SPECIFICATION OF DAIRY EQUIPMENTS AND ACCESSARIES

SPECIFICATION OF AMCU

Sl No	Particular	Specification
1.0	Basic Operations at Society	All operations are manual or semi-automated at society level. No regular power supply is available and fluctuation in power supply is very high. Clean and dust free environment can not be guaranteed. The operators may not be IT savvy. **Major Activities at Society.** .Purchase of Milk .Payments to producers for milk poured, government subsidies, incentives for quality etc. .Purchase of Cattle feed. .Purchase of Ghee .Other Purchases . Expenditure for Services .Other Expenditures . Local Sale of Milk .Supply/Sale of Milk to the Union .Sale of Cattle Feed .Sale of Ghee .Support of AH, Al etc .Income from Services .Other Income
2.0	AMCU- Functional Requirements	.The Unit should be suitable for instant weighing of milk, measuring record fat content, calculating the amount payable to the member based on fat & weight, printing the amount calculated thereof with member identification details. .This unit should also be used for maintaining the complete record of the collection centre as above together with the details of all transactions of the producers/MCC. .Recommended to incorporate Capability for online data
		transfer to Milk Union and designated local Banks for transfer of payments to milk producers in their bank accounts directly.
3.0	**Computer Hardware and Software**	**Model of PC offered should be Enterprises/ Business Class Desk top PC(OEM) like..Dell , HP, Lenovo, ACER etc., assembled desktop PC shall not be accepted with Manufacturer Warranty.**
3.1	Processor	.11thGeneration Intel Core,64 Bit, I-5 Processor
3.2	Form Factor	.Tower Model
3.3	Chipset	.Intel Chipset supporting the above processor
3.4	Memory	.8GB DDR3 1333MHz SDRAM expandable to16GB
3.5	Internal Storage	.1TB Sata II Hard Disk 512 GB SSD

3.6	Removable Media	**.**DVD+/-RW Writer
3.7	**Graphics**	**.**Integrated Intel HD Graphics Supporting 1600x1200 Resolutions
3.8	**Audio**	**.**Integrated high definition Audio
3.9	**Net work**	**.**10/100/1000Mbps Giga bit Ethernet/with Wi-Fi Connectivity (802.11n or higher)
3.10	**Display Monitor**	**.**18.5" wide screen LCD/LED Backlit TFT Color HD Monitor with 1366x 768 native Resolutions
3.11	Input Devices	**.**USB Standard Keyboard and USB Optical button Scroll Mouse with Pad.
3.12	Ports&	**.**3 Serial Port,1 Parallel Port,1
	Connectors	VGA Port,1 Microphone/ Head phone Jack,1 RJ45 Port
3.13	USB Ports	**.**6 USB 2.0Ports(Min. two on front and two on rear side)
3.14	PCI Slots	**.**Minimum 1free PCI Slots
3.15	Compatibility	**.**Window11
	Particulars	**Specification**
3.16	Operating System-11	**.**Licensed Windows 11 professional 64 bit Preloaded with OS Recovery Media Driver CD.
3.17	Anti Virus	**.**Norton, Symantec, etruat, Macfee ,Trend Micro, Quick Heal Latest Version with three(3)years license.
3.18	Warrantee obligation	**.**call should be attended by next business day. **.**problem resolved within 48 hours of attending the call. **.**within 48 hours in case any part is to be replaced.
3.19	Scope of Work	**.**Installation and configuration

3.20	Application Software	**.**Supplier to develop and provide Integrated AMCU Software for all functions & requirements of Milk collection centre. Supplier to finalize requirements from EIA for all Milk Collection centers, develop/modify a software and install in each AMCU with a texting period of software for 6 months from the date of installation of software and subsequent one time modifications in the software based on feedback/ request from EIA/Milk Collection centers to be done without extra charges. **.**Software should be Bi-Lingual (English Language) **.**Data generated from the new system should be compatible with the format in which the data is accepted by the existing system. **.**The Software should be user friendly, menu driven and provide help facility in local language.
		.The data input forms, reports, menus etc. should be in English**.** **.**The application software, if felt essential by the user may be modified/ upgraded to meet the need of the milk collection centre**.** **.**The software should have provision of connectivity of such milk collection center with milk collection agencies head office in the future. **.**The supplier should also make necessary changes on case-to-case basis, wherever required. The application package should contain legal Copy of the data base used.
4.0	**DOT MATRIX PRINTE R**	Impact dot Matrix external printer
4..1	Print Method	24 pins
4.2	Pins in head	Bi-direction parallel interfaceUSB2.0(Full speed)
4.3	Print Direction	300cps high speed draft, LQ and other features
4.4	Print Speed	80 (10cpi)
4.5	Printable column	Pull tractor unit
4.6	Paper Handing	Manual insertion front or rear in top out: Push Tractor front or rear in top out – front or rear or bottom in and top out.
4.7	Paper path	10000POH(25%Duty)
4.8	MTBF(Hrs at 25% duty cycle)	10000POH(25%Duty)
4.9	Copy Capability	Original 3 copies
4.10	Cartridge	Ribbon cartridge Black with 2.5 million characters
4.11	Compatible OS with Drivers	MS Windows 8/7/Vista/XP(32bit/64 bit),Windows Server 2003/2008/2012(32bit/64bit)
4.12	Accessories	Roll Stand
5.0	**Electronic Weigh Scale**	
5.1	Functional Requirement	To Electronically weigh & digital display of milk quantity in litre in a container
5.2	Capacity	200 kg
5.3	Least Count	20 gm
5.4	Weight Accuracy	20 gm as per Standards of W & MRules1987mediumaccuracyClassIII
5.5	Certification & Stamping	Duly Certified and stamped by W&M Dept. and confirming to IS:9281(pt1&2)1979, IS:9281 And IS:9281(pt.4)1983 as Amended up-to-date.
5.6	Display Resolution	1/10,000(accuracy, Class-III)

5.7	Load Cell	300kgS/SADI
5.8	Over Load & shock Load Protection	300% to take impact of loading with audio (beep) visual indication
5.9	Platform Size	600mmX 600 mm
5.10	Platform Moc	AISI SS 304,1.6mm thick,150 grit top plate
5.11	Platform under frame material/design	.Cold rolled mild steel box of adequate size, Hot dip galvanized after fabrication .All screw/bolts/nuts to be of SS
5.12	Indication in display EWS Unit	Quanitity-7 segment RED LED,6 digits, minimum 1.3mm height, display for mode of operation zero ,tare, kg/litre, by default KG.
5.13	Display Unit Mounting	.Pole mounted type with sturdy base and SS304,38mm dia,pipe 1.2 m high. .SS 304 Body IP 55,Tactile Switch keys with feed back response, auto calibration & auto span with drift correction .RS 232 Serial port with Protocol to meet requirement of IBM compatible.
5.14	Calibration protection & Sealing Arrangement	.Special arrangement to house PCB & Sealing arrangement
5.15	Load Cell Cable	Load Cell cable from plat form to display unit with reinforced heavy duty PVC conduit.
5.16	Battery for working on power failure	Inbuilt,6Vcapacity minimum for 6 hrs.
5.17	Power Supply	As given above with minimum 1 m power cable with plug top AC/SC
5.18	Model Approval Certificate	Manufacturer to have model approval certificate of regulatory authority/Govt of India(Weight &Measure Unit)
5.19	Stamping at Site	Supplier to arrange stamping of each scale at site from local weights & measure inspector before installation. Supplier should include the cost of stamping in the unit of AMCU for the 1st year only. Stamping of each weighing scale from 2nd year onwards will be in the scope of EIA.
5.20	Repairing License	
Sl. No	**Particulars**	**Specification**
6.0	**Milk Analyzer:**	**(Single Unit)with Blue tooth/ Wi-Fi facility, Mobile application, CE Certified &Performance certificate must be certified by NDDB CALF**
6.1	Analyzer Type	Ultrasonic principle based milk analyzer for testing FAT,SNF and added water.

6.2	Analyzer CPU	NA
6.3	Analyzer CPU Speed	NA
6.4	Power Supply	230VoltACor 12V DC
6.5	Rate chart facility	NA
6.6	Per Liter Price on Analyzer.	NA
6.7	Data Storage	NA
6.8	Computer Interface	RS232&USBConnectivity
6.9	WiFi Cloud connectivity	Real time cloud based app. Test result updation (Test result updation, Offset correction, Password updation and machine Statistics updation)
6.10	Bluetooth Android app connectivity	Real time android app. Test result updation
6.11	Android app. Machine operational control	Testing, cleaning and password change Remotely control the machine
6.12	OTP based login facility	OTP send to the android app. All settings and correction
6.13	Measuring Method	Ultrasonic technology
6.14	Password protection	Setup, Calibration
6.15	Centralized Rate chart updation	NA
6.16	Display	High contrast blue back light 4-Line LCD display.
6.17	**Samples per hour**	**90 to120 samples**
6.18	Sample volume	20 ml
6.19	Measuring cycle	NA
6.20	Sample milk Temperature	1Deg.To 40 Deg. Celsius(+/- 1 Deg. C)
6.21	Fat	0.5% to 15%(+/-0.1%)
6.22	Fat Repeatability	0.5% to 12% (+/-0.1%) 12% to 15% (+/-0.2%)
6.23	Solid Non- Fat (SNF)	3% to15%(+/-0.15%)
6.24	CLR	15 to 40(+/-1)
6.25	SNF Repeatability	0.15%(+/-0.15%)
6.26	Added Water in Milk	0% to 99%(+/-3%)
6.27	Protein	2% to7%(+/-0.1%)
6.28	Lactose	0.01 % to 6% (+/-0.2%)
6.29	Per Lt Price	.NA

6.30	Cleaning methods	Automatic & Manual with plunger
Sr. No	**Particulars**	**Specification**
6.31	Calibration and correction control	Separate function for calibration and correction (Password protected).Secured calibration through Mobile app.
6.32	Cleaning Time and count control	Programmable Cleaning Time and count
6.33	System operational history	Show total tests, cleanings, cleaning skip
6.34	Test sample take	Automatic Intake
6.35	Output Readings	Fat, SNF, CLR, Protein, Lactose, Temperature, Added water etc..(Show/Hide programmable Display arrangement) Enable/Disable
6.36	Separate Channel for calibration and correction	COW,BUFFALO and MIX
6.37	Advance weight entry facility	NA
6.38	External peripheral connectivity	NA
6.39	External Display connectivity	NA
6.40	Multiple Analyzer output format	NA
6.41	Result Printing format	NA
6.42	Real time clock	NA
6.43	Enclosure	AISI 304 0.75MM thick minimum
6.44	Reports	NA
6.45	Cleaning solution	One set of Daily and weekly cleaning solution should be provided along with holding bottom tray for spillage one No and measuring Mug 2 Nos
6.46	Warranty	3-Year
7.0	**Ultrasonic Milk Sample Stirrer**	
7.1	Functional Requirement	To remove air from fresh milk sample by vibrations created in the milk before testing of milk.
7.2	Type	Table Top, Ultrasonic Stirrer
7.3	Stirrer for Ultrasonic Stirrer	Frequency and Timer setting
7.4	Ultrasonic Frequency	20-25KHz(Variable)
7.5	Timer	1-99Sec selectable

7.6	Environment	Suitable for dusty/humid village environment, operating temperature-5 to 50 Degree C
7.7	Complete Ready to Use	Item complete in all respect with required electric/electronic parts, Ready for use at site.
7.8	Body	AISI 304 1.2mm thick Minimum
7.9	Operating Voltage	230 Volts+/-10,AC,50Hz and 12Volts DC
8.0	**REMOTE DISPLAY UNIT (RDU)**	
8.1	Functional Requirement	To display pourer members milk collected & milk testing and other selected parameters in English/Local Language
8.2	Type	Wall mounted type
8.3	Display Parameters-8No	7 Bright segments ,Red LED,
8.4	Labels for display	Screen Printed
8.5	Environment	Dusty, Humid, preferably housing to be with IP 55 or equivalent protection, rust proof Powder coated metalic.
8.6	Connecting Cables	Minimum 5 m Power cable with Plug top with connector at both ends, Minimum 5m Data cable with connector at both ends
9.0	**Inverter& Battery**	
9.1	Functional Requirement	To give regulated AC power to AMCU from mains or attached battery
9.2	Type	Line-Interactive type
9.3	Capacity	1500VA minimum
9.4	Backup time(Full Load)	3-hrs minimum (in one shift)
9.5	Output Wave Form	Sine Wave/Quasi Sine wave
9.6	Voltage at input	160-280V(+10%)
9.7	DC Voltage Bus	24 V
9.8	Voltage at output (With Mains as well as with Battery)with in-built AVR	220V+/-10%
9.9	Full protection	Inbuilt protection-Under/Over voltage, Short-circuit, Overload Cut off, Low Battery Cut-off ,Spikes cut-off
9.10	Warning (LED + Sound)	Low Battery& Overloads
9.11	Input/ Output Frequency	50Hz+/-3Hz, No Correction
9.12	Battery switchover	Battery switch over in 3-10 milli seconds

9.13	Battery Charging	Preferably to take place even at 130&300V with SMPS charger • Boost charging at minimum 7A • Battery overcharge protection
9.14	Battery No and Type	2 No 100 AH Tubular, Acid filled, low maintenance battery with level indicator (Maintenance free Battery desirable)
9.15	Charging Indicator	Battery charging indicator plus low battery/fault indicator to be Provided
9.16	Battery Steel Rack	Required
9.17	Leads between UPS & Battery	Flexible, Cu conductor PVC, Minimum 1m with lugs at both ends.
9.18	Warranty of Battery	3years against manufacturing defect.
9.19	Steel rack for UPS	Required to place UPS above floor
9.20	No load loss at 24 Volt when UPS is ON	Minimum
10.0	**Earthling-**	**Earth Electrode(Gel type) (Optional)**
10.1	Technology	Earth Electrode (Gel type) maintenance free earthing. Mineral Filling Compound (MFC), surrounded to earth electrode creates low resistance zone so that output is constant For longer life.
10.2	Pipe Material	Galvanized Pipe as per IS:1239
10.3	Class of Pipe	Class-B
10.4	Diameter (Outer Dia.)	48 mm
10.5	Length	2 Meter
10.6	Wall Thickness	2.5 mm
10.7	Primary Electrode	Mild Steel Strip
10.8	Mild Steel Strip	2.12mlong, 32mm wide and 6 mm thick
10.9	MS Strip hot dip Galvanized thickness	110 micron
10.10	GelFilled	Highly non-corrosive compound
10.11	Earth wire to connect Electrode with Power Supply.	Copper 8m long & 8mm dia suitable for inter connection
10.12	Filling compound	Adequate

10.14 The supplier should also provide Annual Maintenance Contract after warranty period on chargeable basis, if felt necessary by the purchaser.

10.15 Training – The supplier shall ensure proper and accurate functioning of all the components of the AMCU and impart training to the operating staff in operation, maintenance and routine check till the operating staffs are confident in operation and routine maintenance.

10.16 Operational &Cleaning SOPs (including leaflet on troubleshooting) - Provide laminated wall chart indicating important steps involved in operation & cleaning of the Milk Analyser for displaying in DCS.