



Farm Machinery Testing and Training Centre
Department of Farm Power and Machinery
College of Agricultural Engineering and Technology
DR. PANJABRAO DESHMUKH KRISHI VIDYAPEETH
AKOLA- 444 104 (MS)



E-mail: fmtt28@gmail.com

SPECIFICATION SHEET OF GROUNDNUT DIGGER

| | | | |
|------------|-------------------------------|---|--|
| 1 | General | | |
| | Name of manufacturer | : | |
| | Name of machine | : | |
| | Type | : | |
| | Make | : | |
| | Model | : | |
| | Serial No | : | |
| | Size, mm | : | |
| | Year of Manufacture | : | |
| | Recommended power source | : | |
| | Power source used, kW | : | |
| 2 | Constructional details | | |
| 2.1 | Main frame | | |
| | Material | : | |
| | Shape | : | |
| | Size (L x B x T), mm | : | |
| 3 | Blade | | |
| | Type and Material | : | |
| | Number | : | |
| | Size, mm | : | |

| | | | |
|------------|---|---|--|
| | Inclination angle, degree | : | |
| | Clearance from ground, mm | : | |
| | Clearance from main frame, mm | : | |
| | Method of fixing | : | |
| 4 | Elevator chain conveyor | | |
| | Material and type | : | |
| | Size, mm | : | |
| | Peripheral length | : | |
| | Width | : | |
| | Conveyor rack material and size, mm | : | |
| | Spacing between racks, mm | : | |
| | Number of racks | : | |
| | Material, Nos. and size (mm) of spikes on racks | : | |
| | Slope of conveyor | : | |
| | Method of power transmission | : | |
| 5 | Rear support / Depth control wheel | | |
| | Type | : | |
| | Number | : | |
| | Size, mm | : | |
| | Spacing, mm | : | |
| | Hub Diameter, mm | : | |
| 6 | Safety features | | |
| 6.1 | PTO guard | | |
| | Material | : | |
| | Thickness of sheet, mm | : | |
| 6.2 | V-belt guard | | |
| | Material | : | |
| | Thickness of sheet, mm | : | |

| 7 | Implement hitch point as per IS | | | |
|----------------|--|--|----------------------------|----------------|
| | Type | : | | |
| | Construction details | : | | |
| Sr. No. | Notations | As per IS: 17231:2019 (1N, 1, /2N, 2), mm | As measured, mm | Remarks |
| I | Upper hitch point | | | |
| D ₁ | Diameter of hitch pin | 19 (0-0.08)/ 25.5 (0-0.13) | | |
| b ₁ | Width between inner faces of yoke | 52 (Min.) | | |
| II | Lower hitch points | | | |
| D ₂ | Diameter of hitch pin | 22 (0-0.2)/ 28 (0-0.2) | | |
| b ₃ | Linch pin hole distance | 49 (Min.) | | |
| b ₅ | Clevis width | 65+20 | | |
| l | Lower hitch point span | 400±1.5, 683±1.5, 683±1.5, 825±1.5 | | |
| III | Other dimensions | | | |
| d | Diameter for linch pin hole | | | |
| | Upper hitch pin | 12 (min.) | | |
| | Lower hitch pin | 12 (min.) | | |
| h | Mast height | 360±1.5 460±1.5 610±1.5 610±1.5 | | |

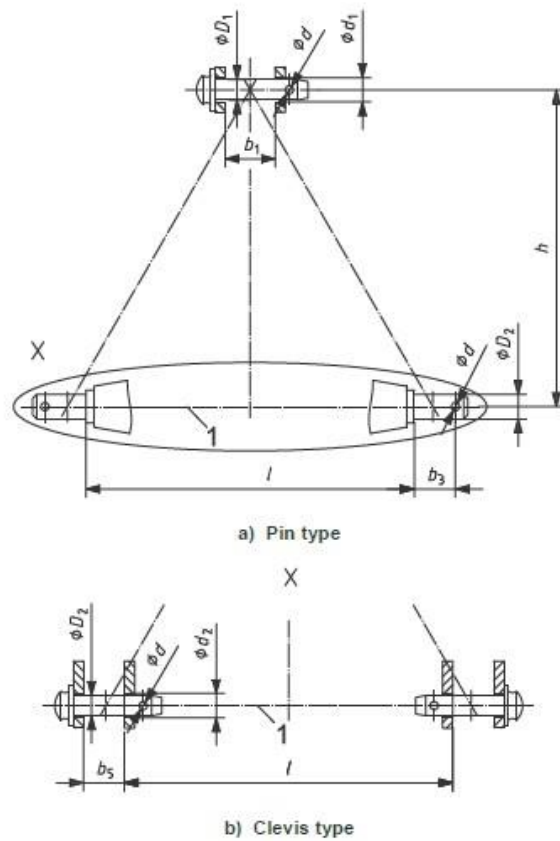
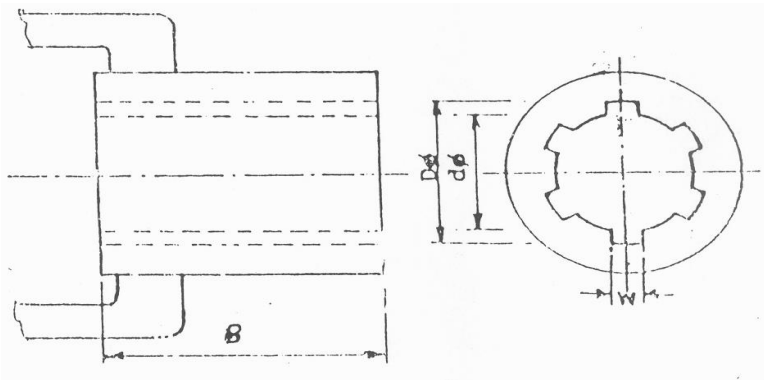
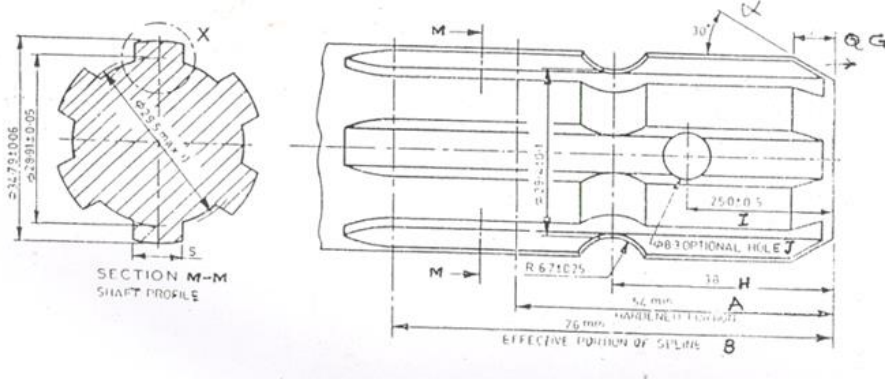


Fig 1 Dimensions related to implement hitch attachment

| | | | |
|------------|--|--------------------------------|------------------------|
| 8 | Power transmission system | : | |
| | Method of transmission | : | |
| 8.1 | Propeller shaft | | |
| | Type | : | |
| | Length of shaft, mm | | |
| | Maximum | : | |
| | Minimum | : | |
| | Mass of shaft, kg | : | |
| | Provision of locking | : | |
| | Hub Dimension, mm Refer Fig 2 As per IS 4931:1995 | | |
| | Notations | As per IS:4931:1995, mm | As observed, mm |
| | Remarks | | |
| | D ϕ | 34.93 \pm 0.03 | |
| | d ϕ | 29.7 \pm 0.7 | |

| | | | | |
|-----|---|-----------------------------|--------------------|----------------|
| | W | 8.69 (Min) | | |
| | B | -- | | |
| |  <p style="text-align: center;">Fig 2 Hub dimensions, mm</p> | | | |
| 8.2 | Splined end of pinion shaft | | | |
| |  <p style="text-align: center;">Fig 3 Dimensions of splined end of pinion shaft, mm</p> | | | |
| | Specification | As per IS: 4931-2004 | As observed | Remarks |
| | Dφ | 34.79±0.06 | | |
| | dφ | 28.91±0.05 | | |
| | Bφ | 29.4±0.1 | | |
| | S | 8.69 | | |
| | R | 6.7±0.25 | | |
| | α | 30° | | |
| | G | 7 | | |
| | H | 38 | | |
| | A | 54 (Min.) | | |

| | | | | |
|------------|---|-----------|--|--|
| | B | 76 (Min.) | | |
| | I | 25±0.5 | | |
| | J (optional hole) | 8.3 | | |
| 8.3 | Gear box assembly (primary reduction) | | | |
| | Type | : | | |
| | No. of teeth on pinion | : | | |
| | No. of teeth on bevel gear | : | | |
| | Reduction ratio at gear box | : | | |
| | Oil capacity, l | : | | |
| | Oil change period, hr | : | | |
| | Recommended grade of oil | : | | |
| | Length of power transmission shaft (mm) (from gear box to front pulley) | : | | |
| | Diameter of shaft, mm | : | | |
| | Provision of breather | : | | |
| 8.4 | Gear box to conveyor upper pulley (secondary reduction) | | | |
| | Front pulley diameter, mm | : | | |
| | Rear pulley diameter, mm | : | | |
| | V-belt size, number | : | | |
| | Provision of belt tightening | : | | |
| | Dia. of casing of output shaft, mm | : | | |
| | Dia. of rear drive shaft, mm | : | | |
| 9 | Windrowing mechanism | | | |
| | Type and material | : | | |
| 10 | Overall dimensions (L x B x H), mm | : | | |
| 11 | Mass, Kg | : | | |
| 12 | Colour of implement | : | | |

Place:

Date:

Signature : _____

Name : _____

Designation: _____