



Sher-e-Kashmir
University of Agricultural Sciences & Technology of Kashmir
FARM MACHINERY TESTING CENTRE
DIVISION OF FARM MACHINERY AND POWER ENGINEERING
College of Agricultural Engineering and Technology
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TECHNICAL SPECIFICATIONS FOR POWER WEEDER

1	General:		
	Type of machine	:	
	Make	:	
	Model	:	
	Brand name	:	
	Serial no.	:	
	Name and address of manufacturer	:	
	Name and address of applicant/importer	:	
	Year of manufacture	:	
	Country of origin	:	
2	Details of prime mover:		
	Name and address of manufacturer	:	
	Type	:	
	Make	:	
	Model	:	
	Sr. No.	:	
	Country of origin	:	
	Year of manufacturer	:	
	Engine speed (recommended setting), rpm:		
	High idle speed	:	
	Low idle speed	:	
	Rated speed	:	
	Speed at maximum torque	:	
	No load engine speed for field operation, if any	:	
	Whether the prime mover has already been tested by authorized testing centre (Yes/No)	:	
	If yes, then specify the valid test report No. and upload the copy of test report	:	
3	Cylinder & cylinder head:		
	Number	:	
	Disposition	:	
	Bore/stroke, mm	:	
	Capacity, cc	:	
	Type of valve	:	

Name of the Manufacturer/ Applicant	Document No, if any Revision status	Name of the Test Agency: FMTC, SKUAST Kashmir
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	Valve clearance (mm):		
	Inlet	:	
	Exhaust	:	
	Compression ratio	:	
4	Fuel supply system:	:	
	Type of fuel feed	:	
4.1	Fuel tank:	:	
	Material	:	
	Capacity of fuel tank, l	:	
	Location of fuel tank	:	
	Provision for draining of sediments/ water	:	
	Fuel filter	:	
	Fuel on/off	:	
4.2	Governor:	:	
	Make	:	
	Model	:	
	Type	:	
4.3	Carburetor:	:	
	Make	:	
	Type	:	
5.0	Fuel injection pump (If applicable):	:	
	Type	:	
	Make	:	
	Model	:	
	Sr. No.	:	
	Method of drive	:	
6	Fuel Injector (If applicable):	:	
	Type	:	
	Make	:	
	Model	:	
	Sr. No.	:	
	Injection pressure, MPa	:	
	Injection timing	:	
7	Air intake system:	:	
7.1	Pre-cleaner:	:	
7.2	Air cleaner:	:	
	Type	:	
	Make and model	:	
	Location	:	
	Recommended service schedule	:	
	Recommended grade of oil	:	
8	Exhaust:	:	
	Type of silencer	:	
	Location of silencer	:	

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	Spark arresting device, if any	:	
9	Lubrication system:		
	Type		
	Oil filter		
	Oil capacity, l		
	Recommended grade of lubricant oil		
	Oil change period, h		
	Minimum permissible lubricating oil pressure (kg/cm ²)		
10	Cooling system:		
	Type		
	Dia. of blower, mm		
	No. of vanes		
11	Starting system:		
	Type		
	Ignition system		
	Any other provision for easy starting		
	Aid for cold starting		
12	Spark plug:		
	Make		
	Model		
	Spark plug electrode gap, mm		
13	Power Transmission system:		
	Type		
13.1	Clutch:		
	Make		
	Type of clutch		
	Number of friction plate		
	Dia. of friction plate, mm		
	Thickness, mm		
	Method of operation		
	Location of operation		
13.2	Transmission system:		
	Type		
	Make		
	No. of speed		
	Grade of oil		
	Oil capacity, l		
	Oil change period, h		
13.2.1	Rotary gear box:		
	Type		
	No. of teeth on drive pinion		
	No. of teeth on driven crown		
	Reduction ratio		

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	No. of teeth on drive pinion		
	No. of teeth on driven crown		
	Reduction ratio		
	Oil capacity, l		
	Oil change period, h		
	No. of engine revolution in one revolution of drive wheel:		
	L – 1		
	H – 1		
	Reverse gear		
14	Rotor:		
14.1	Rotor cover:		
	Material		
	Length, mm		
	Width, mm		
	Thickness, mm		
	Method of fixing		
14.2	Rotor shaft:		
	Material		
	Type of rotor axle		
	Width across flat of rotor axle, mm		
	Length of shaft, mm		
	Length of extension shaft, mm		
	No. of flanges		
	Type of flanges		
	Size of flanges, mm		
	Thickness of flange, mm		
	Distance between two flanges, mm		
	No. of blades on each flange		
	Overall length of rotor, mm		
	Diameter of rotor with blades, mm		
	Method of fixing of blade		
	No. of disc		
	Diameter of disc, mm		
14.3	Rotor blades:		
	Number		
	Type		
	Material		
	Thickness, mm		
	Width of beveled edge, mm		
	No. and size of hole on each blade for fixing it to the flanges, mm		
	Arrangement of blades on the axle		
15	Depth control mechanism:		
	Type		
	No. of flat		
	Material		
	Size of flat (L x W x T), mm		

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	Provision for depth adjustment		
16	Steering handle bar:		
	Material		
	Dia. of pipe, mm		
	No. of hand grips		
	Length of grip, mm		
	Material of grip		
	Dia. of grip, mm		
	Provision for handle height adjustment		
	Height of handle bar from ground level, mm		
	Provision for angle adjustment		
	Stand		
	Transport wheel		
	Type		
	Make		
	Number		
	Size, mm		
	Recommended pressure at 150 kg load, kPa		
17	Controls		
	At LHS		
	At RHS		
18	Overall dimensions, mm:		
	Length		
	Width		
	Height		
	Mass, kg		
19	Color of machine		
	Engine		
	Main drive cover & transmission system		
	Rotary drive cover		
	Fuel tank		
	Handle bar		
20	Labeling /Identification plate	:	

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ADDITIONAL INFORMATION

1. Engine Performance:		
i.	Maximum Power, kW (Ps)	:
ii.	Rated Power, kW(Ps)	:
iii.	Specific fuel consumption corresponding to maximum power, kg/kWh (g/hph)	:
iv.	Maximum equivalent crankshaft torque, Nm (kgf-m)	:
v.	Back-up torque (%)	:
vi.	Maximum Engine oil temperature, °C	:
vii.	Maximum Coolant (water)/ liner wall temperature (°C)	:
viii.	Lubricating oil consumption (g/kWh)	:
ix.	Coolant consumption (% of total Coolant capacity)	:
x.	Smoke level (Bosch No.)	:
2.	Mechanical Vibration at steering/ hands	:
3.	Air cleaner-oil pullover:	:
	-Maximum oil pull-over (%)	:
4.	Noise level:	:
	-Maximum ambient noise level, dB(A)	:
	-Maximum noise level at the Operator's ear level, dB(A)	:

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Sl. No.	Critical engine components	Initial Setting	Discard Limit
1	Cylinder bore dia. (mm)		
2	Piston to cylinder clearance at skirt (mm)		
3	Piston dia. (mm)		
4	Ring-end gap (mm):		
	-Top compression ring		
	-2 nd compression ring		
	-3 rd compression ring		
	- Oil ring		
5	Ring groove clearance (mm):		
	-Top compression ring		
	-2 nd compression ring		
	-3 rd compression ring		
	- Oil ring		
6	Clearance of big end bearings (mm):		
	- Diametrical		
	- Axial		
7	Crankshaft end float (mm)		
8	Backlash of timing gears (mm)		
9	Backlash of primary gear box gears (mm)		
10	Backlash of secondary gear box gears (mm)		
11	Overall thickness of clutch plate (mm)		
12	Spring stiffness, N/mm (kgf/mm):		
	-Inlet		
	-Exhaust		
13	Clearance between valve guide and valve Stem (mm):		
	-Inlet		
	-Exhaust		

Place: _____

Signature: _____

Date: _____

Name of signatory: _____

Designation: _____

Name & address of firm: _____

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