



FARM MACHINERY TESTING CENTRE

Department of Agricultural Engineering,
UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
College of Agriculture, GKVK, Bangalore -560065

SPECIFICATION SHEET OF TRACTOR OPERATED ROTAVATOR

1.0	General	:	
	Name	:	
	Type	:	
	Make	:	
	Serial Number	:	
	Model	:	
	Year of manufacture	:	
	Name and address of manufacture	:	
	Source of power	:	
	Recommended power of tractor, if tractor operated	:	
	Selling price in India	:	
2.1	Main frame / Chassis:		
	a) Type and material	:	
	b) Size of box section(mm)	:	
	c) Size of supporting flat (mm)	:	
	d) Type of mounting box section	:	
2.2	Side support / plates:		
	a) Number and material	:	
	b) Thickness of plate (mm)	:	
	c) Size (mm)	:	
		LHS	:
		RHS	:
	d) Method of fixing	:	
2.3	Shield (cover):		
	a) Type	:	
	b) Size (mm)	:	
	c) Thickness of sheet (mm)	:	
	d) Method of mounting	:	
2.4	Trailing board:		
	a) Type and material	:	
	b) Size of board (mm)	:	
	c) Type and number of hinge	:	
	d) Angle of trailing board	:	
	e) Provision for locking	:	
	f) Method of fixing	:	
2.5	Rotor shaft:		
	a) Material	:	
	b) Type and size (mm) of rotor axle	:	
	c) No. and type of flanges	:	
	d) Size (mm) of flanges	:	
	e) No. of blades on each flange	:	
	f) Total No. of blades	:	
	g) Method of mounting blades on flange	:	
	h) Distance between two flanges (mm)	:	
	i) Dia. of rotor with blades (mm)	:	

	j)	Method of fixing	:	
2.6	Rotor blade			
	a)	Number and Type	:	
	b)	Material	:	
	c)	Size (cm)	:	
	d)	Thickness (mm)	:	
		Overall	:	
		Beveled edge	:	
	e)	Length and width of beveled edge (mm)	:	
	f)	No., size and spacing of the holes on each blade for fixing it to the flanges (mm)	:	
	g)	Arrangement of blades on the axle		
2.7	Depth control mechanism:			
2.7.1	Skid:			
	a)	No., Type and material	:	
	b)	Size (mm)	:	
	c)	Method of fixing	:	
2.7.2	Adjusting rack:			
	a)	No., Type and material	:	
	b)	Size (mm)	:	
	c)	Method of mounting	:	
	d)	Range of depth adjustment (mm)		
2.8	Type of hitch and its details :			
	a)	Type and material	:	
	b)	Shape	:	
	c)	Size (mm)		

Specification of Hitch Pyramid As per IS: 4468-2001 (Part-I)

Sr.	Dimension (Refer Fig.1)	Description	Measurement
Upper Hitch attachments			
1	d_1	Diameter of hitch pin hole	
2	b'_1	Width between inner faces of yoke	
3	b'_2	Width between outer faces of yoke	
Lower hitch points			
4	D_2	Dia. of hitch pin	
5	b'_3	Linch pin hole distance	
6	l	Lower hitch point span	
Other dimensions			
	Diameter of linch pin hole		
7	d	For upper hitch pin	
8		For lower hitch pin	
9	h	Mast height	

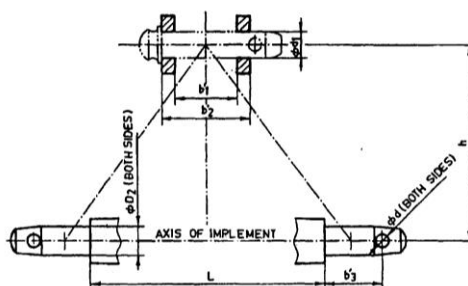


Fig. 1 : Implement Hitch Attachment

2.9	Power transmission system:			
	a)	Method of transmission	:	
2.9.1	Spline end of rotavator input shaft:			Ref. Fig.2
	a)	PTO Type 1/2/3	:	
	b)	Nominal speed (rpm)	:	
	c)	Nominal dia.(mm)	:	
	d)	Number and type of splines	:	

Dimension of Implement Power Input Shaft As per IS: 4931-2006

Specification/ Notations (Refer Fig.2)	Measurement Dimensions (mm)
D Φ	
d Φ	
B Φ	
A Φ	
W	
a	
b	
c	
x	
B	
h	

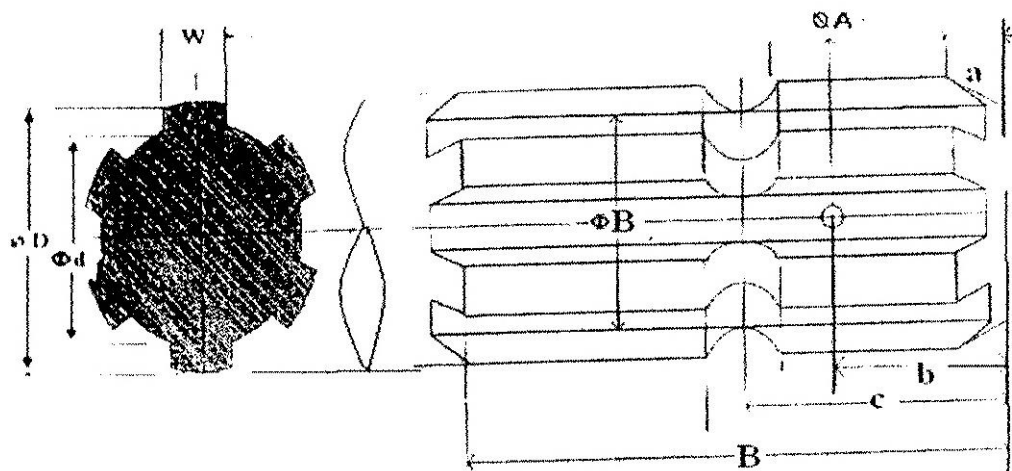


Fig. 2 Dimension of Implement Power Input Shaft

2.9.2	Gear box assembly (primary reduction):			
	a)	Type	:	
	b)	No. of teeth on pinion	:	
	c)	No. of teeth on bevel gear	:	
	d)	Reduction ratio at gear box	:	
	e)	Oil capacity (L)	:	
	f)	Oil change period (hr)	:	
	g)	Recommended grade of oil	:	
	h)	Length of power transmission shaft (mm) (from gear box to secondary reduction unit)	:	
	i)	Diameter of shaft (mm)	:	

	j)	Provision of breather		
	k)	No. of bearing		
2.9.3	Gear box assembly (secondary reduction):			
	a)	Type		
	b)	No. of teeth on drive gear		
	c)	No. of teeth on driven gear		
	d)	Reduction ratio		
	e)	No. of teeth on idler gear		
	f)	Oil capacity (L)		
	g)	Oil change period (hrs.)		
	h)	No. of bearing		
2.9.4	Propeller shaft:			
	a)	Type and material		
	b)	Length of shaft (mm)		
		Minimum		
		Maximum		
	c)	Mass of shaft (kg)		
	d)	Provision for locking		

Propeller Shaft Insert Dimensions As per IS: 4931-2006

Sr.	Notations (Refer Fig.3)	
1	D Φ	
2	d Φ	
3	W	
4	B	

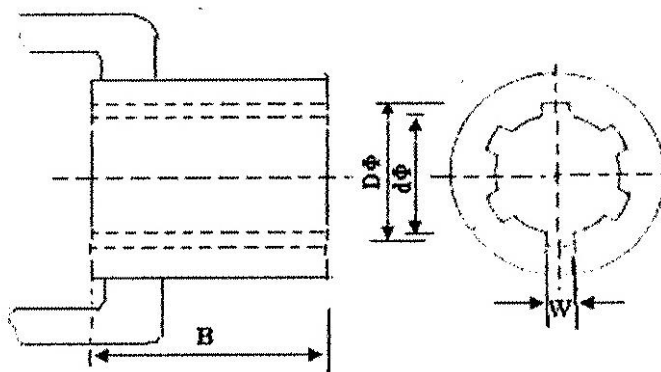


Fig. 3 : Propeller Shaft Insert Dimensions

2.9.5	Safety clutch/device:			
	Size of bolt(mm) :		:	
	a)	Length	:	
	b)	Dia.	:	
	c)	Pitch	:	
3.0	Overall Dimensions (mm)			
	a)	Length	:	
	b)	Width	:	
	c)	Height	:	
	d)	Mass, (kg)	:	
4.0	Color of implement			

5.0 Details of Material of Construction :

Sr.	Name of part	Material	Section or size in mm
1	2	3	4
1	Chassis		
2	Side support		
3	Shield (cover)		
4	Trailing board		
5	Rotor shaft		
6	Rotor blade		
7	Skid		
8	Adjusting rack		

Place:

Date:

Signature : _____

Name : _____

Designation: _____