 gauge MS sheet
17.	Bits/page	54 Nos., 52x25x25 mm M.S. bar welded in zigzag spiral form on the shelling drum
18.	Sieve	01 No. 3 mm MS sheet with 12 mm dia. holes
19.	Blower	Pedal type, 04 Nos. Blades 12 mm gauge
20.	Thrower	Pedal type, 04 Nos. blades 12 mm gauge M.S. sheet
21.	Auger pipe	3 meter long 175 mm dia. with worm sheet 14 gauge welded on 40 mm dia. MS pipe
22.	Auger gear box	01 No. 1:2 ratio, cast iron
23.	Thrower gear box	01 No. cast iron
24.	Pulley cover	16 gauge MS sheet
25.	Shaft	
	Main	50 mm M.S round
	Blower	38 mm M.S. round
	Thrower	38 mm M.S. round
26.	Bearings	02 Nos. 6309 main shaft
		02 Nos. 6307 blower shaft
		02 Nos. 6206 thrower shaft
		02 Nos. 6206 worm gear mounting

### **MISCELLANEOUS**

27.	Paint	Double coat with primer after surface finish
28.	Nuts and bolts	To be tightened with spring washers
29.	Bearings	European Standard or Equivalent
30.	Warranty	Free : 1 year for parts and service
		Extended : 5 years for parts supply on payment

## 48. FODDER CUTTER (SICKLE TYPE)

### FODDER CUTTER SICKLE TYPE



#### GENERAL

- |                   |                             |
|-------------------|-----------------------------|
| 1. Application    | For cutting of forage crops |
| 2. Working width  | 2100 mm                     |
| 3. Field capacity | 1 ac/hr.                    |
| 4. Tractor power  | ≥ 50 hp                     |

#### OVERALL DIMENTION

- |           |                 |
|-----------|-----------------|
| 5. Length | 1300 mm ± 10 mm |
| 6. Height | 700 mm ± 10 mm  |
| 7. Width  | 3800 mm ± 30 mm |
| 8. Weight | ≥ 160 kg        |

#### MATERIAL SPECIFICATIONS

- |                             |   |
|-----------------------------|---|
| 9. Main frame               | 130x15 mm MS plate, 60x6 mm and 50x6 mm MS pipe, 5 mm MS sheet  |
| 10. Hitch frame             | 60x6 mm MS pipe, 100x50 mm MS plate 12 mm thick, 02 Nos. 100x12 mm and 75x12 mm MS plate welded on hitch pipe |
| 11. Frame pivoting          | U-type pivot made of MS pivoted with main frame via 25 mm MS pin  |
| 12. PTO drive pulley        | 280 mm dia. 2-groove B-type   |
| 13. Sickle bar drive pulley | 150 mm dia. 2-groove B-type   |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

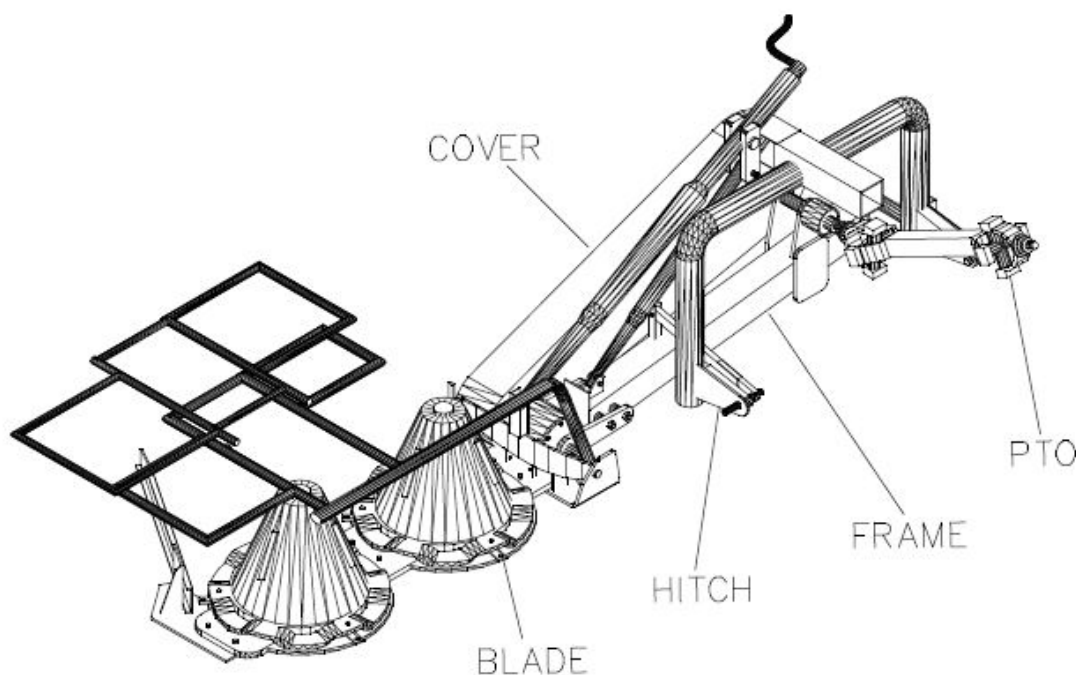
14. Sickle bar drive pipes	02 Nos. 25 mm dia. MS round attached with U-type bolted 50x10 mm MS clamp
15. Hydraulic jack	48 mm OD MS pipe with 22 mm inner pin, pivoted with main frame pipe
16. Cutting blades	28 Nos. blades of size 75 mm, HRC 50-55
17. Parking stand	38x38x4.5 mm MS box with skid
18. Bearings	
PTO	6205, 6206
Camshaft	6502 02-Nos.
Pull rod	6402, UCF 205

### **MISCELLANEOUS**

19. Paint	Double coat with primer after surface finish
20. Nuts & bolts	To be tightened with spring washers
21. Bearings	European Standard or Equivalent
22. Warranty	Free: 1 year for parts and service
	Extended: 5 years for parts supply on payment

## 49. FODDER CUTTER (Disc Mower)

### FODDER CUTTER DISC MOVER



### GENERAL

- |                   |                             |
|-------------------|-----------------------------|
| 1. Application    | For cutting of forage crops |
| 2. Working width  | 1650 mm                     |
| 3. Disc spacing   | 800 mm                      |
| 4. Field capacity | 1 ac/hr.                    |
| 5. Tractor power  | ≥ 50 hp                     |

### OVERALL DIMENTION

- |           |                 |
|-----------|-----------------|
| 6. Length | 3000 mm ± 30 mm |
| 7. Height | 940 mm ± 10 mm  |
| 8. Width  | 960 mm ± 10 mm  |
| 9. Weight | ≥ 300 kg        |

### MATERIAL SPECIFICATIONS

- |                         |  |
|-------------------------|--|
| 10. Main frame          | 175x65 mm MS box, wall thickness 6 mm                          |
| 11. Hitch frame         | 62x62x6 mm and 50x50x5mm MS box re-enforced with 8 mm MS plate |
| 12. Hitch               | 50x50x6 mm MS box, 6 mm MS plate                               |
| 13. Hitch frame holding | 83 mm, 76 mm and 70 mm MS pipe with wall thickness 12 mm       |
| 14. Frame pivoting      | 72 mm dia. MS pipe 6mm wall rotating on pin 64 mm dia.         |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                         |   |
|-------------------------|---|
| 15. Gear box housing    | 1200x267x165 mm M.S box from M.S formed sheet 4.5 mm thick, bolted with 72x12 mm plate  |
| 16. Blade rotating Drum | 240 mm dia. with extended 04 Nos. M.S flat 35x5 mm working as air wings for wind rowing |
| 17. Rotating plates     | 02 Nos. plates 645 mm dia. 5 mm thick and 02 Nos. plates (lower) of same size           |
| 18. Blades              | 03 Nos. in each rotating disc 150x50x6 mm   |
| 19. Gears               | 03 sets of bevel gears consisting of 11 teeth (76 mm dia. ) and 22 teeth (137 mm dia.   |
| 20. Adjustable link     | 01 No. 730 mm long with support of 75x30x6 mm M.S. box                                  |
| 21. Bearings            |   |
| PTO shaft               | 02 Nos. 6307  |
| Gear Drive shaft        | 02 Nos. 6207  |
| Blade drive shaft       | 04 Nos. 6307  |
| Main shaft              | 02 Nos. 6307  |
| Discs (upper side)      | 02 Nos. 7510  |
| Disc (lower side)       | 02 Nos. 7509  |

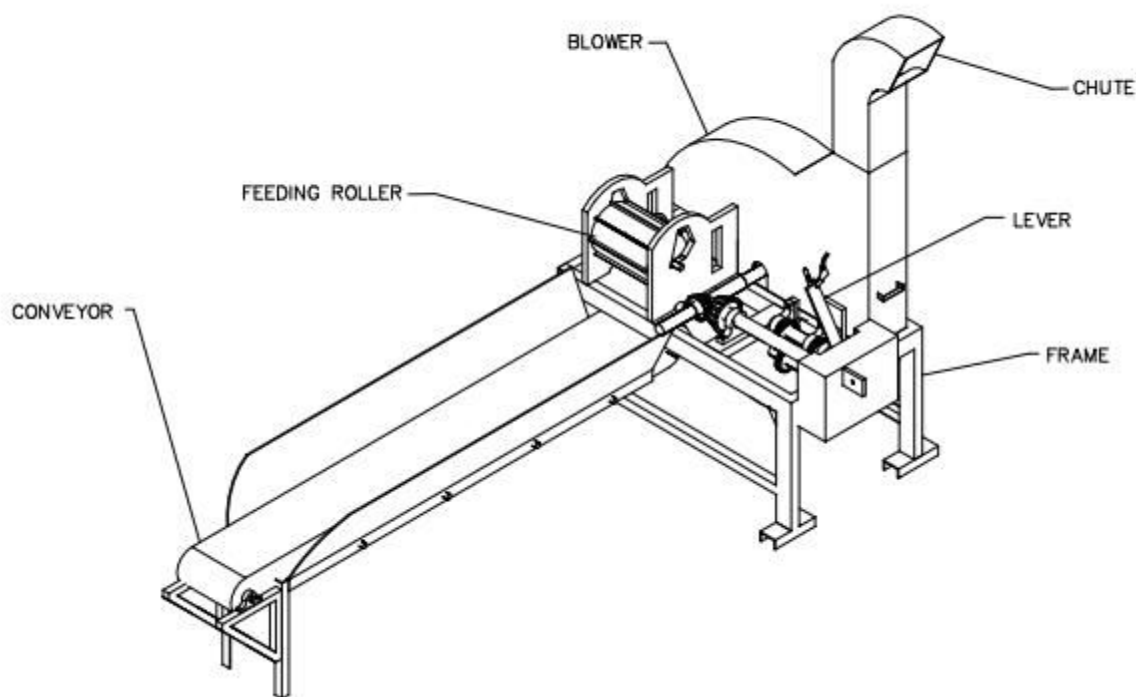
### **MISCELLANEOUS**

- |                  |   |
|------------------|---|
| 22. Paint        | Double coat with primer after surface finish  |
| 23. Nuts & bolts | To be tightened with spring washers           |
| 24. Bearings     | European Standard or Equivalent               |
| 25. Warranty     | Free: 1 year for parts and service            |
|                  | Extended: 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 50. FODDER CHOPPER (STATIONARY)

#### FODDER CHOPPER STATIONARY



#### GENERAL

- |                               |                        |
|-------------------------------|------------------------|
| 1. Application                | For chopping of fodder |
| 2. Chopping capacity          | 8-10 tons/hour         |
| 3. Blade mounting plate speed | 900-1000 rpm           |
| 4. Conveyer chain             | 50 #                   |
| 5. Feeding                    | Manual                 |
| 6. Tractor power              | ≥ 50 hp                |

#### OVERALL DIMENTION

- |            |                 |
|------------|-----------------|
| 7. Length  | 2470 mm ± 20 mm |
| 8. Height  | 1260 mm ± 10 mm |
| 9. Width   | 2750 mm ± 30 mm |
| 10. Weight | ≥ 600 kg        |

#### MATERIAL SPECIFICATIONS

- |                             |  |
|-----------------------------|--|
| 11. Mast A-frame            | 76 x 12 mm MS flat with supports of 50 x 12 mm M.S flat                    |
| 12. Blade mounting plate    | 600 mm dia. 28 mm thick MS plate   |
| 13. Cutting plate shaft     | 50 mm dia. MS cold drawn   |
| 14. Main frame              | 100x48x5 mm MS box   |
| 15. Feeding rollers (front) | 02 Nos. 14 teeth & 15 teeth having dia. 92 mm fitted with 35 mm M.S. shaft |
| 16. Feeding rollers (rear)  | 02 Nos.  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

	Upper	216 mm dia. MS pipe of 6 mm wall thickness welded with 14 Nos. notched flat made from 6 mm thick MS sheet
	Lower	100 mm dia. M.S. pipe of 6 mm wall thickness welded with 10 Nos. M.S. notched flat made from 6 mm thick MS sheet
17.	Feeding conveyer rollers	02 Nos. 100 mm dia. MS pipe 4.5 mm wall thickness for conveying of fodder
18.	Blade mounting plate housing	3 mm MS chute
19.	Blade mounting supports	6 Nos. 150x10 mm MS plate
20.	Cutting blades	6 Nos. 57x10 mm MS plate with sharp edge of material SUP-10 vanadium
21.	Throwing paddles	6 Nos. 130x130x4.5 mm MS sheet welded with 37x25x6 mm MS angle
22.	Bearings	
	PTO shaft	02 Nos. P209
	Main shaft	02 Nos. P209
	Gear box	02 Nos. P207
	Gear box	09 Nos. P206
	Fodders	05 Nos. P205
	Sprockets	02 Nos. 6205
		02 Nos. 6204

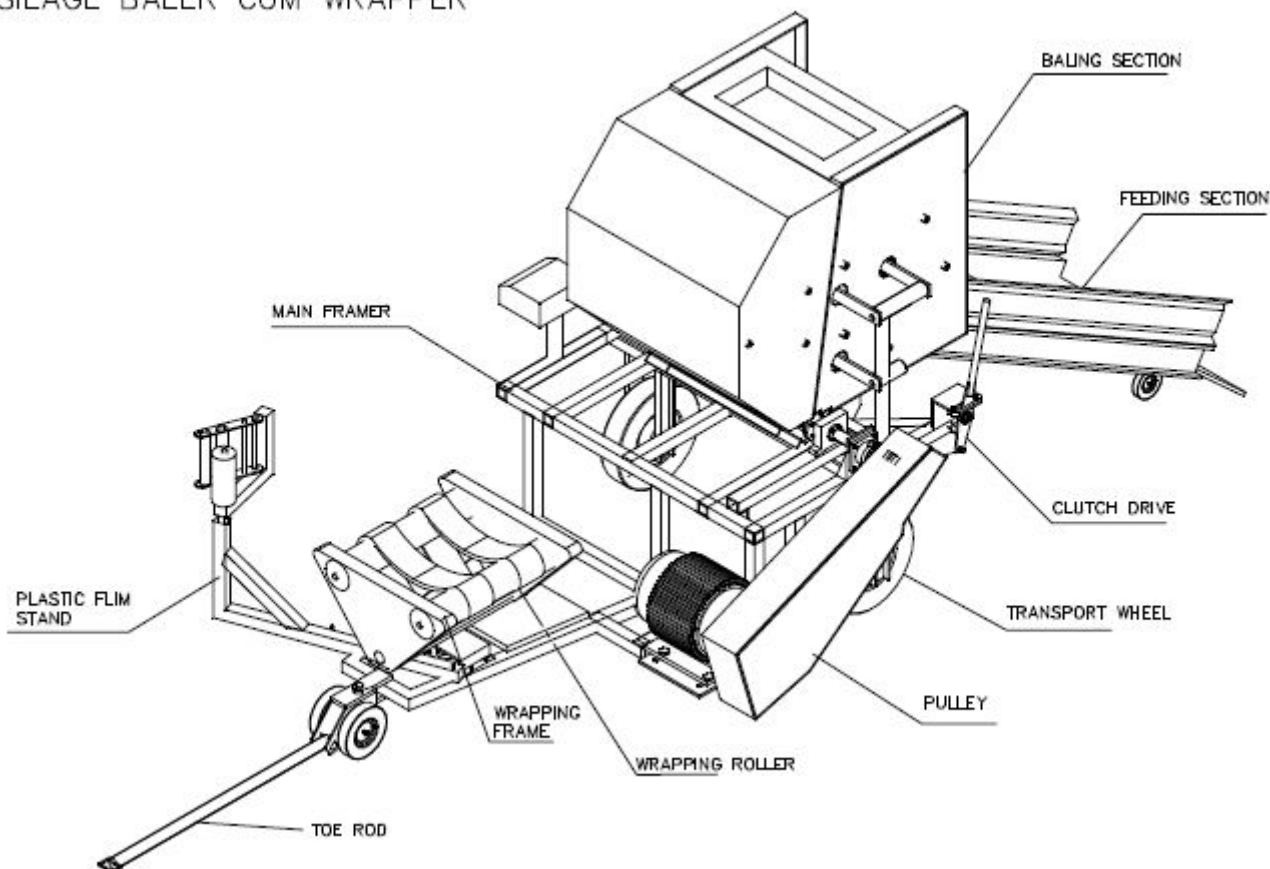
### **MISCELLANEOUS**

23.	Paint	Double coat with primer after surface finish
24.	Nuts & bolts	To be tightened with spring washers
25.	Bearings	European Standard or Equivalent
26.	Warranty	Free: 1 year for parts and service
		Extended: 5 years for parts supply on payment



## 51. SILAGE BALER CUM WRAPER

### SILAGE BALER CUM WRAPPER



### GENERAL

- |                   |                                       |
|-------------------|---------------------------------------|
| 1. Application    | For making of bales of chopped fodder |
| 2. Field Capacity | 40-50 bales/hr.                       |
| 3. Bale size      | 520 mm dia. 520 mm long               |
| 4. Bale weight    | ≥50 kg                                |
| 5. Electric motor | 10 hp 900 rpm 3-phase, 440 V          |

### OVERALL DIMENSIONS

- |           |                 |
|-----------|-----------------|
| 6. Length | 2550 mm ± 20 mm |
| 7. Width  | 1450 mm ± 10 mm |
| 8. Height | 1050 mm ± 10 mm |
| 9. Weight | ≥700 kg         |

### MATERIAL SPECIFICATIONS

- |                      |   |
|----------------------|---|
| 10. Main frame       | 37x37x3 mm MS sq. pipe , 50x4.5 mm M.S. formed channel        |
| 11. Level adjuster's | 35 mm dia. worm with pivot ball or leveling of machine        |
| 12. Pressure rollers | 24 Nos. aluminum alloy casting, 74 mm dia. 520 long, textured |
| 13. Side plates      | 6 mm MS shaft bolted with other side sheet with 04 Nos.       |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

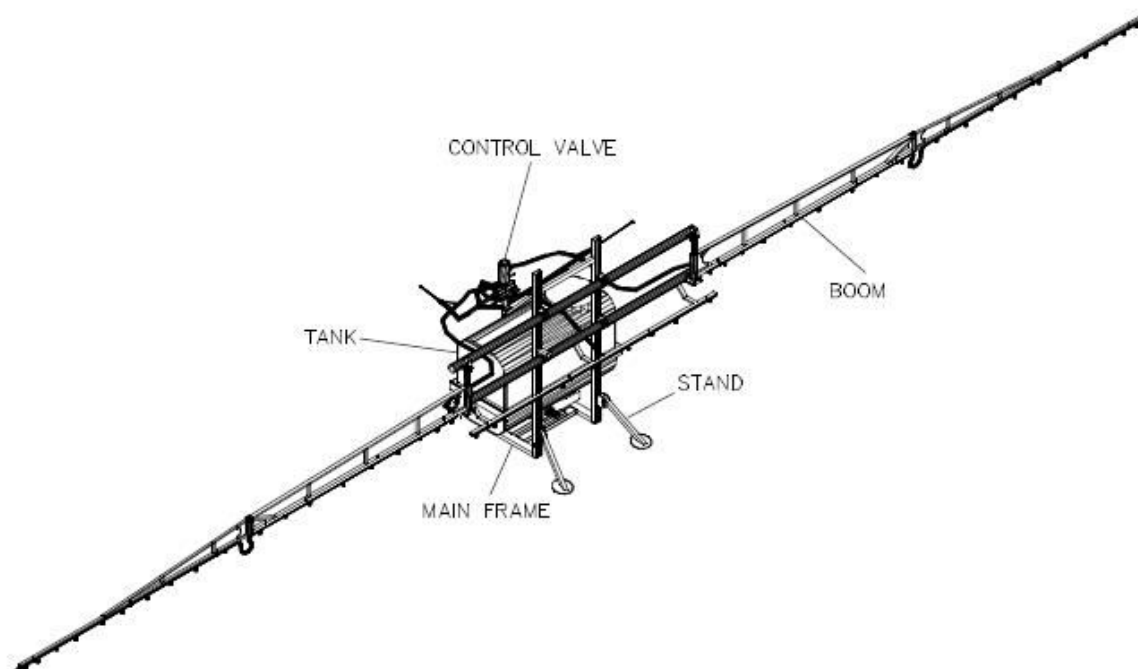
14.	Toe rod	40 mm dia. MS pipe, 5 mm thick 900 mm long MS rods of 18 mm long
15.	Aluminum roller shafts	48 Nos. 25 mm dia. 615 mm long
16.	Shock absorbers	02 Nos., 460 mm long
17.	Thread wrapping shaft	01 No. 30 mm dia. 615 mm long
18.	Knurling shafts	02 Nos. 40 mm dia. 515 mm long
19.	Roller driving shaft	02 Nos. 63 mm dia.
20.	Transport wheels	02 Nos. steel casting, 156 mm dia. at front 02 Nos. 430 mm dia. steel casting at rear
21.	Feeding section	515 mm wide with straw collections
22.	Clutch lever rod	20 mm dia. MS rod revolving
23.	Sheet metal	18 gauge (1.4 mm)
24.	Clutch driven shaft	38 mm dia. with splines for clutch plates of 150 mm dia.
25.	Bearings	
	Aluminum roller	44 Nos. 6004 on sides of rollers 04 Nos. 6204 02 Nos. 6003
	Thread wrapping shaft	02 Nos. 6003
	Wheels	04 Nos. 30204
	Chain tightners	04 Nos. 6004
	Sprocket	02 Nos. 6203 02 Nos. 6200 06 Nos. 6000
	Belt tightner	01 No. 6200
	Hinged shaft	02 Nos. 6204
	Cane pipe	04 Nos. 6002
	Roller driving shaft	01 No. 6302 01 No. 16005
	Clutch drive shaft	02 No. 6306 02 Nos. 6206 01 No. 6204
	Pulley main shaft	01 NO. 6005 01 No. 30204

### **MISCELLANEOUS**

26.	Paint	Double coating after primer and surface finish
27.	Nuts & bolts	To be tightened with spring washers
28.	Bearings	European Standard or Equivalent
29.	Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment

## 52. BOOM SPRAYER

TRACTOR MOUNTED BOOM SPRAYER (500 liter 45 feet)



### GENERAL

- |                             |   |
|-----------------------------|---|
| 1. Application              | For spraying of field crops   |
| 2. Spray tank capacity (L)  | 500   |
| 3. Boom width               | 13.7 m, 5 sections with 03 supply lines   |
| 4. Boom height (adjustable) | 200-1800 mm through screw rod (30 mm dia.)/chain winch  |
| 5. Nozzle tips (imported)   | 02 sets hollow cone, 0.8 L/min @ 3 bar<br>01 set flat fan, 0.8 L/min @ 3 bar                                      |
| 6. Nozzle spacing           | 500 mm  |
| 7. Pump                     | Plunger, PTO driven, capacity (80-100 L/min.) @ pressure 25 bar   |
| 8. Pressure gauge           | 0-25 kg/cm glycerin filled  |
| 9. Pressure control valve   | Adjustable with 03 sections independent delivery and tank return valve with spring loaded pressure/flow regulator |
| 10. UJ shaft                | 01 No.  |
| 11. Agitator                | Provided  |
| 12. Tractor power           | ≥ 50 hp   |

### OVERALL DIMENSIONS

- |                    |                 |
|--------------------|-----------------|
| 13. Length         | 1200 mm ± 10 mm |
| 14. Width (folded) | 3300 mm ± 30 mm |
| 15. Height         | 1700 mm ± 20 mm |
| 16. Weight         | ≥ 275 kg        |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

- |     |                      |   |
|-----|----------------------|---|
| 17. | Frame                | 65x50x4 mm M.S. channel box and M.S. angle 50x9 mm with 62x12 mm M.S. plate hitch |
| 18. | Boom sliding (frame) | C-Shaped, 75x60 mm M.S. formed sheet 4 mm or Z-shaped made of M.S. sheet 6 mm     |
| 19. | Boom frame spacer    | 125x65x5 mm M.S. channel  |
| 20. | Tank                 | Synthetic (fiber glass with graduated scale)                                      |
| 21. | Boom Sections        | Spring loaded (back lash mechanism)   |
|     | Central              | 01 No. M.S. box 50x38x4 mm, and 02 Nos. supports                                  |
|     | Lateral              | 02 Nos. M.S. box 30x30 mm, 12 gauge with supports                                 |
|     | External             | 02 Nos. M.S. box 30x30 mm, 16 gauge with supports of 25x12 mm MS pipe             |
| 22. | Accessories          | Mask, Gloves, rubber washers and Tool kit (screw driver, plier, wrench)           |

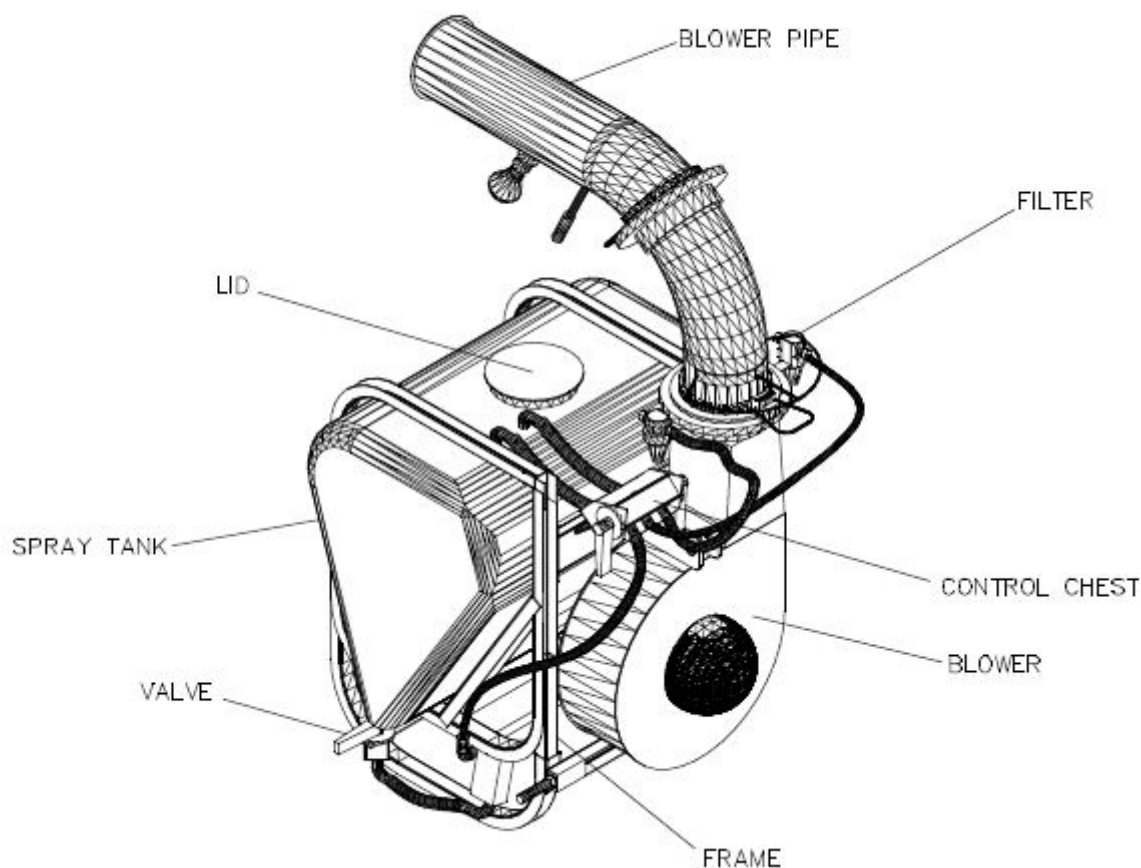
### **MISCELLANEOUS**

- |     |                       |   |
|-----|-----------------------|---|
| 23. | Paint                 | Double coat with primer after surface finish  |
| 24. | Nuts and bolts        | To be tightened with spring washers   |
| 25. | Origin of nozzle tips | UK/Northern America/Western/Northern Europe, Japan and Australia, France              |
| 26. | Warranty              | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 53. TRACTOR MOUNTED MIST BLOWER SPRAYER (Canon Type)

TRACTOR MOUNTED MIST BLOWER SPRAYER  
(CANON SPRAYER)



#### GENERAL

- |                           |   |
|---------------------------|---|
| 1. Application            | For spraying of field crops and orchards  |
| 2. Spray tank capacity    | ≥ 400 liters  |
| 3. Spray swath            | ≥ 25 meters   |
| 4. Droplet generation     | By rotary atomizers/nozzles (discharge 0.2-0.4 L/min)                               |
| 5. Flow rate              | ULV < 0.2 L/min.<br>LV 10-20 L/min<br>MV 21-40 L/min                                |
| 6. Pump                   | Centrifugal/Plunger type, PTO driven, 50 L/min                                      |
| 7. Pressure control chest | Adjustable with 2-section direct delivery and tank return valve with flow regulator |
| 8. UJ shaft               | 01 No.  |
| 9. Tractor power          | ≥ 50 hp   |

#### OVERALL DIMENSIONS

- |            |                 |
|------------|-----------------|
| 10. Length | 1200 mm ± 10 mm |
| 11. Width  | 1320 mm ± 10 mm |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

- |     |        |                     |
|-----|--------|---------------------|
| 12. | Height | 2100 mm $\pm$ 20 mm |
| 13. | Weight | $\geq$ 275 kg       |

### MATERIAL SPECIFICATIONS

- |     |                      |   |
|-----|----------------------|---|
| 14. | Frame                | 50x30x3 mm or 65x50x4 mm MS channel   |
| 15. | Hitch                | 12 mm MS plate  |
| 16. | Spray Tank           | Synthetic fiber glass/high density polyethylene, corrosion resistant with graduated scale and supported with 90x3 mm MS strap |
| 17. | Pump suction hose    | 29 mm dia. flexible quality rubber/synthetic  |
| 18. | Delivery/supply hose | 18 mm dia. to maintain atomizer, quality rubber/synthetic<br>15 mm dia. to small atomizer, quality rubber/synthetic           |
| 19. | Main atomizer        | Adjustable steel sheet of 15 gauge, 200 mm dia. with silver flange  |
| 20. | Blower               | 480 mm dia. face width 60 mm, 3200 rpm  |
| 21. | Air velocity         | $\geq$ 120 km/hr.   |

### MISCELLANEOUS

- |     |                |  |
|-----|----------------|--|
| 22. | Paint          | Double coat with primer after surface finish   |
| 23. | Nuts and Bolts | To be tightened with spring washers  |
| 24. | Bearings       | European Standard <b>or Equivalent</b>   |
| 25. | Warranty       | Free : 01 year for parts and service<br>Extended: 05 years for parts supply on payment |



## 54. WHOLE STALK SUGARCANE HARVESTER

WHOLE STALK SUGARCANE HARVESTER

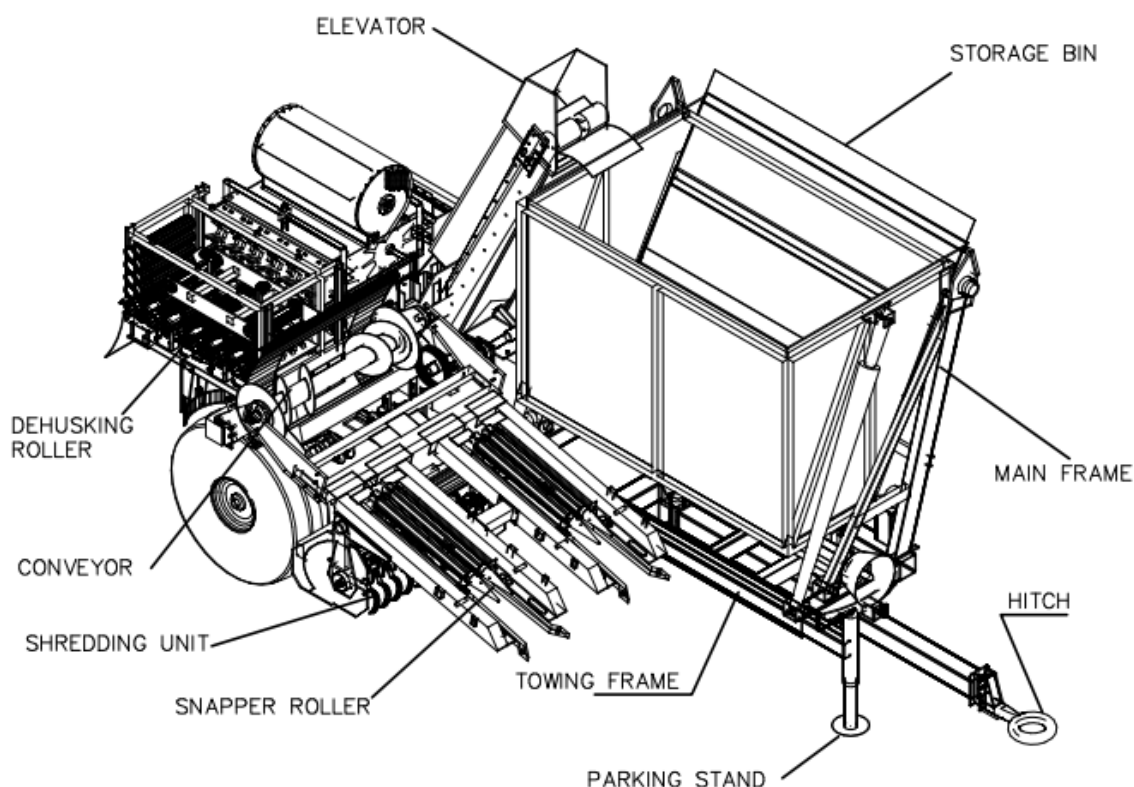


Sr. #	Parameter	Description
1	Application	For cutting of whole stalk sugarcane in field
2	Type	Wheel type self-propelled combine harvester
3	Number of row harvesting	01
4	Cutting width	≥ 1000-1400 mm
5	Field capacity	≥ 10 tones/hr
6	Power required	≥ 90 hp
7	Literature	Provided
8	Origin	Imported
9	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments



## 55. A) CORN PICKER

### CORN PICKER



Sr. #	Parameter	Description
1.	Application	For picking and dehusking of maize cobs from the field
2.	Type	Tractor operated
3.	Field capacity	0.6-0.8 <b>acre</b> /hr
4.	Number of cutting rows	02
5.	Hooper capacity (min)	2.7 m <sup>3</sup>
6.	PTO speed	540 rpm
7.	Power requirement	<b>≥ 60</b> hp Tractor
8.	Origin	Imported
9.	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **B) CORN PICKER**

#### **GENERAL**

- |                        |  |
|------------------------|--|
| 1. Application         | For picking and dehusking of maize cobs from the field |
| 2. No. of cutting rows | 02   |
| 3. Field capacity      | ≥ 1 acre/hr  |
| 4. Hopper capacity     | 1500 kg  |
| 5. Tractor power       | ≥ 60 hp  |
| 6. Type                | Rear side mounted                                      |

#### **OVERALL DIMENSIONS**

- |            |                |
|------------|----------------|
| 7. Length  | 5500 mm ± 50mm |
| 8. Width   | 3000 mm ± 30mm |
| 9. Height  | 1940 mm ± 20mm |
| 10. Weight | ≥ 3000 kg      |

#### **MATERIAL SPECIFICATIONS**

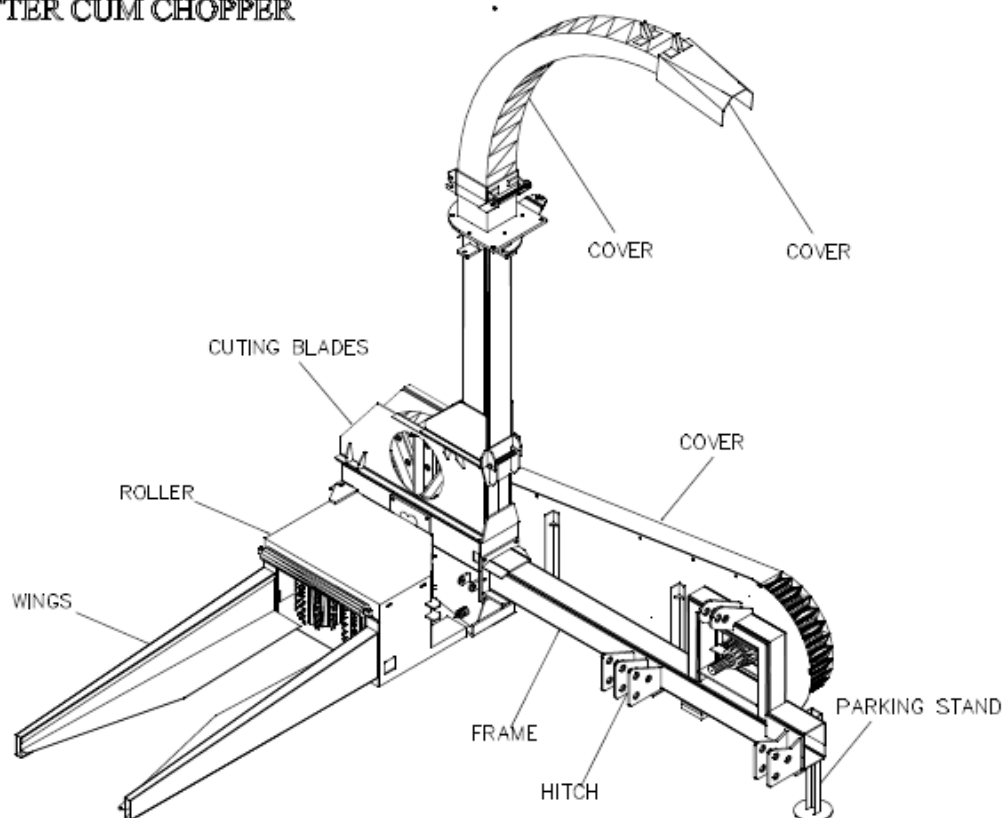
- |                                |   |
|--------------------------------|---|
| 11. Main frame                 | 120x120x6 mm, 120x60x6 mm and 60x60x6 mm MS box   |
| 12. Hitch                      | 120x120x6 mm MS box, 200x10 mm MS flat  |
| 13. Towing frame               | 120x120x6 mm and 100x100x10 mm MS box, 90x10 mm MS flat   |
| 14. Dehusking spiral rollers   | 06 Nos. metal, 06 Nos. rubber, 1230 mm long   |
| 15. Shredding unit             | 33 Nos. blades 200x6 mm MS flat bolted on 160x8 mm MS plate, 3 mm thickness MS sheet cover, 60 mm dia. MS shaft |
| 16. Elevator                   | 16 gauge MS sheet cover   |
| 17. Snapper rollers & conveyor | 04 rollers 88 mm dia. 150x75x6 mm MS box, 120x30 mm MS flat, 150x100x9 mm MS plate                              |
| 18. Storage bin                | 16 gauge MS sheet with supports of 38x38x4.5 mm MS box  |
| 19. Hydraulic jack             | 02 Nos. 80 mm and 70 mm OD, 50 mm ID.   |
| 20. Gear box                   | 03 Nos.   |
| 21. Tyre size                  | 02 Nos. 11.5/80-15  |

#### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 22. Paint          | Double coat with primer after surface finish   |
| 23. Bearings       | European Standard or Equivalent                |
| 24. Nuts and bolts | To be tightened with spring washers            |
| 25. Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |

## 56. FODDER CUTTER CUM CHOPPER

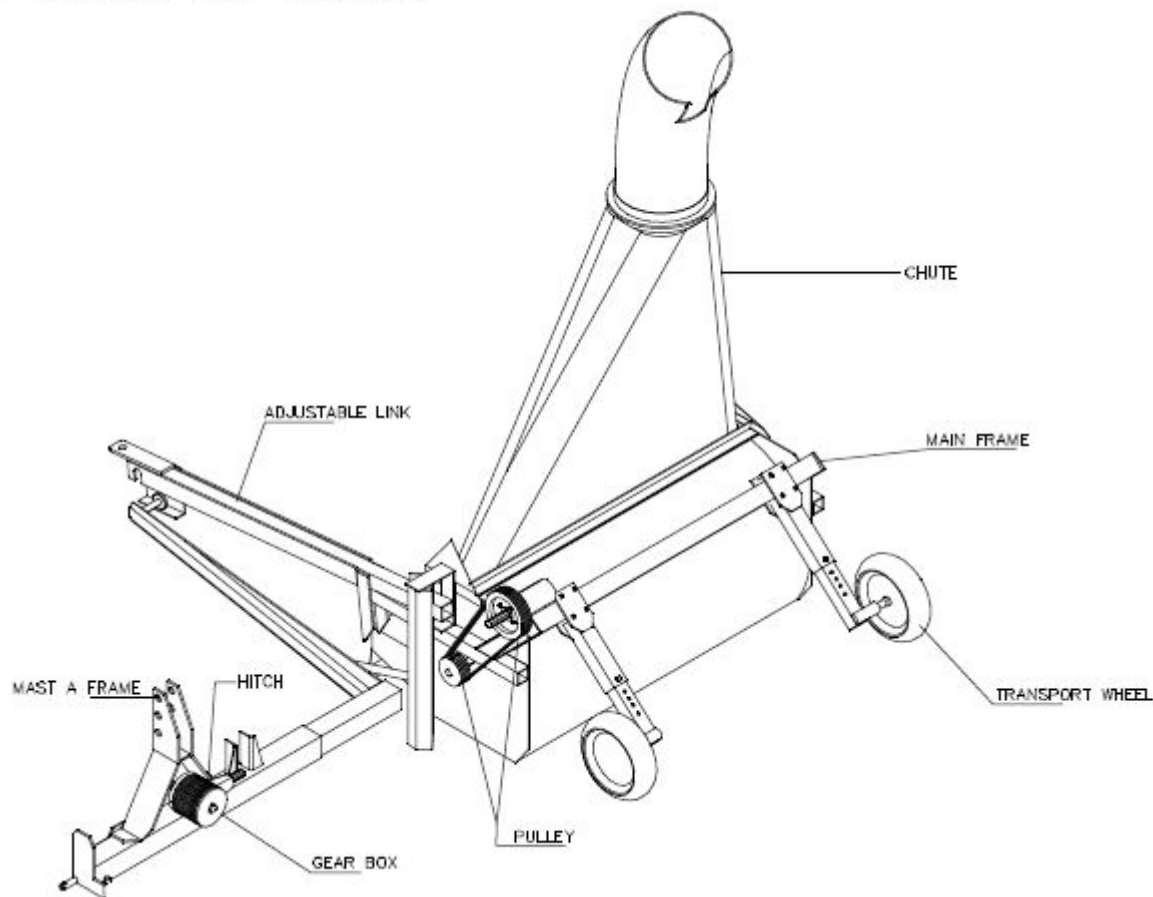
### FODDER CUTTER CUM CHOPPER



1. Type	Tractor operated, rear mounted
2. Application	For cutting and chopping of fodder for silage making
3. Cutting ability	Single row
4. Field capacity	$\geq 0.25$ acre/hr
5. Chop size	5-22 mm
6. Number of Knives	10-12
7. Power requirement	50-75 hp tractor
8. PTO speed	540 rpm
9. Origin	Imported/local
10. Warranty	Free : One year for repair/replacement of parts

## 57. FORAGE HARVESTER

### FORAGE HARVESTER



#### GENERAL

- |                              |                             |
|------------------------------|-----------------------------|
| 1. Application               | For cutting of forage crops |
| 2. Working width             | 1500 mm                     |
| 3. Field capacity            | 1 ac/hr.                    |
| 4. Tractor power requirement | ≥ 50 hp                     |
| 5. Type                      | Tractor rear side mounted   |

#### OVERALL DIMENTION

- |           |                 |
|-----------|-----------------|
| 6. Length | 2850 mm ± 30 mm |
| 7. Height | 3360 mm ± 30 mm |
| 8. Width  | 1660 mm ± 20 mm |
| 9. Weight | ≥ 700 kg        |

#### MATERIAL SPECIFICATIONS

- |                 |   |
|-----------------|---|
| 10. Main frame  | M.S. box 80x60x5 mm wall thickness 6 mm and form sheet 5 mm thick |
| 11. Hitch frame | 100x100 mm MS box reinforced with 8 mm MS plate                   |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

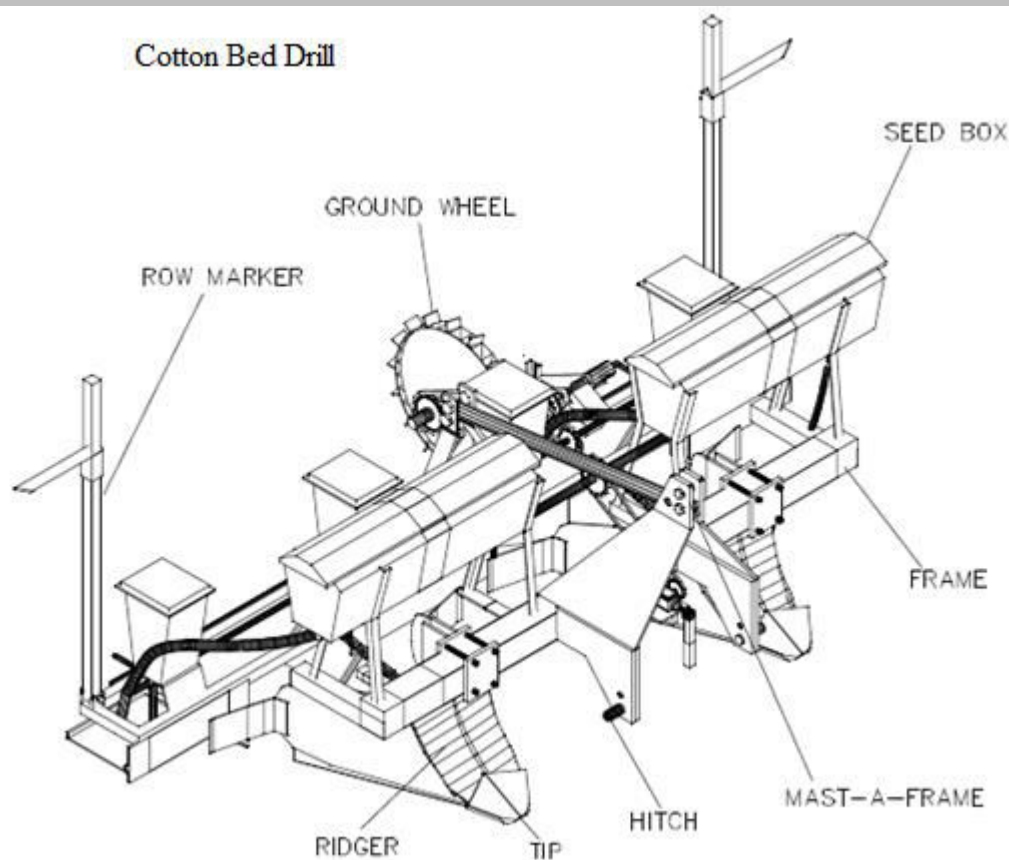
12. Hitch	8 mm MS flat
13. Mast A-Frame	75x12 mm MS flat
14. Hitch frame holding	90x90x5 mm MS box
15. Rotor	160 mm dia. MS pipe 8 mm thick with 42 Nos. pegs 90x75x10 mm MS flat
16. Flipper	08 Nos. and 3 mm thick MS Sheet
17. Blades	21 Nos. pivoted with pegs welded on rotor in 03 Nos. row, 110x75x8 mm MS flat 35 mm sharpened edge, heat treated HRC 40-45
18. Adjustable link	01 No. 1500 mm long with support of 60x60x5 mm M.S. box
19. Chute	16 gauge MS Sheet with 03 Nos. lock
20. Transportation & depth Control	02 Nos. Rim with tyre 145/70R12
21. Wheel Frame	62x62x4.5 mm MS Box, 100x150x10 mm M.S. plate
22. Skid	M.S. flat 50x12 mm
23. Gear Box	Bevel gear, ratio 1:2
24. Bearings	
Pulley	02 Nos. UCP 209
Rotor	02 Nos. 6210

### **MISCELLANEOUS**

25. Paint	Double coat with primer after surface finish
26. Nuts & bolts	To be tightened with spring washers
27. Bearings	European Standards or Equivalent
28. Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 58. COTTON BED DRILL



#### GENERAL

- |                   |                              |
|-------------------|------------------------------|
| 1. Application    | For sowing of cotton on beds |
| 2. No. of rows    | 04 Nos.                      |
| 3. Row spacing    | 762 mm                       |
| 4. Field capacity | $\geq 0.75$ ac/hr.           |
| 5. Tractor power  | $\geq 50$ hp                 |
| 6. Type           | Tractor rear side mounted    |

#### OVERALL DIMENSIONS

- |            |                     |
|------------|---------------------|
| 7. Length  | 1660 mm $\pm$ 15 mm |
| 8. Width   | 3000 mm $\pm$ 30 mm |
| 9. Height  | 1000 mm $\pm$ 10 mm |
| 10. Weight | $\geq 400$ kg       |

#### MATERIAL SPECIFICATIONS

- |                      |  |
|----------------------|--|
| 11. Main Frame       | 02 Nos. 75x75x6 mm MS box              |
| 12. Mast (A-Frame)   | 60x12 mm MS flat and 50x50x5 mm MS box |
| 13. Hitch            | 50x50x6 mm MS box                      |
| 14. Bed shaper plate | 3048x1219x5 mm MS formed sheet         |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |     |                        |  |
|-----|------------------------|--|
| 15. | Furrow opener ridger   |  |
|     | Front                  | 5 mm MS sheet and 280x228x10 mm hard tip with support of 50x50x5 mm MS box |
|     | Sides                  | 5 mm MS sheet  |
| 16. | Seed metering system   | Plate type   |
| 17. | Seed boxes             | 04 Nos. 16 gauge MS sheet of 10 kg capacity                                |
| 18. | Seed rate              | 4-10 kg/acre adjustable  |
| 19. | Furrow opener for seed | 04 Nos. 3 mm MS sheet  |
| 20. | Seed drive shaft       | 22 mm dia. MS round  |
| 21. | Ground wheel           | 508 mm dia. and 60x5 mm flat with 60 # chain for sprockets                 |
| 22. | Row marker             | 02 Nos. 35x35x6 mm MS box hoe type   |

### **MISCELLANEOUS**

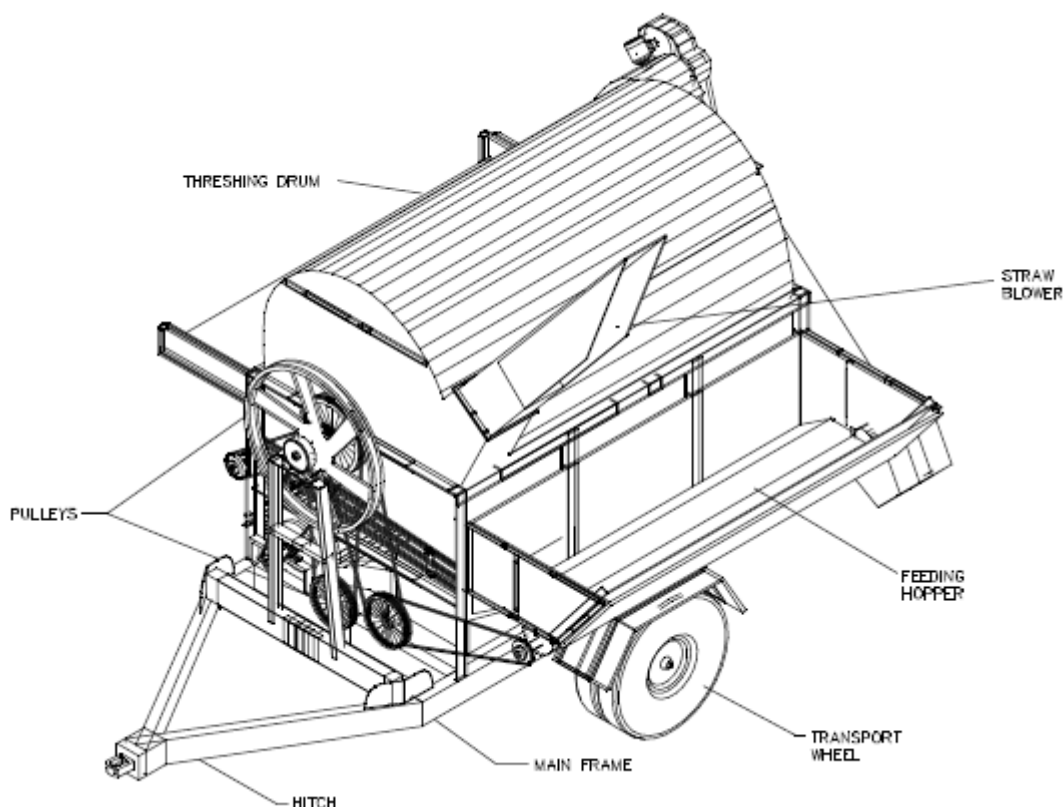
- |     |                |   |
|-----|----------------|---|
| 23. | Paint          | Double coat with primer after surface finish  |
| 24. | Nuts and bolts | To be tightened with spring washers   |
| 25. | Bearings       | European Standards or Equivalent  |
| 26. | Warranty       | Free: 01 year for parts and service<br>Extended: 05 years for parts supply on payment |



## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 59. PADDY/RICE THRESHER (7 ft.)

#### PADDY THRESHER



#### GENERAL

- |                       |   |
|-----------------------|---|
| 1. Application        | For threshing of paddy crop                     |
| 2. Threshing capacity | 1600-2000 Kg/hr.                                |
| 3. Power requirement  | ≥ 50 hp tractor or 25 hp electric motor         |
| 4. Drum speed         | 540 RPM   |
| 5. Wheels             | 02 Nos. hubs and 04 Nos. rims and tyres 7.50-16 |

#### OVERALL DIMENSIONS

- |           |                 |
|-----------|-----------------|
| 6. Length | 4300 mm ± 40 mm |
| 7. Width  | 2800 mm ± 30 mm |
| 8. Height | 3300 mm ± 30 mm |
| 9. Weight | ≥ 2000 kg       |

#### MATERIAL SPECIFICATION

- |                             |   |
|-----------------------------|---|
| 10. Main frame              | 125x60x6 mm MS channel with side frame 75x75x6 mm and 60x60x6 mm MS angle |
| 11. Hitch                   | 125x60x6 mm MS channel and 38 mm dia. round hook                          |
| 12. Drum                    | 700 mm dia. 1880mm long concave, 11 mm MS round bar                       |
| 13. No. Of beaters (cutter) | 220 Pcs. 100x18 mm tempered rod HRC 25-30 fixed with 14 mm nut            |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

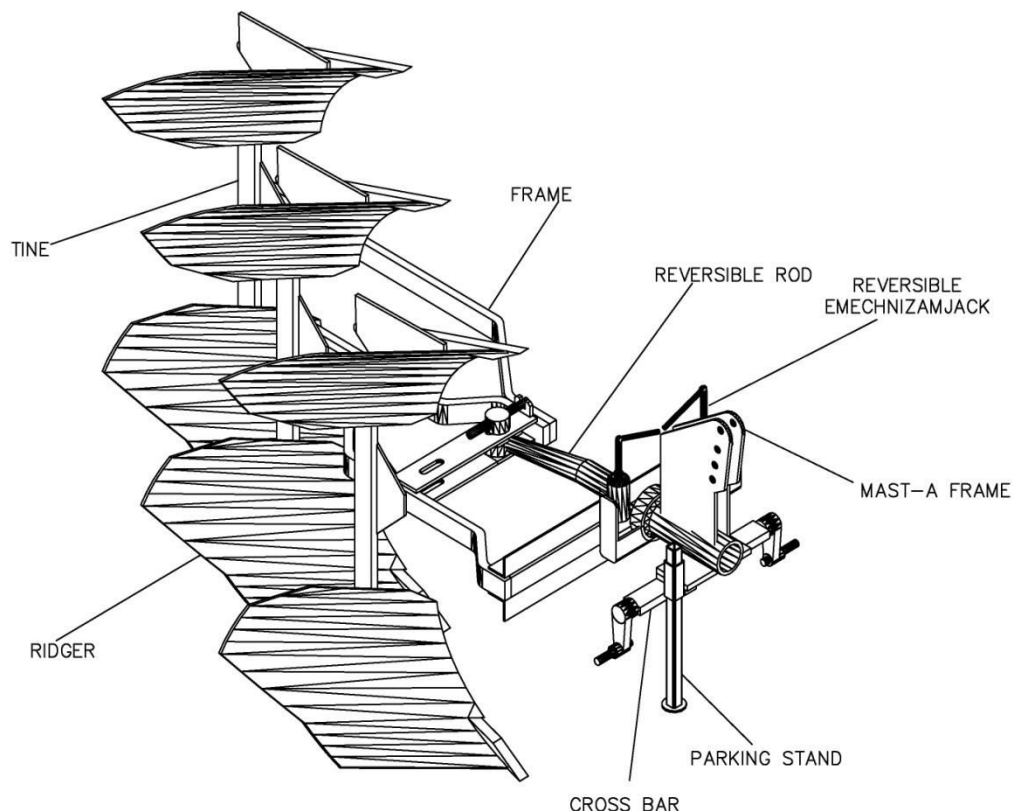
14.	Cradle frame	50x50x6 mm MS angle
15.	No. of sieves	02 Nos. Sieves 01, 16 guage MS sheet, hole size 15 mm for cleaning of paddy & 01, feeding sieve 5 mm MS sheet with 15mm hole dia.
16.	No. of blowers	03 Nos. blowers, 600 mm long with 04 blades 2 mm MS sheet
17.	Feeding platform & chair (folding)	2100x700x2 mm MS sheet, 1 No. chair folding
18.	No. of worms (screw conveyors)	2150mm long, 150mm dia. horizontal (02-Nos.) and 01 No. 250 mm dia. vertical
19.	Fan blade main	07 Nos. 300x209x6 mm MS sheet
20.	Fan blade cover	2.5 mm MS sheet
21.	Vertical pipe	254 mm dia. 2 mm thick
22.	Jack rods (For Parking)	04 Nos. 300 mm long, 38 mm screw dia.
23.	Balancing wheels	02 Nos. cast iron 750 mm and 500 mm dia.
24.	Bearings	
	Wheels	6209, 02 Nos. and 6208, 02 Nos.
	PTO	6310, 02 Nos.
	Threshing Drum	6313, 02 Nos.
	Cam shaft and sieve blower	UC 208, 05 Nos.
	Vertical conveyor	UC 208, 02 Nos.
	Horizontal conveyor	UC 208, 05 Nos.
	Cradle	6205, 08 Nos.
	Belt tightners	6204, 08 Nos.

### **MISCELLANEOUS**

25.	Paint	Double coating with primer after surface finish.
26.	Bearings	European standard or Equivalent
27.	Nut bolts	Tighten with spring washers
28.	Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment

## 60. REVERSIBLE HYDRAULIC M.B PLOW

REVERSIBLE HYDRAULIC M.B PLOW



### GENERAL

- |                        |   |
|------------------------|---|
| 1) Application         | For cutting and inversion of soil                         |
| 2) Tractor power       | $\geq 60$ hp  |
| 3) No. of bottoms      | 03 Reversible   |
| 4) Reversing mechanism | Hydraulic and manually operated lever with locking system |

### OVERALL DIMENSIONS (min.)

- |                     |                    |
|---------------------|--------------------|
| 5) Length           | 3100 mm $\pm$ 30mm |
| 6) Width            | 1700 mm $\pm$ 10mm |
| 7) Height           | 1450 mm $\pm$ 10mm |
| 8) Weight (Approx.) | 575 kg $\pm$ 10 kg |

### MATERIAL SPECIFICATIONS

- |                    |   |
|--------------------|---|
| 9) Main frame      | M.S. Pipe 120 mm dia. 12 mm wall thickness and M.S. shaft 80 mm dia. with support of M.S. angle 75x75x9 mm and rectangular bar 80x30 mm |
| 10) Mast (A-frame) | M.S. sheet 490x12 mm  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

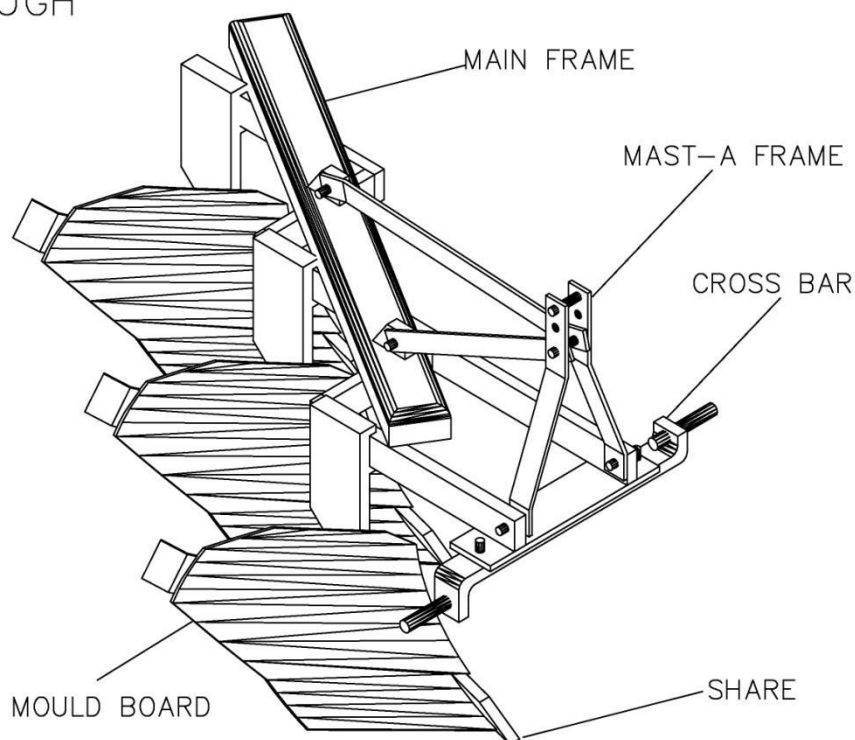
- |                     |  |
|---------------------|--|
| 11) Cross bar       | M.S. flat 60x30 mm                         |
| 12) Mould board     | 740x385x6 mm M.S. sheet                    |
| 13) M.B. extension  | M.S. sheet 100x9 mm                        |
| 14) Share           | 500x230x11 mm hardened steel HRC $\geq 40$ |
| 15) Bracket support | 04 Nos. M.S. plate 640x100x12 mm           |
|                     | 02 Nos. M.S. plate 345x100x12 mm           |
| 16) Hydraulic jack  | 01 No. 535 mm long, 22 mm dia.             |
| 17) Bearings        | 02 Nos. 32210 and 32215                    |

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 18) Paint          | Double coat with primer after surface finish   |
| 19) Bearings       | European standard or Equivalent                |
| 20) Nuts and bolts | To be tightened with spring washers            |
| 21) Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |

## 61. M.B. PLOUGH

M.B PLOUGH



### GENERAL

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| 1) Application                  | For cutting and inversion of soil |
| 2) Tractor power                | $\geq 50$ hp                      |
| 3) No. of bottoms               | 03                                |
| 4) Clearance under frame (min.) | 500 mm                            |

### OVERALL DIMENSIONS (min.)

- |                     |                    |
|---------------------|--------------------|
| 5) Length           | 1750 mm $\pm$ 20mm |
| 6) Width            | 1100 mm $\pm$ 10mm |
| 7) Height           | 925 mm $\pm$ 10mm  |
| 8) Weight (Approx.) | 325 kg $\pm$ 10 kg |

### MATERIAL SPECIFICATIONS

- |                    |  |
|--------------------|--|
| 9) Main frame      | 140x80x6 mm M.S. box, bolted with 75x30 mm M.S. flat |
| 10) Mast (A-frame) | 62x15 mm M.S. flat                                   |
| 11) Cross bar      | 75x30 mm M.S. flat                                   |
| 12) Mould board    | 725x325x6 mm M.S. sheet                              |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

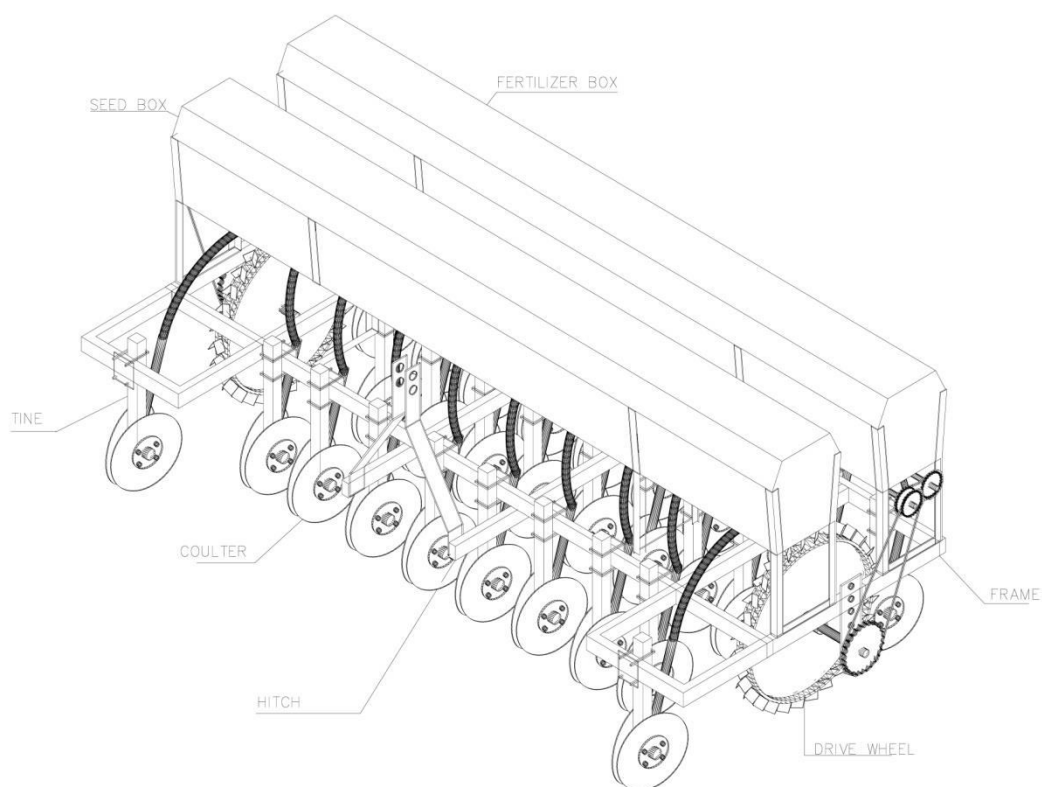
- |                    |   |
|--------------------|---|
| 13) M.B. extension | 6 mm M.S. sheet                           |
| 14) Share          | 355x130x9 mm hardened steel HRC $\geq$ 40 |
| 15) Land side      | 620x40x30 mm hardened steel               |

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 16) Paint          | Double coat with primer after surface finish   |
| 17) Nuts and bolts | To be tightened with spring washers            |
| 18) Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |

## 62. DOUBLE COULTER DRILL WITH FERTILIZER ATTACHMENT

### DOUBLE COULTER DRILL



#### **GENERAL**

- |                                |   |
|--------------------------------|---|
| 1) Application                 | For sowing of wheat in stubble field as well  |
| 2) No. of rows                 | 21 Nos. Fertilizer 10 Nos. at front, spacing 125 mm 02 Nos. gang with fertilizer attachment |
| 3) Furrow opener               | Coultter type   |
| 4) Seed and fertilizer tubes   | Transparent plastic spring fragmented   |
| 5) Metering drive mechanism    | Ground wheel through chain and sprockets  |
| 6) Seed& fert. Hopper capacity | 150 kg for seed, 125 kg for fertilizer  |

#### **OVERALAL DIMENSIONS**

- |                      |                     |
|----------------------|---------------------|
| 7) Length            | 1500 mm $\pm$ 15 mm |
| 8) Width             | 3000 mm $\pm$ 30 mm |
| 9) Height            | 1220 mm $\pm$ 10 mm |
| 10) Weight (Approx.) | 450 kg $\pm$ 10 kg  |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

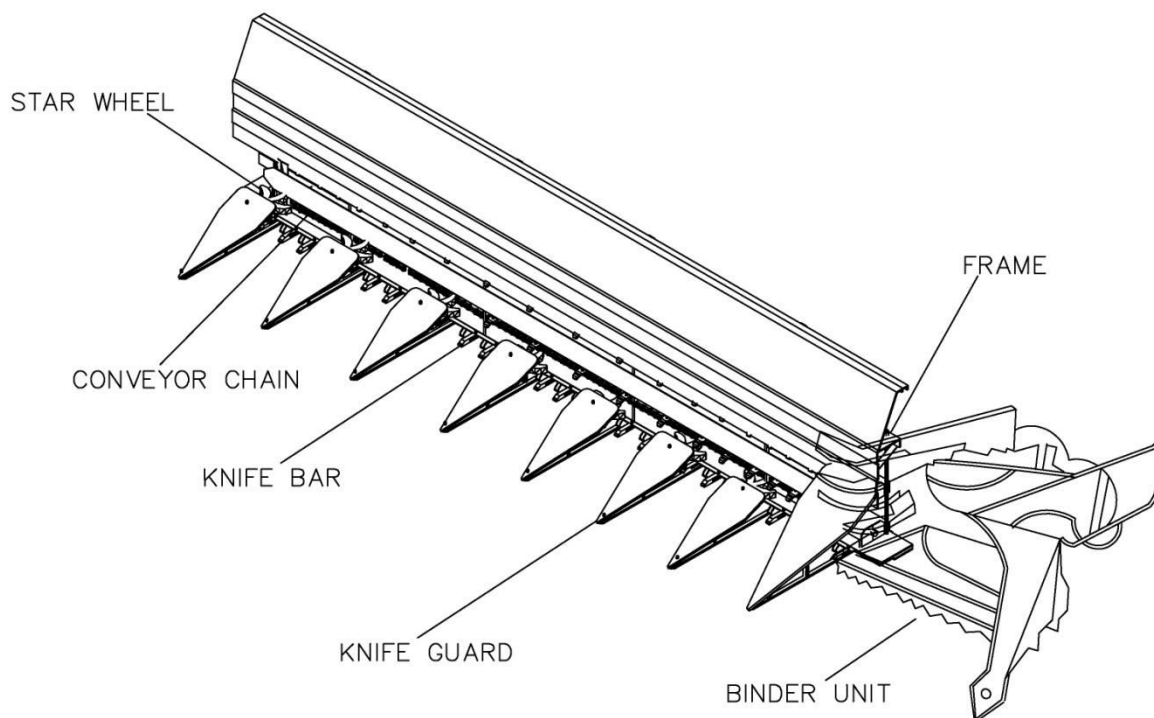
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|------------------------------|--|
| 11) Frame                    | 03 Nos. gangs 75x38x6 mm M.S. box with 06 Nos. supports  |
| 12) Mast (A-frame)           | 62x12 mm M.S. flat and 50x12 mm M.S. flat  |
| 13) Hitch                    | 75x38x6 mm M.S. box  |
| 14) Seed / fertilizer hopper | M.S. sheet 16 gauge, divided into two parts with lid of 16 gauge   |
| 15) Ground wheels            | 02 Nos. 75x6 mm M.s flat rim 508 mm dia. 35 mm M.S round axle with spokes of 15 mm M.S. round with lugs  |
| 16) Tine                     | 31 Nos. 40x5 mm M.S Square pipe bolted with 38x9 mm M.S plate welded with main frame   |
| 17) Coulters                 | 62 Nos. 300 mm dia. Plate, 5 mm thick heat treated, hardness $\geq 40$ HRC   |
| 18) Fluted wheel drive shaft | 22 mm dia. M.S. round cold drawn   |
| 19) Crumbler                 | 02 Nos. 1200 mm long each with 40 mm dia. Pipe of 3 mm wall thickness with 04 Nos. supports of M.S round plate 200 mm dia. 6 mm thick and 08 Nos. M.S flat notched of 35x6 mm thick with mountings |
| 20) Crumbler mounting        | M.S formed plate 9 mm thick welded with main frame and M.S flat 12 mm thick for bearing with 03 Nos. spring loaded adjustment  |
| 21) Row marker               | M.S box 38x38x6 mm, hoe type   |
| 22) Bearings                 | 62 Nos. 6205 2RS, 01 No. in each coulter<br>03 Nos. 204 F for seed and fert. drive shaft<br>04 Nos. 6306 for ground wheels,<br>04 Nos. 6306 for crumbler   |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 23) Paint          | Double coat with primer after surface finish  |
| 24) Nuts and bolts | To be tightened with spring washers   |
| 25) Bearings (new) | European standard or Equivalent   |
| 26) Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |

## 63. WHEAT REAPER CUM BINDER

### WHEAT REAPER CUM BINDER



Parameters	Description
<b>A. <u>Reaper Specifications</u></b>	
<b><u>General</u></b>	
1) Application	For cutting of wheat and rice crop
2) Attachment	Provided
3) Cutting width	2180 mm
4) Tractor power	≥ 50 hp
<b><u>Overall Dimensions</u></b>	
5) Length	2650 mm ± 10 mm
6) Width	1300 mm ± 20 mm
7) Height	750 mm ± 10 mm (adjustable)
8) Weight (min.)	370 kg ± 10 kg
<b><u>MATERIAL SPECIFICATIONS</u></b>	
9) Frame	
a. Lower box	01 No. M.S. 125x30x4.5 mm

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |   |                     |   |
|---|---------------------|---|
| b.  | Vertical boxes      | 02 Nos. M.S. 100x30x4 mm  |
| c.  | Front panel         | M.S. 18 gauge   |
| d.  | Conveyer Chain      | 04 Nos. channels, 60 # chain with 38 Nos. lugs fitted on chain, made of M.S. formed sheet |
| 10) Cutter bar assembly                   |                     |   |
| a.  | Knife bar           | 02 Nos. 22x6 mm M.S. flat   |
| b.  | Blades              | 28 Nos. triangular 75 mm, HRC 50-60   |
| c.  | Knife Guard Fingers | Steel cast  |
| d.  | Hold down clips     | 06 Nos., steel cast/steel plate   |
| e.  | Drive lever end     | 01 No. cam type, M.S.   |
| f.  | Gear box            | 02 Nos. Cast Iron   |
| g.  | Chain sprockets     | 04 Nos. cast iron/M.S. formed sheet for 60 # chain  |
| 11) Header Assembly                       |                     |   |
| a.  | Pipes               | M.S pipe, 21 mm sq. rod 21 mm, and M.S. flat 30x5 mm, 18gauge M.S. formed sheet           |
| b.  | Star wheels         | Polypropylene plastic with bearings   |
| c.  | Pressure spring     | 14 Nos. 4 mm dia. Spring steel  |
| 13) Tractor attachment                    |                     |   |
| 14) Lifting and lowering assembly         |                     |   |
| a.  | Legs front and back | 04 Nos. legs made of steel cast or steel plate  |
| b.  | Pulleys             | 100 mm dia. cast iron with pins   |
| c.  | Steel rods          | 02 Nos. steel rods, 17 mm dia.  |
| 15) Power transmission                    |                     |   |
| 16) Propeller shaft                       |                     |   |
| PTO shaft pulley 150 mm dia., cast iron   |                     |   |
| 39 mm dia. M.S. pipe, 3 mm wall thickness |                     |   |

### **B. BINDER PARTS**

- |     |                                  |  |
|-----|----------------------------------|--|
| 17) | Gear Box                         | CI ratio 1:1   |
| 18) | Pillars with arm and arm support | Aluminum casted, Left pillar 170x170 mm, 250 mm long, Right pillar 150x150 mm, 250 mm long   |
| 19) | Binder Shafts                    | Needle shaft 30 mm dia.<br>Trigger shaft 14 mm dia.<br>Binding cone shaft 25 mm dia.<br>Bachman 370 x 220 mm                               |
| 20) | Knotter mechanism (complete)     | Provided, European standard or Equivalent  |
| 21) | Binder main parts with bearings  | Binder needle 480x310 mm<br>01 No. Cone drum<br>Binder left support 530 x 75 mm aluminum cast<br>07 No. 6205<br>01 No. 6206<br>04 No. 6203 |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- 22) Connecting rod
- 01 No. 6012  
01 No. 62202  
MS 475 mm long and 60 mm dia.

### **MISCELLANEOUS**

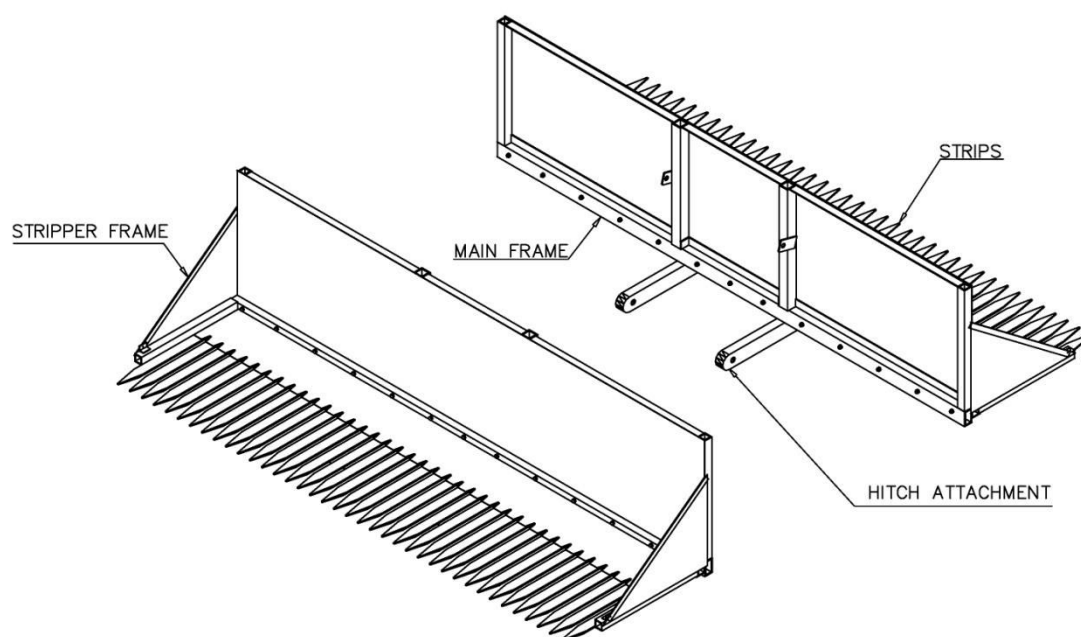
- 23) Paint Double coat with primer after surface finish
- 24) Nuts and bolts To be tightened with spring washers
- 25) Bearings European standards or Equivalent
- 26) Warranty Free: 01 years for parts supply and service  
Extended: 05 years for parts supply on payment
- 27) Origin Locally made

### **Accessories**

01 spring tines cultivator, Operational manual, Ten reaper binder and baler thread/rope and tool kit, Tractor attachment complete

## 64. COTTON BOLL STRIPPER

### COTTON BOLL STRIPPER



#### General

- |                  |   |
|------------------|---|
| 1) Applications  | For collection of bolls from remaining cotton crop after last picking |
| 2) Type          | Tractor front mounted   |
| 3) Tractor Power | 50 + hp   |
| 4) Working Width | 2640 mm   |

#### Overall Dimensions

- |           |              |
|-----------|--------------|
| 5) Length | 1180 ± 50mm  |
| 6) Width  | 2725 ± 100mm |
| 7) Height | 760 ± 20mm   |

#### Material Specifications

- |                     |  |
|---------------------|--|
| 8) Main frame       | MS box 75x43x 6 mm , 02 Nos. side supports of MS box 42x42x6 mm , 02 Nos. center supports of MS box 50x50x6 mm<br>MS angle 38x38x4 mm welded on top and MS flat 38x4 mm welded on bottom |
| 9) Hitch attachment | 02 Nos. MS rectangular box 75x43x6 mm, 920 mm long and 100 mm tapered at ends  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

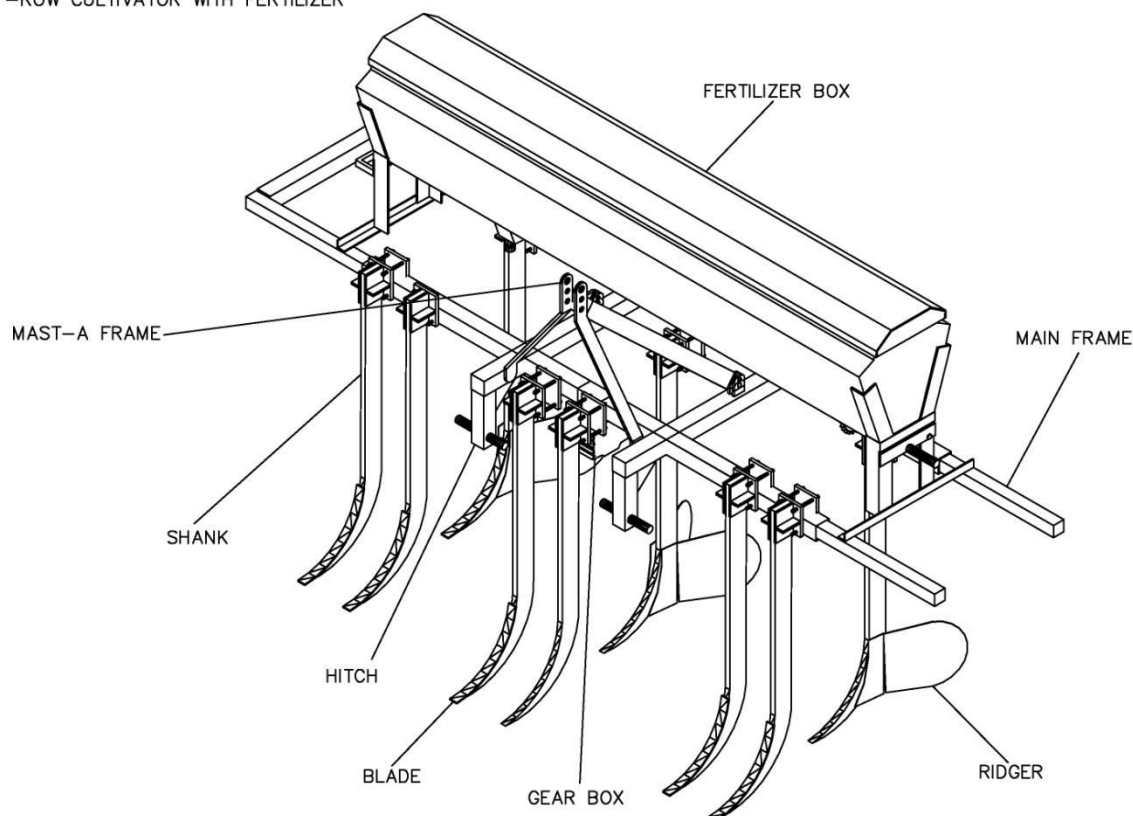
- |                                |   |
|--------------------------------|---|
| 10) Stripper Frame             | MS box 40x40x6 mm bolted with 12 Nos. of bolts of size 12 mm bolted with main frame, 02 Nos. of pins 18 mm dia. for support   |
| 11) Stripes                    | 14 gauge MS sheet, welded at front and sides<br>762x50x4.5 mm T.iron welded with stripper frame with front tapered 120 mm and 4 mm tip size<br>MS sheet 14 gauge 250mm wide, welded on rear end of stripper frame |
| 12) Tractor Attachment (Front) | 25 mm thick MS plate bolted with tractor frame, 9 mm MS plate welded for support pulley<br>MS box 50x50x6 mm with adjustment holes<br>MS plate 75x16 mm attached with main frame through 25 mm pins               |
| 13) Pulley for wire Rope       | 04 Nos. 90 mm dia, flexible wire rope dia. 10 mm  |
| 14) Rear hydraulic link        | L shaped 460x235 mm, made of 50x6 mm MS angle hinged at place of lower links with wire rope tightener   |

### **Miscellaneous**

- |                         |  |
|-------------------------|--|
| 15) Paint               | Double coat with primer after surface finish |
| 16) Nuts and Bolts      | To be tightened with spring washers          |
| 17) Minor modifications | To be carried out free of cost if required   |
| 18) Warranty            | Free : 1 year for parts and service          |

## 65. INTER-ROW CULTIVATOR

INTER -ROW CULTIVATOR WITH FERTILIZER



### GENERAL

- |                              |   |
|------------------------------|---|
| 1) Application               | Weeding, interculture, earthing up and fertilizer application     |
| 2) Type                      | Rear mounted  |
| 3) Tractor power requirement | ≥ 50 hp   |
| 4) Linkage category          | I & II  |
| 5) Tines                     | 06 Nos. for interculture at front and 03 Nos. for ridgers at rear |
| 6) Tine spacing              | Adjustable  |
| 7) Metering mechanism        | Fluted wheel (Aluminum)   |
| 8) Fertilizer box capacity   | 03 bags   |
| 9) Fertilizer tubes          | Hard, transparent flexible plastic                                |
| 10) Power transmission       | Through reduction gear, sprockets, chains and shaft               |
| 11) Bearing                  | 04 Nos. 6205 sealed ball bearing                                  |

### OVERALL DIMENSIONS



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

12) Length	900 mm $\pm$ 10 mm
13) Width	2100 mm $\pm$ 30 mm
14) Height	1350 mm $\pm$ 10 mm
15) Weight (Approx.)	325 kg $\pm$ 5 kg

### **MATERIAL SPECIFICATIONS**

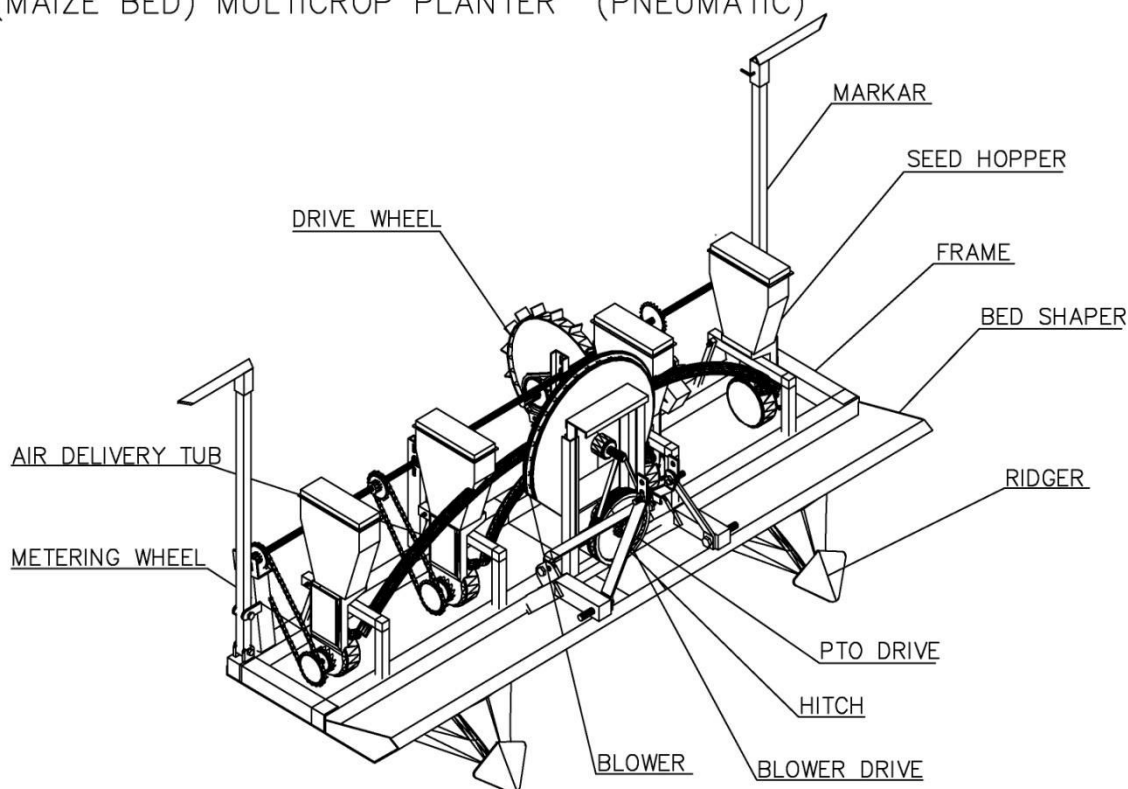
16) Frame	02 Nos. 62x62x6 mm MS box with 02 cross members 90x45x6 mm MS channel and 02 Nos. 150x50x5 mm MS box
17) Mast A-frame	3 mm MS plate reinforced with 62x12 mm MS flat
18) Hitch	100x50x6 mm MS box
19) Tine	09 Nos. 900x70x22 mm MS flat
20) Tine clamps/brackets	Formed 5 mm MS plate, bolted
21) Shovel	09 Nos. 250x60x8 mm forged and heat treated/hardened MS
22) Ridger	03 Nos. adjustable 5 mm MS sheet
23) Fertilizer hopper	MS or GI sheet of 16 gauge
24) Fertilizer drive shaft	22 mm dia. MS cold drawn

### **MISCELLANEOUS**

25) Paint	Double coat with primer after surface finish
26) Nuts and bolts	To be tightened with spring washers
27) Bearings	European standard or Equivalent
28) Warranty	Free: 1 year for parts and service Extended: 5 years for parts supply on payment

## 66. MAIZE BED PLANTER

(MAIZE BED) MULTICROP PLANTER (PNEUMATIC)



### GENERAL

- |                  |                               |
|------------------|-------------------------------|
| 1) Application   | For planting of maize on beds |
| 2) Nos. of rows  | 04                            |
| 3) Row spacing   | 687-762 mm (adjustable)       |
| 4) Seed metering | Plate type (pneumatic)        |
| 5) Seed plates   | 01 set provided               |
| 6) Tractor power | $\geq 50$ hp                  |

### OVERALL DIMENSIONS

- |                   |                     |
|-------------------|---------------------|
| 7) Length         | 1910 mm $\pm$ 20 mm |
| 8) Height         | 1600 mm $\pm$ 10 mm |
| 9) Width          | 2760 mm $\pm$ 20 mm |
| 10) Weight (min.) | 425 kg $\pm$ 10 kg  |

### MATERIALS SPECIFICATONS

- |           |                               |
|-----------|-------------------------------|
| 11) Frame | 02 Nos. M.S. boxes 62x62x6 mm |
|-----------|-------------------------------|

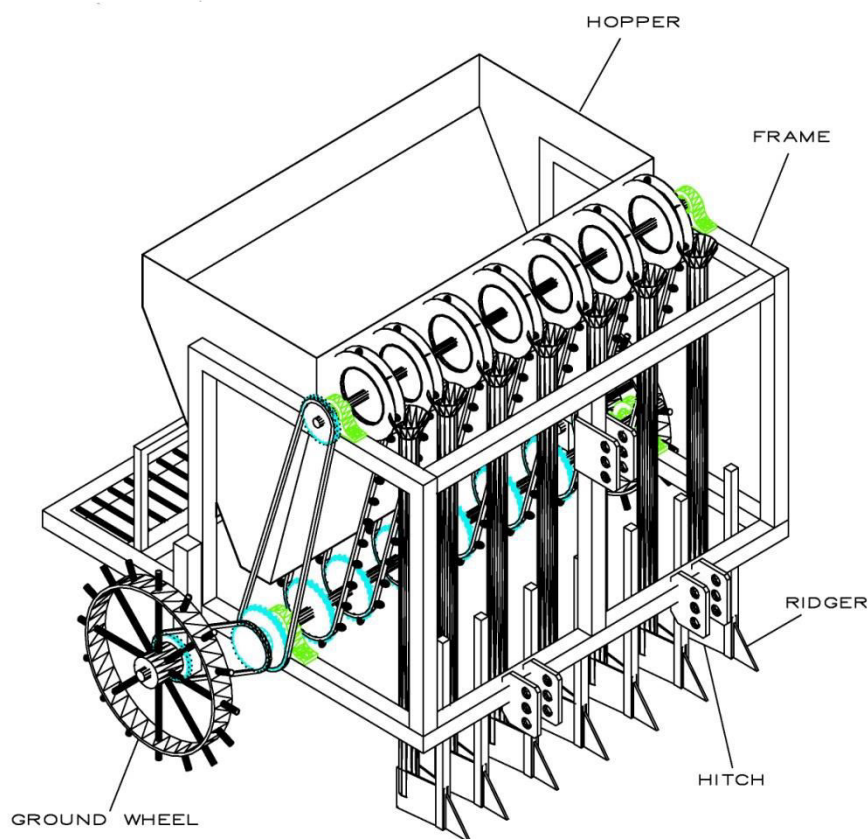
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

12) Mast (A-frame)	62x12 mm M.S. flat & 50x12 mm M.S. flat
13) Hitch	62x62x6 mm M.S. box
14) Bed shaper plate	2440x1220x5 mm M.S. formed sheet
15) Furrow opener with wings	M.S. plate 6 mm of tip and M.S. plate 5 mm furrow with wings
16) Blower	400 mm dia. 4500rpm, M.S sheet 10 and 14 gauge.
17) Air suction Pipe	60x60x4 mm MS sq. pipe with 04 Nos. vent pipe 38mm OD, 16 gauge, flexible vinyl pipes 62 mm dia. (main) and 38 mm dia. (distributor) with steel wire impregnated
18) Seed box	04 Nos. fiber glass boxes 8 kg each
19) Seed plate	215 mm dia. with 13 Nos. tips for each crop
20) Seed drive shaft	22 mm M.S. round cold drawn
21) Ground wheels	02 Nos. 6.00-12 with lugs (8 ply), 60# chain
22) Row marker	02 Nos. 35x35x6 mm MS box hoe type

### **MISCELLANEOUS**

23) Paint	Double coat with primer after surface finish
24) Nuts and bolts	To be tightened with spring washers
29) Bearing	European standard or Equivalent
25) Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

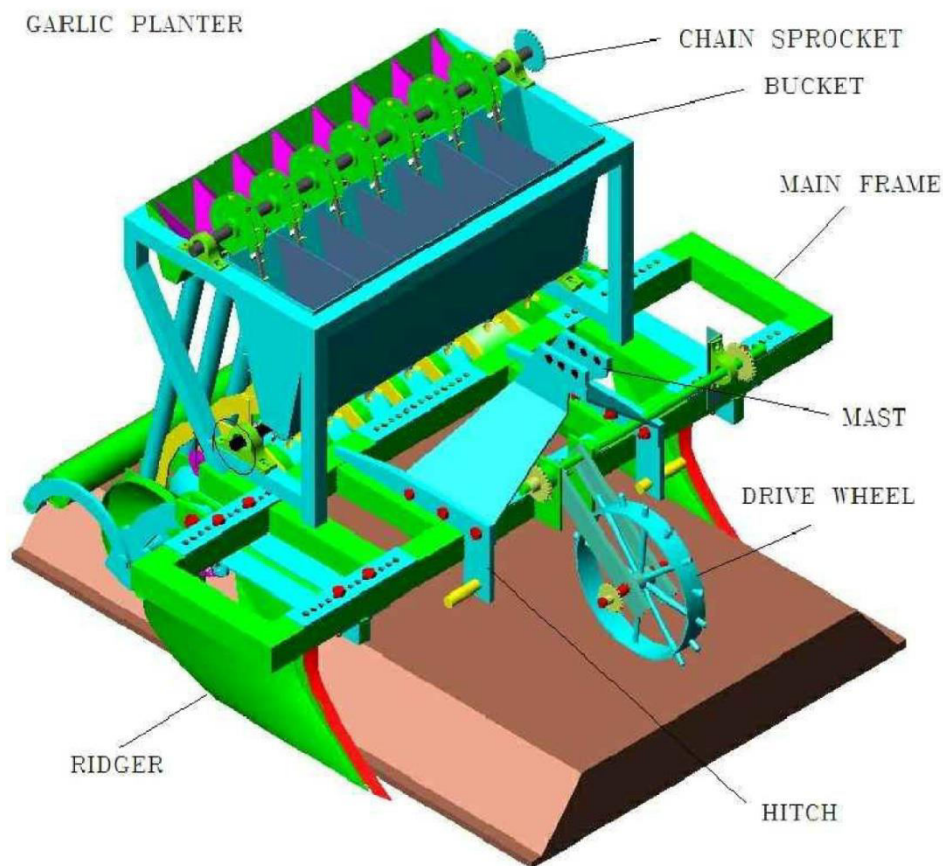
## 67. A) GARLIC PLANTER



Sr. #	Parameter	Description
1	Application	Used for planting of garlic
2	Type	Tractor operated
3	Planting Mechanism	Cup type and pick and drop system
4	Tractor power	50 hp
5	Transplanting rows	4 or above
6	Working width	1650 mm
7	Row to row distance (min)	250 mm (adjustable)
8	Seed spacing	65-150 mm (adjustable)
9	Origin	Imported/Local
10	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### B) GARLIC BED PLANTER



#### GENERAL

- |                  |                              |
|------------------|------------------------------|
| 1) Application   | For sowing of garlic on beds |
| 2) Type          | Tractor rear mounted         |
| 3) Tractor power | $\geq 55$ hp                 |
| 4) Working width | 1370 mm                      |

#### OVERALL DIMENSIONS (min.)

- |                     |                     |
|---------------------|---------------------|
| 5) Length           | 2350 mm $\pm$ 20 mm |
| 6) Width            | 1830 mm $\pm$ 20 mm |
| 7) Height           | 1520 mm $\pm$ 10 mm |
| 8) Weight (Approx.) | 500 kg $\pm$ 10 kg  |

#### MATERIAL SPECIFICATIONS

- |                    |                        |
|--------------------|------------------------|
| 9) Main frame      | 75x75x7 mm MS angle    |
| 10) Mast (A-frame) | 560x320x10 mm MS plate |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                           |   |
|---------------------------|---|
| 11) Lower link            | 22 mm thick MS plate  |
| 12) Ridger mountings      | 02 Sets 63x63x7 mm MS angle   |
| 13) Ridger wing           | 10 mm thick MS plate  |
| 14) Shaper unit           | 16 mm pivoted arms MS plate. 165 mm OD and 1372 mm long MS pipe with UC 207 bearings. Ridge shaper (Conical section) 450 mm dia. and 3.5 mm wall thickness. |
| 15) Ground/drive wheel    | 460 mm dia. along with peg, 76 mm long MS flat, 50 # chain and 100x50 mm MS channel.  |
| 16) Seed hopper           | 3 mm MS sheet   |
| 17) Bucket conveyor       | 428 Nos. buckets as per seed size 6 row (6 set)   |
| 18) Bucket conveyor shaft | 40 mm MS shaft with 04 Nos. UC 208 bearings.  |
| 19) Seed placement unit   | Coulter wheel 6 set 350 mm dia. along with all accessories and 38x12 mm MS flat.  |
| 20) Seed tube             | 38 mm inner dia. transparent plastic pipe.  |
| 21) Seed cover roller     | 100 mm dia. along with respective attachment  |

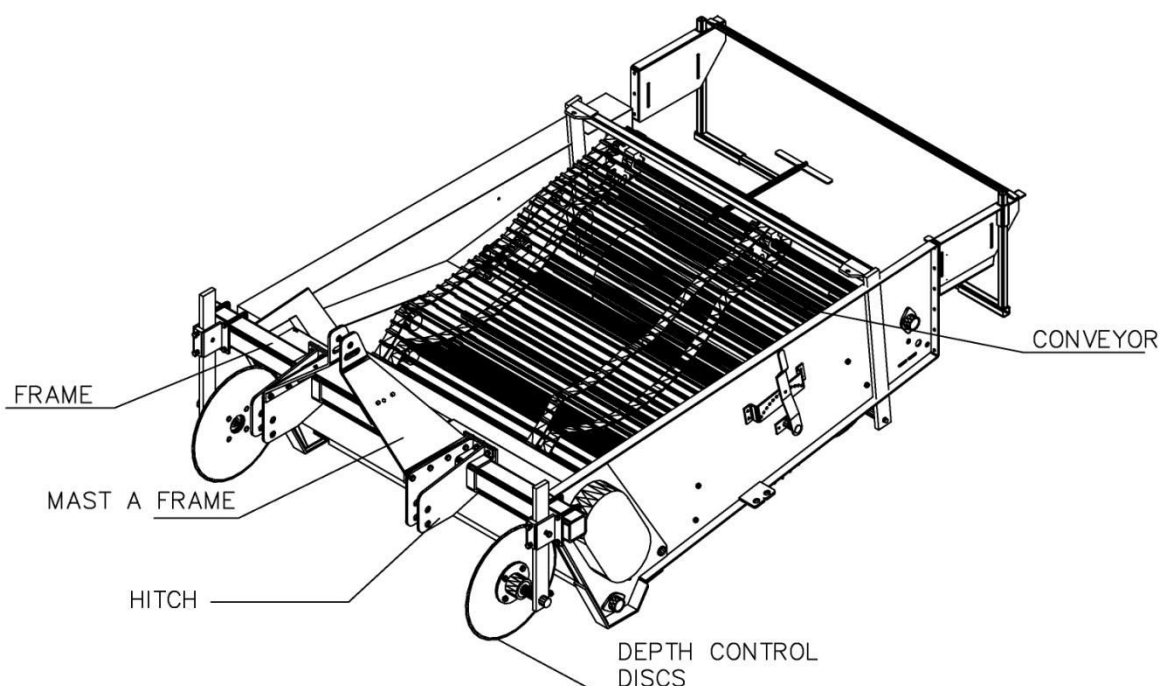
### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 22) Paint          | Double coat with primer after surface finish   |
| 23) Nuts and bolts | To be tightened with spring washers            |
| 24) Bearings       | European standard or Equivalent                |
| 25) Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |



## 68. ONION HARVESTER

### ONION HARVESTER



#### GENERAL

- |                  |                              |
|------------------|------------------------------|
| 1) Application   | For harvesting of onion crop |
| 2) Type          | Tractor rear mounted         |
| 3) Tractor power | ≥ 65 hp                      |

#### OVERALL DIMENSIONS (min.)

- |           |                 |
|-----------|-----------------|
| 4) Length | 3500 mm ± 30 mm |
| 5) Width  | 2050 mm ± 20 mm |
| 6) Height | 1300 mm ± 10 mm |

#### MATERIAL SPECIFICATIONS

- |                         |  |
|-------------------------|--|
| 7) Main frame           | MS sheet 10 mm thick on both sides, MS pipe 45 mm dia. |
| 8) Mast (A Frame)       | MS plate 10 mm thick support with MS pipe 45 mm dia.   |
| 9) Hitch                | MS plate 10 mm thick                                   |
| 10) Hitch support frame | MS box 100x100x8 mm                                    |
| 11) Depth control discs | MS round plate 6 mm thick , 500 mm dia.                |
| 12) Gear box            | Cast iron attached with PTO shaft                      |
| 13) Conveyor            | MS rod 10 mm dia.                                      |



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

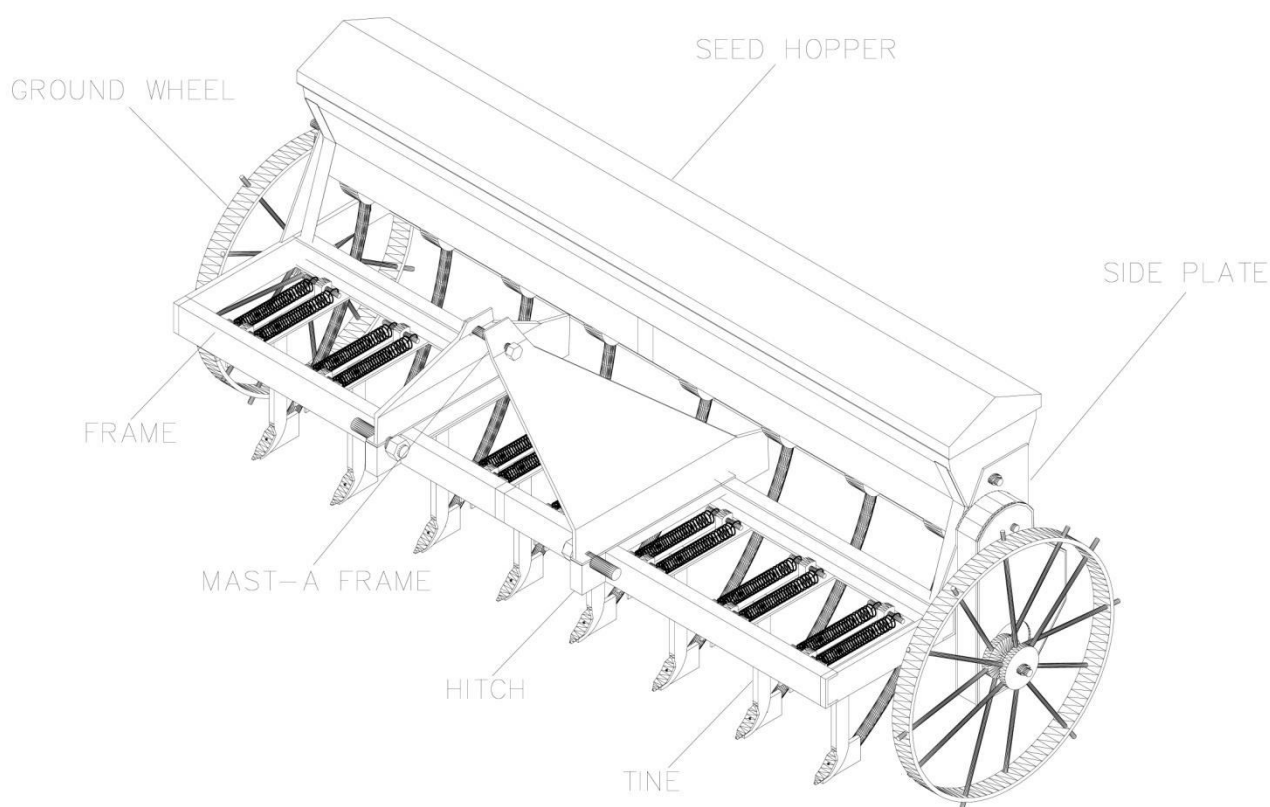
- |                             |   |
|-----------------------------|---|
| 14) Crop conveying Flappers | 04 Nos. rubber flappers attached with MS flat 50x10 mm  |
| 15) Press wheel             | MS pipe 380 mm dia. 2 mm thick attached with main frame |
| 16) Chain sprockets         | 04 Nos. different sizes, chain # 50                     |
| 17) Chain cover             | M.S. sheet 14 gauge                                     |
| 18) Plastic flappers        | Plastic sheet 4 mm thick                                |
| 19) Bearings                | 02 Nos. UCF 207   |
| 20) Transportations wheels  | 02 Nos. provided  |

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 21) Paint          | Double coat with primer after surface finish   |
| 22) Nuts and bolts | To be tightened with spring washers            |
| 23) Bearings       | European standard or Equivalent                |
| 24) Warranty       | Free : 1 year for parts and service            |
|                    | Extended : 5 years for parts supply on payment |

## 69. GROUNDNUT DRILL

### GROUNDNUT DRILL



### GENERAL

1) Application	For sowing of groundnut
2) Nos. of rows	08
3) Row spacing	250-450 mm adjustable
4) Tractor power	50+ hp
5) Furrow opener	Hoe type
6) Seed tube	Flexible/transparent plastic
7) Power transmission	Ground wheel through gear train
8) Metering device	Fluted wheel (plastic)
9) Seed hopper capacity	60-80 kg

### OVERALL DIMENSIONS (min.)

10) Length	1000 mm $\pm$ 10 mm
11) Width	2400 mm $\pm$ 20 mm
12) Height	1000 mm $\pm$ 10 mm

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- 13) Weight (Approx.) 300 kg  $\pm$  5 kg

### **MATERIAL SPECIFICATIONS**

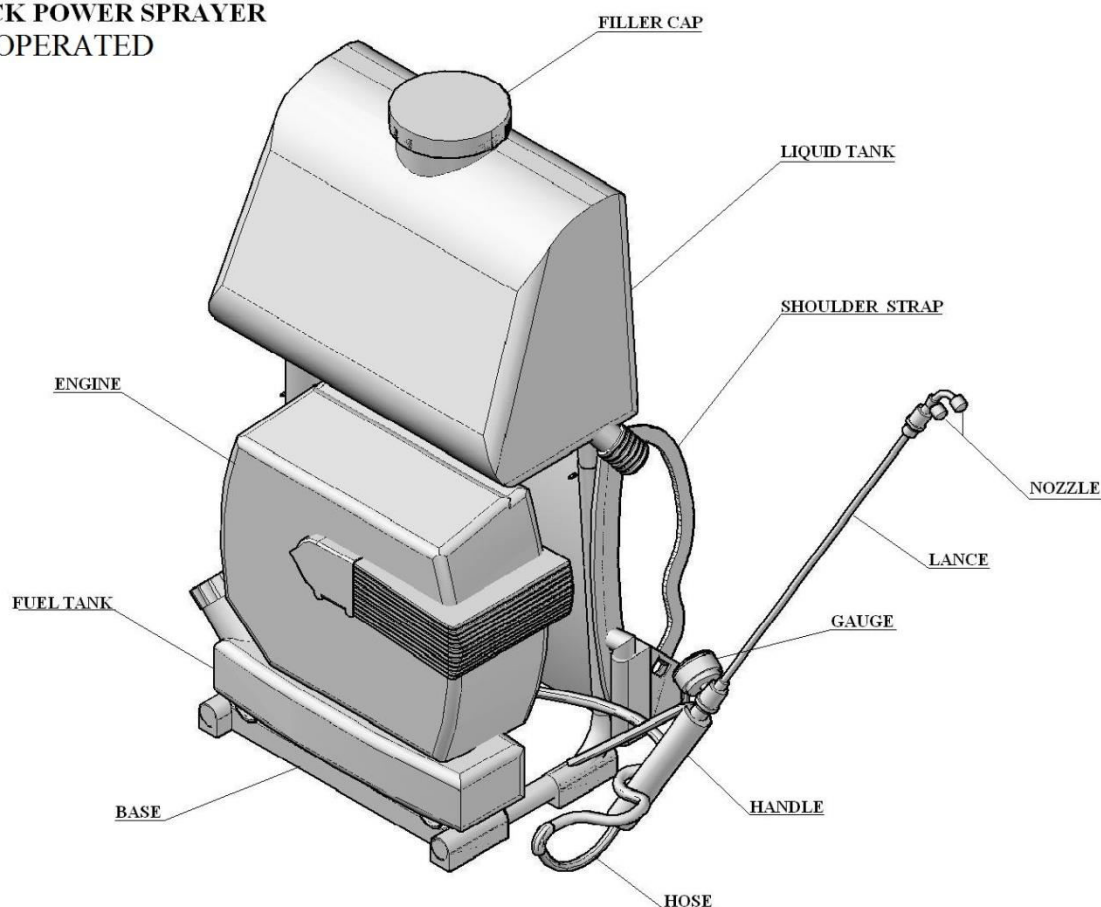
- |                                 |  |
|---------------------------------|--|
| 14) Main frame                  | M.S. channel 75x37x4.5 mm with cross member of M.S. flat 62x8 mm   |
| 15) Hitch                       | M.S. box 75x40x5 mm  |
| 16) Mast (A-frame)              | 62x2 mm and 50x9 mm M.S. flat  |
| 17) Seed hopper and lid         | M.S. sheet 18 gauge, hopper, mounted with M.S. flat 38x8 mm,   |
| 18) Ground wheel                | 600mm dia 62x5 mm M.S. flat, 15 mm M.S. round and 40 mm M.S. round axle (cold drawn) and C.I hub 100 mm dia mounted on 75x40x6 mm M.S. box |
| 19) Metering device             |  |
| Seed metering unit              | Fluted wheel type (plastic) with adjustable lever for seed rate  |
| 20) Fluted wheel                | Slotted type alternative slot from center line   |
| Size                            | 95 mm dia and 43 mm width  |
| Slot size                       | Tapered slots, length 28 mm, width 20 mm and depth 10 mm   |
| No. of slots                    | 08 Nos.  |
| Hole for drive shaft            | 19 mm square   |
| 21) Metering device drive shaft | M.S. square bar 18x18 mm   |
| 22) Tine                        | 08 Nos. forged flat 50x20 mm, tine support M.S. angle 50x4 mm with spring, o.d. 45 mm, wire dia 10 mm                                      |
| 23) Gears                       | 03 Nos. cast iron face width 25 mm   |
| 24) Bearings                    | 04 Nos. 6306/6307 for wheel and 02 Nos. of 6007 and 01 No. 6304 for gears  |

### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 25) Paint          | Double coat with primer after surface finish  |
| 26) Nuts and bolts | To be tightened with spring washers   |
| 27) Bearings       | European standard or Equivalent   |
| 28) Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply on payment |

## 70. KNAPSACK HYDRAULIC POWER SPRAYER (Engine Operated)

### KNAP SACK POWER SPRAYER ENGINE OPERATED



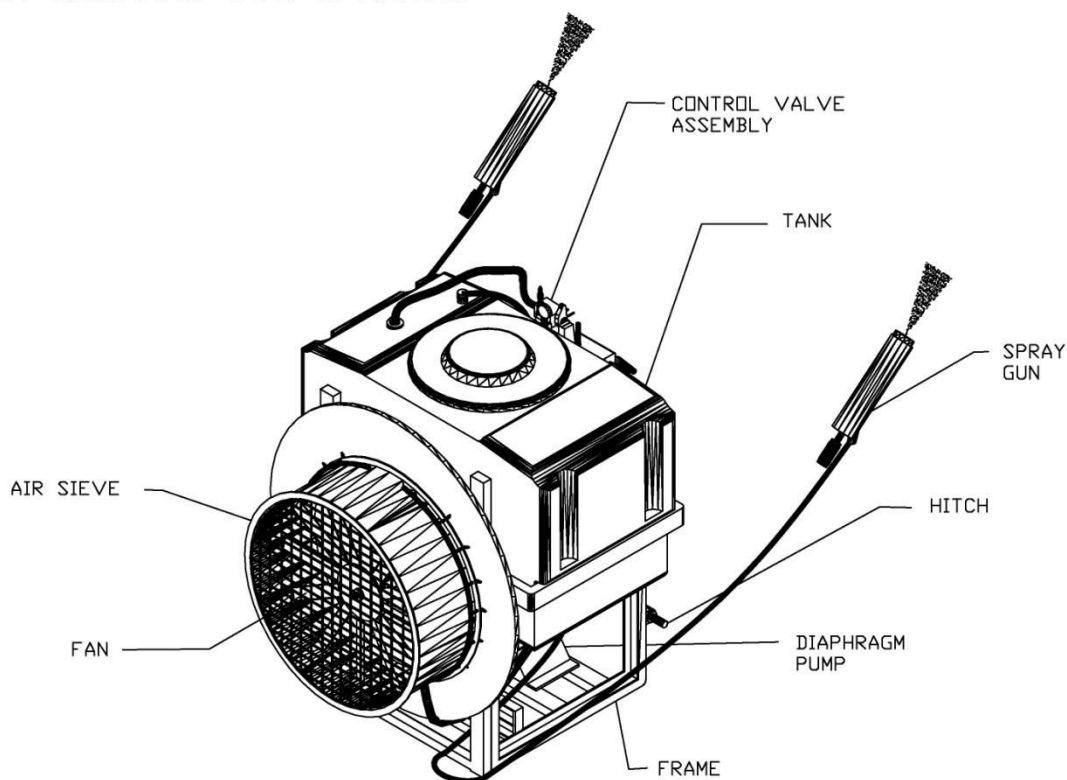
1) Applications	Field Crops, Vegetables and Orchards
2) Type	Engine operated
3) Tank Capacity (min.)	20 lit.
4) Tank Material	polypropylene
5) Lance	Goose neck/telescopic type
6) Pump	Diaphragm or Piston type
7) Engine	Air cooled, 4 stroke, petrol engine with filter, muffler and silencer, displacement (min) 35 cc
8) Noise level (max.)	90 db
9) Pressured developed (min.)	>6 bar
10) Operating pressure	3 bar
11) Gasket/washer	Rubber material
12) Tank Filter	Provided
13) Nozzles provided with the sprayer	
Hollow cone:	Discharge 0.6 L/min at 3 bar 01 No.

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

		Discharge 0.8 L/min at 3 bar 01 No.
	Flat fan Discharge:	1.0 L/min. at 2 bar 01 No.
	Flood jet/deflector:	Discharge 1.0 L/min at 1 bar 01 No.
14)	Accessories	As per manufacturer's standard including lance having 3-4 nozzles spacing 500 mm and proper handling, Spray gun for orchards, tool kit (Screw driver, Plier, Wrench 200 mm), fuel filter, spark plug, mask, Eye glasses, ear plug and hand gloves
15)	Weight (Approx.)	11 kg
16)	Origin	Imported
17)	Literature	English/Urdu
18)	Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

## 71. TRACTOR MOUNTED GUN SPRAYER

### TRACTOR MOUNTED GUN SPRAYER



### GENERAL

- |                           |  |
|---------------------------|--|
| 1) Application            | For spraying orchards.                                       |
| 2) Spray tank capacity    | 500 L  |
| 3) Spray gun              | 04 Nos., lance type, manually held with adjustable jet throw |
| 4) Spray jet height (max) | 7620mm (25 ft)   |
| 5) Pump                   | Plunger, PTO driven, 100 L/min capacity @ 20 bar             |
| 6) Pressure gauge         | 0-40 kg/cm <sup>2</sup> , glycerin filled                    |
| 7) Pressure control chest | Adjustable   |
| 8) UJ shaft               | 01 No. provided  |

### OVERALL DIMENSIONS

- |            |                 |
|------------|-----------------|
| 9) Length  | 1070 mm ± 10 mm |
| 10) Height | 1100 mm ± 10 mm |
| 11) Width  | 1140 mm ± 10 mm |

### MATERIAL SPECIFICATIONS

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                          |   |
|--------------------------|---|
| 12) Frame                | 65x40x6 mm formed channel with 02 Nos., rear vertical member of 60*40*3 mm channels |
| 13) Hitch                | 10 mm M.S. plate  |
| 14) Spray tank           | Synthetic (fiber glass) with graduated scale  |
| 15) Tank support         | 65x40x6 mm channel loop with bracket  |
| 16) Strainers            | Tank filling hole 20-30 mesh, SS Pump suction end 40 mesh, SS                       |
| 17) Pump suction hose    | 38mm dia. flexible quality rubber   |
| 18) Delivery/supply hose | 12mm dia. 15m, 4 Nos. flexible quality reinforced rubber                            |
| 19) Spray gun            | 04 Nos., 25 mm o.d. high pressure steel/brass pipe 600 mm long with trigger         |

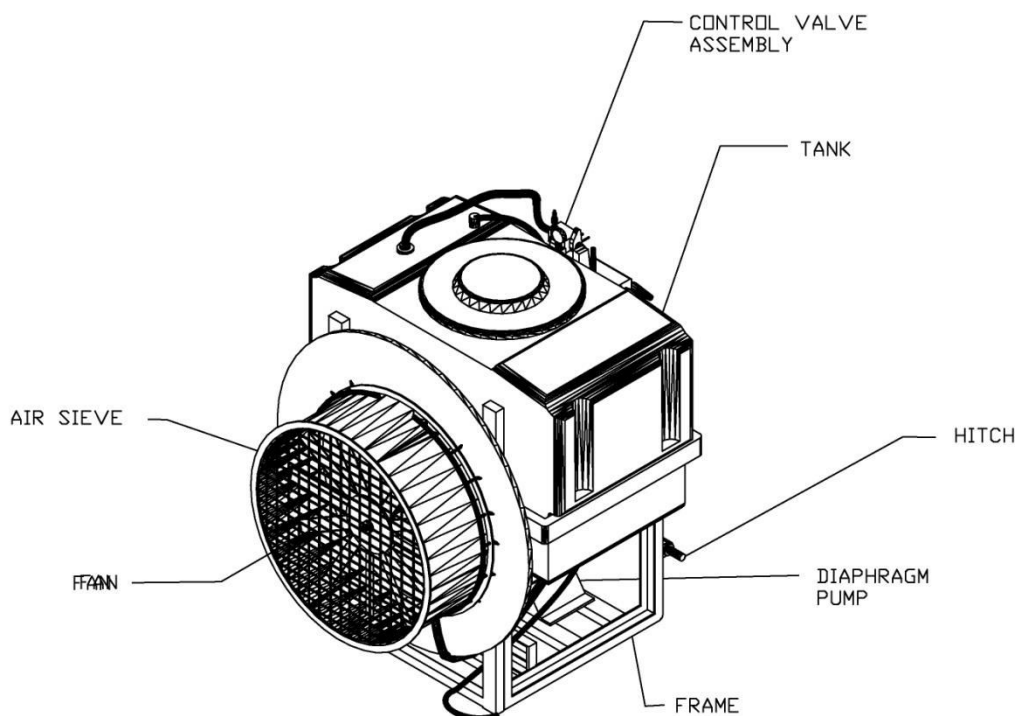
### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 20) Paint          | Baked after smooth surface finish  |
| 21) Nuts and bolts | To be tightened with spring washers  |
| 22) Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply |



## 72. TRACTOR MOUNTED AIR BLAST SPRAYER

### TRACTOR MOUNTED AIR BLAST SPRAYER



#### GENERAL

- |                          |  |
|--------------------------|--|
| 1) Application           | For spraying field crops and orchards.   |
| 2) Spray tank capacity   | 500 L  |
| 3) Pump                  | Plunger, PTO driven, 80-100 L/min capacity @ 20-40 bar   |
| 4) Pressure gauge        | 0-40 kg/cm <sup>2</sup> , glycerin filled  |
| 5) Pressure control unit | Adjustable (with two sections independent delivery and tank return valve with spring loaded pressure/flow regulator) |
| 6) UJ shaft              | 01 No. provided  |
| 7) Fan diameter          | 700-800 mm   |
| 8) Fan                   | Axial type adjustable  |
| 9) Fan rotation          | 1600-1800 RPM (through gear box)   |
| 10) Air speed            | 32-35 m/s  |
| 11) Nozzle location      | Equally spaced on circular ring over fan of dia.   |
| 12) No. of nozzles       | 11-14  |

#### OVERALL DIMENSIONS

- |                      |                 |
|----------------------|-----------------|
| 13) Length           | 1250 mm ± 10 mm |
| 14) Height           | 1300 mm ± 10 mm |
| 15) Width            | 1125 mm ± 10 mm |
| 16) Weight (Approx.) | 260 kg ± 10 kg  |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

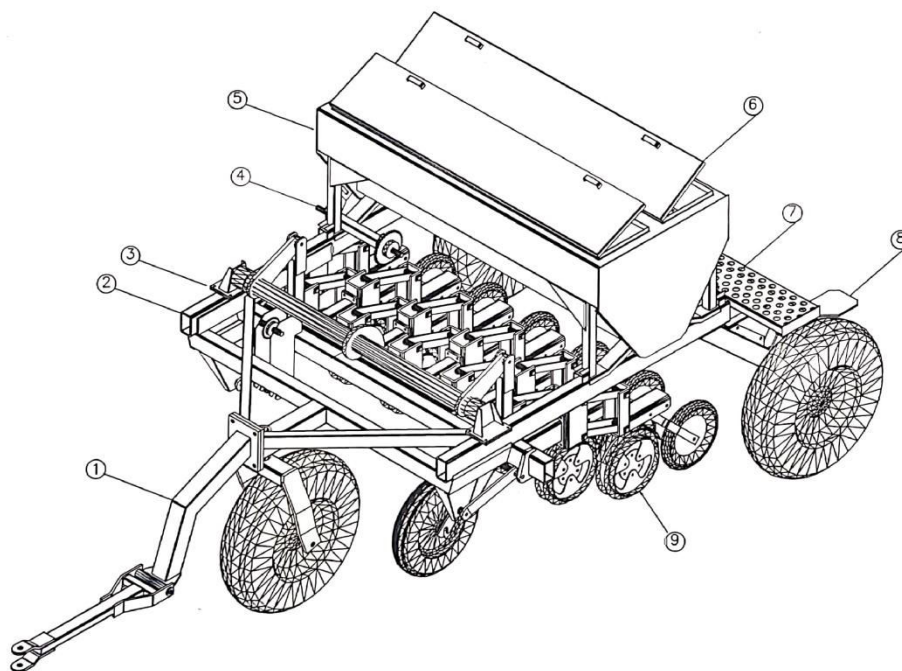
- |                          |  |
|--------------------------|--|
| 17) Frame                | 75x42x4 mm formed box rear vertical member of<br>75x4x4 mm channels                    |
| 18) Hitch                | 10 mm M.S. plate   |
| 19) Spray tank           | Synthetic (fibre glass) with graduated scale   |
| 20) Tank support         | 75x42x4 mm channel loop with bracket   |
| 21) Strainers            | Tank filling hole 20-30 mesh, SS Pump suction end<br>40 mesh, SS                       |
| 22) Gear box             | C.I, with gears of 22 and 82 teeth with extension gear box                             |
| 23) Pump suction hose    | 30 mm (i.d), 4000 mm length flexible quality synthetic<br>reinforced with plastic coil |
| 24) Delivery/supply hose | 12 mm (i.d), 1520 mm length, flexible quality reinforced<br>rubber                     |

### **MISCELLANEOUS**

- |                    |  |
|--------------------|--|
| 25) Paint          | Double coat with primer after surface finish                             |
| 26) Nuts and bolts | To be tightened with spring washers                                      |
| 27) Bearing        | European standard or Equivalent  |
| 28) Warranty       | Free: 1 year for parts and service<br>Extended: 5 years for parts supply |

## 73. MULTI CROP DRILL

MULTI CROP DRILL



### GENERAL

1) Type	Tractor mounted, Trailed type.
2) Application	For direct sowing of rice and other crops like wheat, soybean, peas, legumes, canola and beans.etc
3) Adjustments	Adjustment of seed to major tillage practices i.e. conventional till, mulch or minimum till, no till.
4) Power Requirement	60 hp-Tractor or above
5) Total Weight	1600kg.
6) No. of rows	12 Nos.
7) Furrow opener type	Double coulter-disc, offset
8) Working width (min.)	2130 mm (Adjustable)
9) Seed hopper capacity	420 kg or above
10) Fertilizer hopper capacity	400 kg or above
11) Row spacing	177.8 mm.
12) Seed/Fertilizer Hose type	Rubber transparent, wire impregnated
13) Coulter Size (dia.)	355.6mm,4mm thick
14) Disc Size (dia.)	355.6mm,2.5mm thick
15) Coulter Lead Distance	38 mm apart in front of dual disc

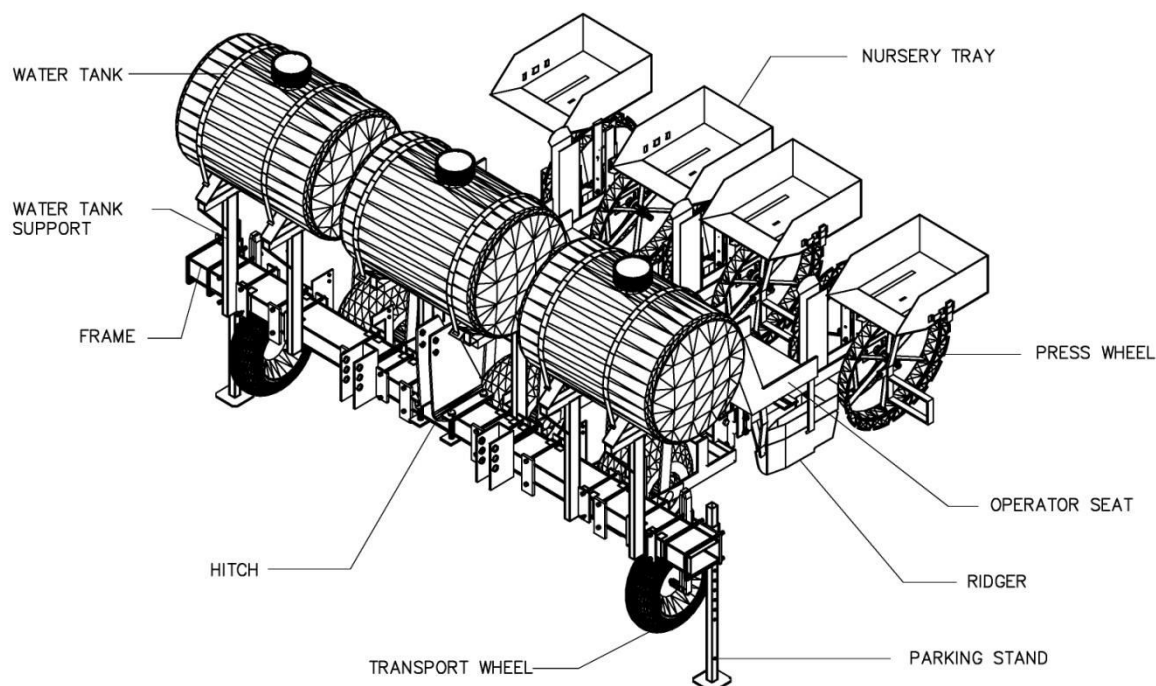
## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                                 |  |
|---------------------------------|--|
| 16) Soil Disc Penetration Range | Up to 76mm.  |
| 17) Press wheels (dia.)         | 393.7mm, 50.8mm thick  |
| 18) Disc bearings               | Heavy duty- sealed double row ball bearing   |
| 19) Warranty                    | Free: 1 year for parts and service<br>Extended: 05 year for parts supply on payments |

## TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS

### 74. VEGETABLE NURSERY TRANSPLANTER

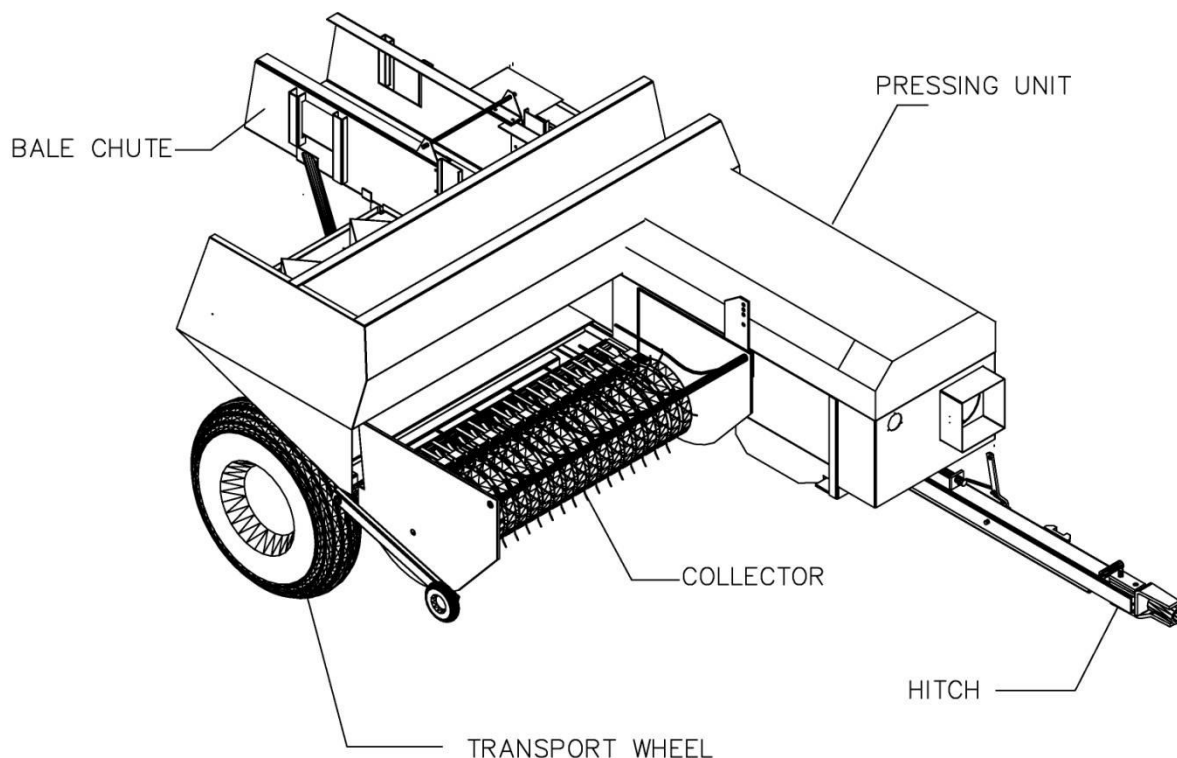
VEGETABLE NURSERY TRANSPLANTER (IMPORTED)



Sr. #	Parameter	Description
1	Application	Used for transplanting different Vegetable Nurseries such as Cauliflower, Chilies, Brinjal, Tomato, Onion, etc.
2	Type	Tractor operated
3	No of rows	02
4	Working efficiency (min)	0.25-0.45 acre/hour
5	Row spacing (min)	250-500 mm
6	Plant spacing	230-500 mm
7	Power requirement (min)	50 hp Tractor
8	Origin	Imported/Local
9	Warranty	Free : 01 year for parts and service Extended: 05 year for parts supply on payments

## 75. HAY BALER

### HAY BALER



#### Application

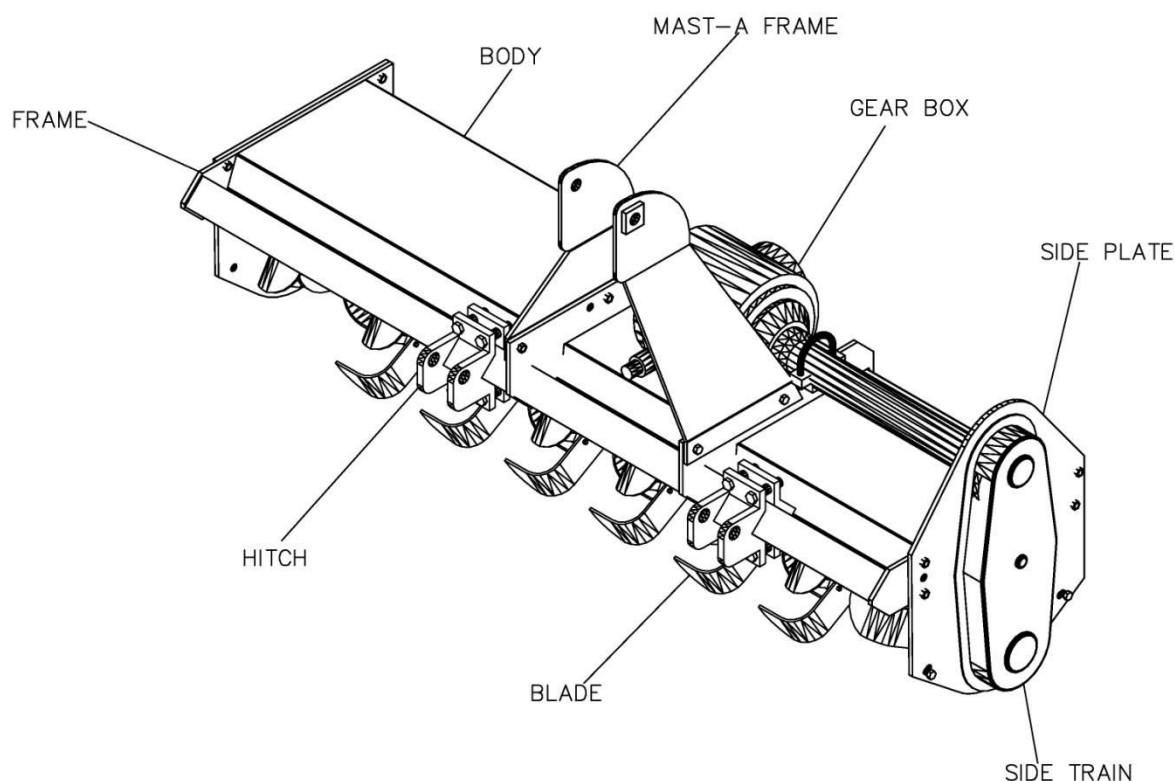
#### For baling of any type of hay

1) Pick up width	1650 mm or above
2) Ram speed	93 strokes per minute
3) Bale Dimensions (W×H)	360 × 460 mm
4) Bale Length (Adjustable)	300-1350 mm
5) Power Requirement (min.)	75 hp-Tractor
6) Knotter Machines	02 Nos.
7) Origin	Imported/Local
8) Warranty	Free: 1 year for parts and Services Extended: 5 years for parts supply on payment



## 76. (A) ROTAVATOR (48 BLADES)

### ROTAVATOR



### GENERAL

1) Type	Mounted
2) Linkage category	I & II
3) Working width	1825 mm
4) Tractor power	50 hp or above
5) Power transmission system	Gear train with lubrication housing and cover
6) No. of blades	48
7) Blade spacing	225 mm
8) U.J. shaft	01 Nos.
9) Rotor speed (min.)	230-245 rpm @ 540 PTO speed

### OVERALL DIMENSIONS

10) Length	1000 mm
11) Width	2150 mm
12) Height	1000 mm
13) Approx. weight	425 kg + 10 kg



## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

14) Frame	01 No. M.S. box of 75x75x5 mm with 02 Nos. supports of 12 mm
15) Mast (A-frame)	M.S. sheet metal 5 mm with reinforced front ends 02 Nos. 50x6 mm M.S flat
16) Blades rotator pipe	Seamless steel pipe o.d. 87 mm wall thickness 6 mm with forged axle end of 60 mm
17) Blades mounting plate	08 or 09 Nos. 235 mm dia., 10 - 12 mm thick and 02 nos. 150 mm dia. On sides (optional)
18) Gear box	Cast iron or cast steel
19) Transmission shaft	60 mm alloy steel with safety cover of 87 mm o.d. and 5 mm wall thickness
20) Blades	L-shaped, forged, heat treated, 5-6 mm thick, HRC 40-50
21) Sheet Metal	
Top cover	3-4 mm M.S. reinforced at bends
Side plates	10 mm M.S.
Rear cover	3-4 mm M.S.
Skids	62x15 mm M.S. flat
22) Bearings	
Gear box (PTO side)	01 No. 7310 or 6309
Gear box (pinion side)	01 No. 7515 or 32212
Gear box (prop. Shaft side)	01 No. 7218 or 32211
Gear train (upper)	01 No. 7311 or 32210
Gear train (idler)	02 Nos. 6309 or 32210
Gear train (lower)	01 No. 6312 or 6213
Rotor shaft (free end)	01 No. 7512 or 6312
Gears	Heat treated, steel gears
Parking stand	G.I. or steel pipe

### **MISCELLANEOUS**

23) Paint	Double coat with primer after surface finish
24) Nuts and bolts	To be tightened with spring washers
25) Bearings (New)	European Standard
26) Modifications	To be carried out free of cost, if required
27) Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

### **(B) ROTAVATOR (54 BLADES)**

#### **GENERAL**

1) Type	Mounted
---------	---------

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

2)	Linkage category	II
3)	Working width	2050 mm
4)	Tractor power	65 hp or above
5)	Power transmission system	Gear train with lubrication housing and cover
6)	No. of blades	54
7)	Blade spacing	225 mm
8)	U.J. shaft	01 Nos.
9)	Rotor speed (min.)	230-245 rpm @ 540 PTO speed

### **OVERALL DIMENSIONS**

10)	Length	1000 mm
11)	Width	2375 mm
12)	Height	1000 mm
13)	Approx. weight	450 kg $\pm$ 10 kg

### **MATERIAL SPECIFICATIONS**

14)	Frame	01 No. M.S. box of 75x75x5 mm with 02 Nos. supports of 12 mm
15)	Mast (A-frame)	M.S. sheet metal 5 mm with reinforced front ends 02 Nos. 50x6 mm M.S flat
16)	Blades rotator pipe	Seamless steel pipe o.d. 87 mm wall thickness 6 mm with forged axle end of 60 mm
17)	Blades mounting plate	09 or 10 Nos. 235 mm dia., 10-12 mm thick and 02 nos. 150 mm dia. On sides (Optional)
18)	Gear box	Cast iron or cast steel
19)	Transmission shaft	60 mm alloy steel with safety cover of 87 mm o.d. and 5 mm wall thickness
20)	Blades	L-shaped, forged, heat treated, 5-6 mm thick, HRC 40-50
21)	Sheet Metal	
	Top cover	3-4 mm M.S. reinforced at bends
	Side plates	10 mm M.S.
	Rear cover	3-4 mm M.S.
	Skids	62x15 mm M.S. flat
22)	Bearings	
	Gear box (PTO side)	01 No. 7310 or 6309
	Gear box (pinion side)	01 No. 7515 or 32212
	Gear box (prop. Shaft side)	01 No. 7218 or 32211
	Gear train (upper)	01 No. 7311 or 32210
	Gear train (idler)	02 Nos. 6309 or 32210
	Gear train (lower)	01 No. 6312 or 6213
	Rotor shaft (free end)	01 No. 7512 or 6312

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

Gears	Heat treated, steel gears
Parking stand	G.I. or steel pipe

### **MISCELLANEOUS**

23) Paint	Double coat with primer after surface finish
24) Nuts and bolts	To be tightened with spring washers
25) Bearings (New)	European Standard
26) Modifications	To be carried out free of cost, if required
27) Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

### **(C) ROTAVATOR (60 BLADES)**

#### **GENERAL**

1) Type	Mounted
2) Linkage category	II
3) Working width	2275 mm
4) Tractor power	75 hp or above
5) Power transmission system	Gear train with lubrication housing and cover
6) No. of blades	60
7) Blade spacing	225 mm
8) U.J. shaft	01 Nos.
9) Rotor speed (min.)	230-245 rpm @ 540 PTO speed

#### **OVERALL DIMENSIONS**

10) Length	1000 mm
11) Width	2600 mm
12) Height	1000 mm
13) Approx. weight	475 kg $\pm$ 10 kg

#### **MATERIAL SPECIFICATIONS**

14) Frame	01 No. M.S. box of 75x75x5 mm with 02 Nos. supports of 12 mm
15) Mast (A-frame)	M.S. sheet metal 5 mm with reinforced front ends 02 Nos. 50x6 mm M.S flat
16) Blades rotator pipe	Seamless steel pipe o.d. 87 mm wall thickness 08 mm with forged axle end of 60 mm
17) Blades mounting plate	11 or 12 Nos. 235 mm dia., 10-12 mm thick and 02 nos. 150 mm dia. On sides (optional)
18) Gear box	Cast iron or cast steel

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

19) Transmission shaft	60 mm alloy steel with safety cover of 87 mm o.d. and 5 mm wall thickness
20) Blades	L-shaped, forged, heat treated, 5-6 mm thick, HRC 40-50
21) Sheet Metal	
Top cover	3-4 mm M.S. reinforced at bends
Side plates	10 mm M.S.
Rear cover	3-4 mm M.S.
Skids	62x15 mm M.S. flat
22) Bearings	
Gear box (PTO side)	01 No. 7310 or 6309
Gear box (pinion side)	01 No. 7515 or 32212
Gear box (prop. Shaft side)	01 No. 7218 or 32211
Gear train (upper)	01 No. 7311 or 32210
Gear train (idler)	02 Nos. 6309 or 32210
Gear train (lower)	01 No. 6312 or 6213
Rotor shaft (free end)	01 No. 7512 or 6312
Gears	Heat treated, steel gears
Parking stand	G.I. or steel pipe

### **MISCELLANEOUS**

23) Paint	Double coat with primer after surface finish
24) Nuts and bolts	To be tightened with spring washers
25) Bearings (New)	European Standard
26) Modifications	To be carried out free of cost, if required
27) Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

### **(D) ROTAVATOR (66 BLADES)**

#### **GENERAL**

1) Type	Mounted
2) Linkage category	II
3) Working width	2500 mm
4) Tractor power	85 hp or above
5) Power transmission system	Gear train with lubrication housing and cover
6) No. of blades	66
7) Blade spacing	225 mm
8) U.J. shaft	01 Nos.
9) Rotor speed (min.)	230-245 rpm @ 540 PTO speed

#### **OVERALL DIMENSIONS**

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

10) Length	1000 mm
11) Width	2825 mm
12) Height	1000 mm
13) Approx. weight	500 kg $\pm$ 10 kg

### **MATERIAL SPECIFICATIONS**

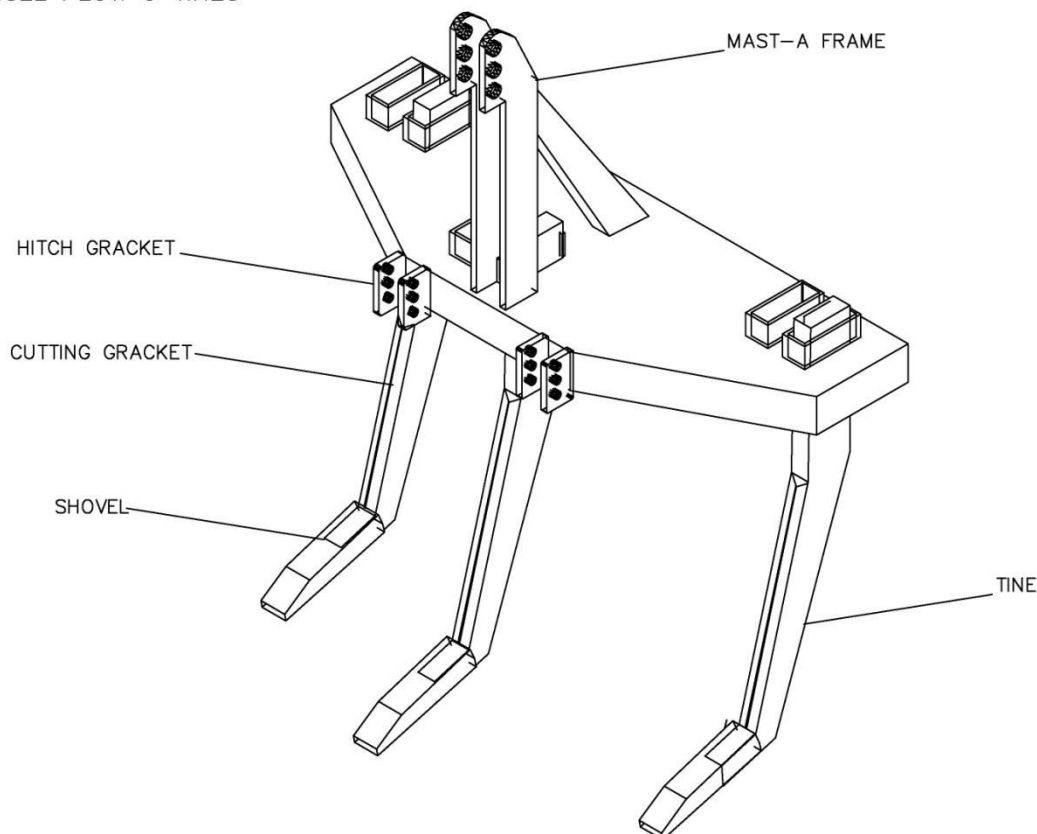
14) Frame	01 No. M.S. box of 75x75x5 mm with 02 Nos. supports of 12 mm
15) Mast (A-frame)	M.S. sheet metal 5 mm with reinforced front ends 02 Nos. 50x6 mm M.S flat
16) Blades rotator pipe	Seamless steel pipe o.d. 87 mm wall thickness 08 mm with forged axle end of 60 mm
17) Blades mounting plate	11 or 12 Nos. 250 mm dia., 10-12 mm thick and 02 nos. 150 mm dia. On sides (optional)
18) Gear box	Cast iron or cast steel
19) Transmission shaft	60 mm alloy steel with safety cover of 87 mm o.d. and 5 mm wall thickness
20) Blades	L-shaped, forged, heat treated, 5-6 mm thick, HRC 40-50
21) Sheet Metal	
Top cover	3-4 mm M.S. reinforced at bends
Side plates	10 mm M.S.
Rear cover	3-4 mm M.S.
Skids	62x15 mm M.S. flat
22) Bearings	
Gear box (PTO side)	01 No. 7310 or 6309
Gear box (pinion side)	01 No. 7515 or 32212
Gear box (prop. Shaft side)	01 No. 7218 or 32211
Gear train (upper)	01 No. 7311 or 32210
Gear train (idler)	02 Nos. 6309 or 32210
Gear train (lower)	01 No. 6312 or 6213
Rotor shaft (free end)	01 No. 7512 or 6312
Gears	Heat treated, steel gears
Parking stand	G.I. or steel pipe

### **MISCELLANEOUS**

23) Paint	Double coat with primer after surface finish
24) Nuts and bolts	To be tightened with spring washers
25) Bearings (New)	European Standard
26) Modifications	To be carried out free of cost, if required
27) Warranty	Free : 1 year for parts and service Extended : 5 years for parts supply on payment

## 77. CHISEL PLOW (3 TINES)

CHISEL PLOW 3 TINES



### GENERAL

- |                              |                        |
|------------------------------|------------------------|
| 1) Type                      | Mounted box frame type |
| 2) No of tines               | 03                     |
| 3) Tractor power             | 50 hp or above         |
| 4) Tine spacing (adjustable) | 380 mm and 675 mm      |

### OVERALL DIMENSIONS

- |           |                     |
|-----------|---------------------|
| 5) Length | 750 mm $\pm$ 10 mm  |
| 6) Height | 1300 mm $\pm$ 10 mm |
| 7) Width  | 1400 mm $\pm$ 10 mm |
| 8) Weight | 280 kg and above    |

### MATERIAL SPECIFICATIONS

- |                   |  |
|-------------------|--|
| 9) Main V-frame   | 1400x110x6 mm, made from M.S formed sheet, box type                            |
| 10) Mast A-frame  | 12 mm M.S plate, 100 mm wide, Integral with supports                           |
| 11) Hitch Bracket | 18-20 mm thick M.S plate made to ride on or penetrate in the frame then welded |

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

- |                           |  |
|---------------------------|--|
| 12) Tine                  | 820x180x30 mm M.S plate with three depth adjustment grooves 50-75 mm apart   |
| 13) Cutting wedge on tine | 400x30x50 mm hardened steel  |
| 14) Shovel (replaceable)  | 265x60x30 mm hardened steel  |
| 15) Tine pins             | 100x25 mm M.S round  |
| 16) Tine boxes            | 05 Nos. made from 6 mm thick M.S. sheet at least 165 mm deep with pin hole and reinforcement wedges at top and bottom to accommodate tines with max. Clearance of 1-2 mm |
| 17) Parking stand         | 01 No. M.S box or G.I. pipe of 40 mm   |

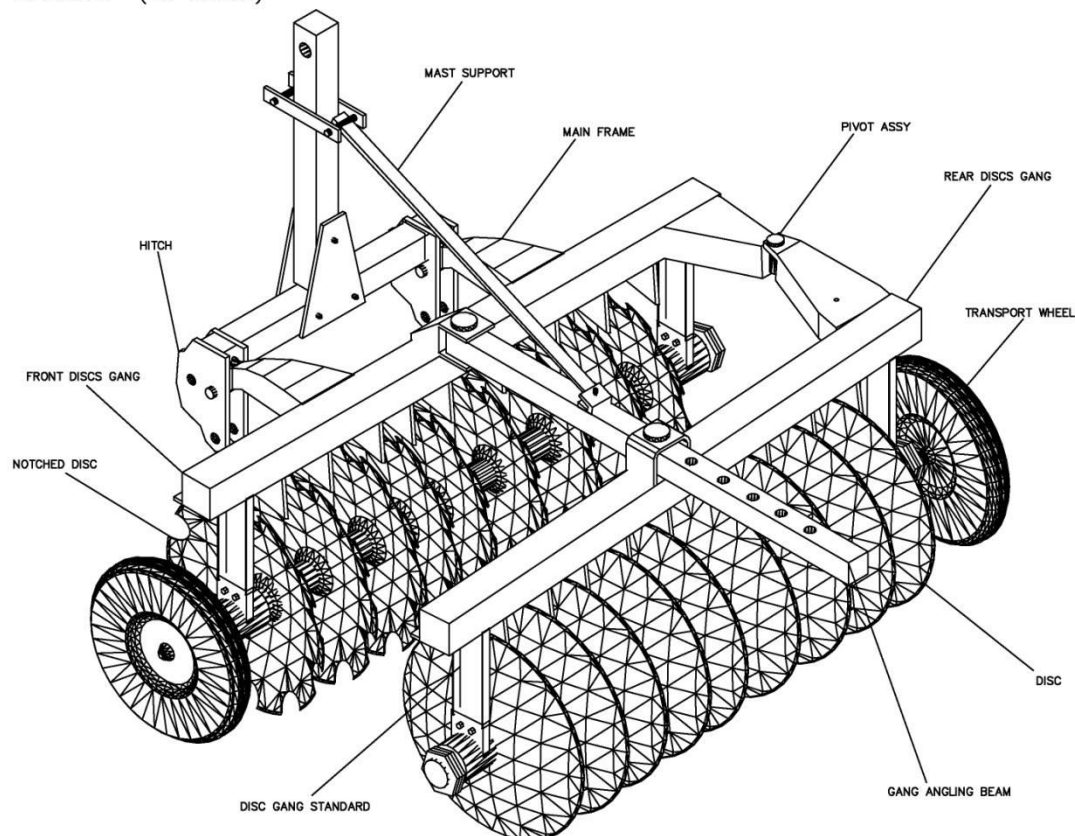
### **MISCELLANEOUS**

- |                    |   |
|--------------------|---|
| 18) Paint          | Double coat with primer after surface finish  |
| 19) Nuts and bolts | To be tightened with spring washers   |
| 20) Modifications  | To be carried out free of cost, if required   |
| 21) Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |



## 78. DISC HARROW (18 DISCS)

DISC HARROW (18 DISCS)



### GENERAL

1) Application	Used for tilling and incorporation of crop residue into soil
2) Front gang	Notched
3) Rear gang	Plain
4) Linkage category	II
5) Tractor power	60 hp or above
6) Disc spacing	220 mm

### OVERALL DIMENSIONS

7) Length	
Mounted position	2200 mm $\pm$ 20mm
Trailed position	3400 mm $\pm$ 20mm
8) Width	2200 mm $\pm$ 20mm
9) Height	
Mounted position	1550 mm $\pm$ 20mm
Trailed position	1350 mm $\pm$ 10mm

## **TECHNICAL SPECIFICATIONS OF AGRICULTURAL IMPLEMENTS**

### **MATERIAL SPECIFICATIONS**

- |     |                    |   |
|-----|--------------------|---|
| 10) | Main frame         | 02 Nos. M.S. box 130x30x6 mm or rolled channel 6 mm<br>M.S. sheet of same size  |
| 11) | Mast (A-frame)     | Inverted T-type, 02 Nos. M.S. box 75x75x5 mm, 800 mm<br>long (each) reinforced with 9 mm M.S. plate   |
| 12) | Hitch assembly     | 38 mm dia. M.S round hook, 18 mm M.S. plate bracket,<br>rotatable   |
| 13) | Mast Support       | 62x12 mm leaf spring or 62x62x6 mm M.S box.   |
| 14) | Hitch brackets     | 30 mm M.S. flat, reinforced with 6 mm M.S. sheet  |
| 15) | Disc               | 660 mm dia., 6 mm thick hardened steel HRC 40 – 50  |
| 16) | Disc spacer        | C.I/M.S. with male female hex   |
| 17) | Disc scraper       | 5 mm M.S. sheet   |
| 18) | Gang shaft         | 68 mm M.S. round  |
| 19) | Gang angling beam  | M.S. box 75x75x5 mm, reinforced with M.S flat 75x6 mm<br>at top or inner side with adjusting holes  |
| 20) | Pivot assembly     | C-Type yoke/bracket made from 25 mm M.S. plate and 6<br>mm M.S. sheet, M.S. bush made from pipe of 10 mm wall<br>thickness and 50 mm dia. pin, hardened |
| 21) | Disc gang standard | 15 mm M.S plate reinforced with 9mm M.S. flat welded<br>to main frame or 5 mm M.S sheet to make box welded to<br>main frame                             |
| 22) | Transport wheel    | To be fitted on sides or on rear wards with back frame  |
| 23) | Wheel              | 02 Nos. 6.00-16, pneumatic (general) with 02 rims of 18<br>kg (min)   |
| 24) | Hub                | 02 Nos. steel cast  |
| 25) | Bearing            | 04 Nos. 6208  |
| 26) | Axle               | 02 Nos. 45 mm dia. M.S.   |
| 27) | Mounting           | 02 Nos. M.S. box 62x62x6 mm, 600 mm long  |
| 28) | Disc Bearing       | 08 Nos. 7512 or 32212 tapered roller  |

### **29) MISCELLANEOUS**

- |     |                |   |
|-----|----------------|---|
| 30) | Paint          | Double coat with primer after surface finish  |
| 31) | Nuts and bolts | To be tightened with spring washers   |
| 32) | Bearings       | European standard or equivalent   |
| 33) | Warranty       | Free : 1 year for parts and service<br>Extended : 5 years for parts supply on payment |