Technical Specification of Syringe Pump

S.N.	Purchaser's Specifications		Bidder's Compliance Sheet		
	Syringe Pump		**Yes /No**	**Ref Dos Page No.**	**Remarks**
	Manufacturer				
	Brand				
	Type / Model				
	Country of Origin				
1	**Description of Function**				
1.1	The Syringe Pump provides uniform flow of fluid by precisely driving the plunger of a syringe down its barrel. It provides accurate and continuous flow rate for precise delivery of medication in critical medical care.				
2	**Operational Requirements**				
2.1	The syringe pump must be programmable, user friendly, safe to use and must have battery backup and comprehensive alarm system.				
3	**System Configuration**				
3.1	Syringe pump should be compatible to syringes different capacities: 5 ml, 10ml, 20ml, 30 ml, 50/60 ml with battery backup alarm and with complete accessories.				
4	**Technical Specifications**				
4.1	Display at least 2.5" or more LCD screen.				
4.2	Flow rate programmable from 0.1 to 1500 ml/hr. in steps of 0.1 ml/hr. with user selectable flow set rate option.				
4.3	Bolus rate must be programmable to 0.1 – 1500 ml/hr. depending on syringe sizes.				
4.4	Display of Drug Name with a provision of memorizing 10~15 names by the operator or more.				
4.5	Keep Vein Open (KVO) must be available 1.0 ml/hr. or set rate if lower than 1.0 ml. User must have choice to disable KVO whenever desired.				
4.6	Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg				
4.7	Must Work on commonly available 5 ml, 10ml, 20ml, 30 ml, 50/60 ml Syringes with accuracy of minimum of +/-2% or better.				
4.8	Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.				
4.9	Anti-bolus system to reduce pressure on sudden release of occlusion				
4.10	Must have comprehensive alarm package including: Occlusion limit exceed alarm, near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm, KVO rate flow, Low battery pre-alarm and alarm, AC power failure, Drive disengaged and preventive maintenance.				
4.11	Rechargeable Battery having at least 4 hour backup for about 5ml/hr. flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.				
4.12	Preset Volume(VTBI): 0.1-9999ml, minimum step 0.1ml				
4.13	Accuracy: ≤ ± 2%				
4.14	K.V.O. Rate: 0.5 ml/hr				
4.15	Bolus Rate: 0.1 ~ 1500 ml				

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प्रदेश न. १
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S.N.	Purchaser's Specifications	Bidder's Compliance Sheet		
4.16	Purge Rate: 150 ~ 800 ml			
4.17	Should have self test system			
4.18	Automatically recognition of syringe size should be available			
4.19	Should have preset syringe brand and should support local brand configuration			
4.20	Should be standard vertical pole mounting type			
4.21	Should support RS232 data interface			
5	**Accessories, spares and consumables**			
5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).			
6	**Operating Environment**			
6.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.			
7	**Standards and Safety Requirements**			
7.1	Must submit ISO13485 or better for Medical Devices **AND**			
7.2	CE (93/42 EEC Directives) or USFDA approved product certificate.			
7.3	Certified for meting IEC60601-2-24:Particular requirements for the safety of infusion pumps and controllers			
8	**User Training**			
8.1	Must provide user training (including how to use and maintain the equipment).			
9	**Warranty**			
9.1	Comprehensive warranty for 2 years after acceptance.			
10	**Maintenance Service During Warranty Period**			
10.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.			
11	**Installation and Commissioning**			
11.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel.			
12	**Documentation**			
12.1	User (Operating) manual in English.			
12.2	Service (Technical / Maintenance) manual in English			
12.4	Certificate of calibration and inspection from factory.			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/no/all complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to rejection of bid from technical committee

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प्रदेश सरकार
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मेडिकल सुपरिटेन्डेन्ट