SPECIFICATIONS FOR SYRINGE INFUSION PUMPS

Sl. No.	Specifications
1	The flow rate range should be 0.1ml/hr to 1200 ml/h with an accuracy of ± 1% on the mechanism.
2	Should work on the following syringe capacities 5, 10, 20, 30/35, 50/60 CC and should be compatible with min 50 types of the syringe
3	Infusion modes to be present ml/hr mode, Dose mode, and Volume/time.
4	Should have the following Dose rate mode units: ng/h, ng/kg/min, ng/kg/h, microg/min, microg/h, microg/kg/min, microg/kg/h, mg/min, mg/h, mg/24h, mg/kg/min, mg/kg/h, mg/kg/24h, mg/m²/h, mg/m²/24h, g/h, g/kg/min, g/kg/h, g/kg/24h, mmol/h, mmol/kg/h, mmol/kg/24h, mU/min, mU/kg/min, mU/kg/h, U/min, U/h, U/kg/min, U/kg/h, kcal/h, kcal/24h, kcal/kg/h, mEq/min, mEq/h, mEq/kg/min, mEq/kg/h.
5	Should have a drug library of a minimum of 50drugs categorized in user-defined categories with the facility to set all infusion parameters like soft limit, hard limit, bolus dose, etc.
6	Should have Soft and Hard limit for max. or min. Flow/Dosage rate that cannot be exceeded and is rejected by the pump.
7	Should have the facility to upload drug library simultaneously through a single interface in the station with up to 4 infusion pumps in a system with an external hardware
8	Should have direct bolus option with flow rate 50 ml/hr to 1200 ml/hr with an increment of 50 ml/hr along with programable bolus with settable dose or volume/time
9	Should have settable KVO option ranging from 0.1 to 5ml/hr with feature to keep it off
10	3 modes of Priming are required (Mandatory, not mandatory, or advised) with a max flow rate: of 1200 ml/hr.
11	Should have induction dose facility with setting of Dose / time: 0.1 - 99.9 units / 1 second - 24 hours rate auto-calculation
12	Night mode programmed manually or automatically in a variable time range is a

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	must to decrease the brightness of the screen.
13	The fast start option is mandatory with a pause option programmable from 1min to 24hrs
14	Variable and 3 pre-set levels pressure mode is a must. Range from 50 to 900 mmHg. (25 mmHg increment from 50 to 250 mmHg / 50 mmHg increment from 250 to 900 mmHg). Can be enabled/disabled and adjusted with the facility to display real-time inline pressure in both digital and analog form.
15	The Dynamic Pressure System with maximum and minimum threshold settings is mandatory.
16	The anti-bolus system is required
17	On Screen Graphical display of the following history "Volume/dose infused, pressure, flow rate" must be present.
18	Should save 1500 data log events in real-time and should have a graphical history of Volume/ dose infused, pressure and flow rate
19	The device should have Syringe barrel clasp check, plunger head detection, anti-siphon system check, and flange detection.
20	The device should have the following alarm Occlusion pressure pre-alarm, occlusion pressure alarm, patient line disconnection, end of infusion pre-alarm, end of infusion alarm, volume limit pre-alarm, volume limit alarm, keypad manual locking or key padlock, hard and soft flow rate limits, start infusion at pause end, Disengaged driving mechanism alarm, plunger disengaged alarm, low battery pre-alarm, discharged battery alarm, battery capacity display in hours and minutes, unconfirmed programming, technical malfunction alarm (auto-test, rotation), drive system advance check, watchdog check, communication connection failure, plug-head disengagement, auto-lock/lock code (on Keypad), preventive maintenance.
21	The device should have a push guard for syringe protection.
22	Should have LCD display of size equal to or more than 60 mm x 30 mm
23	Should have a Swing lock clamp for versatile clamp and horizontal clamp that allows the fixation on a rail or on a pole
24	Should have a Li-ion Smart battery, remaining battery life, and battery charge level available on the display. Battery Life (when fully charged): > 13 h at 5 mL/h.
25	The device should have an RS232 Communication port with HL7 compatibility.

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26	Should have the option of self stackability of min 3 pumps
27	The device should have a Docking station to fit in 4 or 6 pump
28	The docking station should be able to communicate to HIS and should be HL7 compliant

Conditions for tenderers:

1. All accessories should be from the same Original Equipment Manufacturer for the main unit.
2. Instruments must be ISO certified and a copy should be enclosed. (The ISO Certificate must be issued by any organization accredited by the Bureau of Indian Standard or accredited by the international accrediting forum "IAF" (Certificate to be attached).
3. Should be USA FDA and/ or European CE be approved by 4 digits notified body.
4. Other necessary certifications if any required will be provided by the bidder for the smooth functioning of the machine.
5. Installation process should be performed by O.E.M trained service engineers/ service representatives on OEM letterhead or Service Report within 15 days of supply, with the mandatory provision of providing preventive services visit of OEM trained Service Engineer/ Service Representative quarterly per year till the completion of warranty period (i.e., 20 visits for the first 05 years) & further quarterly visits (04 visits/year) year till the completion of CMC period.
6. The equipment should have a Brand name/ Model Number embossed/etched on the equipment.
7. All the technical specifications in the compliance statement must be supported by Original Literature from the firm/ O.E.M with highlighting Numbering & flagging of all technical certificates.
8. Offered Equipment should have a strong Government Installation base.
9. Offered Equipment should have a Regional Sales Service Centre of the Original Equipment Manufacturer in the region for a 95 % uptime guarantee.
10. For the offered main unit, the essential, optional required consumables'/accessories' shelf life should be declared on the Original Equipment Manufacturer's letterhead.
11. In case of technical snag/failure/breakdown the response time for the inspection should be within 24 hours and repair within 05 days otherwise provide a service

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machine/ alternate arrangement to be made till the period of recovery of the breakdown of the unit, failing which attracts penal action as per the decision of institute/ hospital.

12. For offered equipment the Training of technical staff and users should be performed by Original Equipment Manufacturer trained Service Engineers at the proper designated place- at bidders' cost.
13. Company should quote their latest model and need to provide an affidavit for the same.
14. As a tendering process the Demonstration of the offered Equipment is Mandatory at hospital/institute premises or other designated places at the bidder's cost.
15. The bidder must comply with the General Financial Rules and their modifications if any issued by the Government of India- 2017.
16. Any bidder from a country that shares a land border with India will be eligible to bid in the tender only if the bidder is registered with the Competent Authority (i.e., Registration certificate issued by the Ministry of Commerce and Industry (Department for Promotion of Industry and Internal Trade- DPIIT after October 2020). If any such bidder is not registered with DPIIT they will be liable for technical disqualification.
17. Principal (OEM) must authorize only one agent to be quoted in the bid otherwise multiple quotes through different agents in the same bid will be canceled.
18. The Bidder and its OEM both have to submit a notarized affidavit on the Indian Non-Judicial Stamp Paper of Rs.100/- that the bidder has not quoted the price higher than the current financial year and last financial year supplied to any government Institute/ Organization/ reputed Private Organization. OEM also has to submit that the price quoted by the bidder in the bid is on its behalf and the lowest in the current and last financial year in the country. Therefore, if at any stage it has been found that the supplier and its OEM have quoted lower rates than those quoted in this bid; the Institute (the purchaser) would be given the benefit of lower rates by the Supplier and any excess payment if any, will become immediately payable to the Institute (the purchaser). If such an affidavit is not submitted, the bid will be outrightly rejected. (Part of technical bid).
19. Guarantee / Warranty Period: Separate offers of Comprehensive Maintenance Contract (CMC on main equipment) and Annual Maintenance Contract (AMC on main equipment) for further 5 years after expiry of 5 years of warranty (i.e., 6th, 7th, 8th, 9th and 10th years) in rupees only (and on basis of percentage of price) should be

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included in a financial bid in the absence of which the offer is liable to be rejected. Payment for CMC/AMC shall be made only after the expiry of the warranty of 5 years, in case the Institute (the purchaser) decides for availing of CMC/AMC services. Contract for CMC/AMC shall be decided on expiry of warranty but rates (not more than 5% inclusive of all taxes for 6^{th} to 10^{th} year) will be frozen at the price of an issued purchase order before the release of payment by the Institute (the purchaser). However, the Institute (the purchaser) may decide not to enter into any CMC/AMC contract without assigning any reason for the same, which shall be binding upon the bid.

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