Technical Specifications for Dialysis Machine

Should have facility for conventional and High flux dialysis.
Machine should have two bacterial filter (Pyrogen filters) one at water inlet and one before water going to dialyser
Battery back-up for 20-30 minutes to run complete machine with heater supply
Should have Na, Bicarbonate and UF profiling
Dialysate temperatures selectable between 35 degrees C to 39 deg. C
Variable conductivity setting between 12 to 15
Should have variable dialysate flow 200-800 ml/mt and should have increasing facilty to step up by 2o ml
Should have facility to show trends curve of all parameter for 15-20 minutes
Heparin pump with syringe sizes 20 to 30 ml with pump flow rate from 1-10 ml/hr(0.1 ml increments)
Stroke pressure operated short term single needle dialysis
Ultrafiltration 0.1 to 2.5 litres/hr. .The in and out fluid circuit must be separated so that there is no chance of contamination in the event of membrane rupture.
Treatment parameter should be displayed by graph and digitally both
Should have integrated heat and chemical disinfection facility with one standard time. disinfection programme with day knight week schedule
Should have accurate feedback control conductivity mixing technique.
Should have drain facility.
Should have accurate UF control by flow by volume control measurement technique.
Extra facilities like Blood Volume sensor,Bicart Select technique and online clearance kt/V and blood temperature monitor.
All important data should be presetted so that machine can be used anytime without feeding data every time
Should have automatic self test facility
Should have auto ON/OFF Facility
Should have touch button screen and large colour TFT Screen
Automatic diagnosis of malfunctioning with on line ability to show the faults with trouble (Technical service Mode)
Machine can be connected to computer to feed all data and trouble shoot whenever any problem
Blood pump rate from 20-500 ml/min adaptable to stndard A-V bloodliness
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Ability to monitor pulse rate and NIBP .
Audio visual alarms on limit violation of conductivity,blood leak, air leak, transmembrane pressure alarms,, Dialysis temperature alarm,dialysis can empty alarm, end of disinfection alarm,bypass alarm and blood pump stop alarm
Alarm for reverse Ultrafiltration and also be able to do sequential dialysis
On line in build NIBP recording
On line cleatrence clearance monitoring –build in device for measurement and monitoring of

effective urea clearance and dialysis dose(KT/V)
The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
All consumables required for installation and standardization of system to be given free of cost.
To be supplied free of cost
Bacterial filters– 2 sets extra , 100 polysulfone 1 m2 dialyzers and tubings
Power input to be 220-240VAC, 50Hz fitted with Indian plug
UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.
Should be FDA , CE,UL or BIS approved product
Manufacturer/Supplier should have ISO certification for quality standards.
Shall comply with IEC 60601-2-16 SAFETY requirements of medical electric equipment part2-particular requirements for the safety of Haemodialysis equipment.