

SYSTEM SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Electronic Medical Records Integration	Allows integration with an Electronic Medical Records (EMR) system, which enables features such as auto-programming of infusion parameters and auto-documentation of infusion therapy information.
Pump and EMR Association Barcoding	<ul style="list-style-type: none"> • 2-D Unique Identifier Barcode on pump screen display • 1-D Unique Identifier Barcode on pump screen display • Unique Identifier number on pump screen display • Hospital Affixed Barcode
Safety Features	<ul style="list-style-type: none"> • Auto-programming & Auto-documentation EMR integration • Dose Error Reduction Software • Single Step Rate or Dose Change Limits • Time Change Alert • Keypad Lock • mL/hr Change Confirmation • Allow/Disallow mL/hr programming for non-mL/hr dose modes • Post occlusion bolus compensation • Rapid occlusion detection for low flow rates
Dose IQ Safety Software	<p>Web-based or local server-based software application that is used to configure a facility specific drug library for Novum IQ Infusion Pump.</p> <ul style="list-style-type: none"> • Customizable drug alias for EMR integration • Safety limits for drugs and Care Area settings • Configurable single step rate change for all continuous and volume/time drugs • Integrated FDB Infusion Knowledge drug data entries based on clinical evidence • Drug library assigned with Digital Certificate for cybersecurity • Supports: <ul style="list-style-type: none"> – 5,000 unique drugs – 32 care areas – 1,000 modifiers, up to 5 per drug – 800 clinical advisories – Configuration of up to 5 concentrations per drug or modifier <div data-bbox="1052 1665 1458 1871" style="background-color: #e0f2f7; padding: 5px; margin-top: 10px;"> <p>A drug that is linked across multiple care areas counts as 1 unique entry. As an example, 1 unique drug added to all 32 care areas as linked counts as 1 drug.</p> </div>

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Drug Library Transfer	<ul style="list-style-type: none"> • Automatic drug library activation without end user intervention or power cycling of the pump • Transfer the drug library <ul style="list-style-type: none"> - Using a wireless network connection any time the pump is on or off (when Sleep Mode is enabled in the drug library file) - Transfer the drug library using USB flash drive 	
Administration Sets	All nDEHP tubing	
Real Time Location Services	When the system is in Sleep Mode (AC or Battery), the system reports its location to the network at the time interval ($\pm 10\%$) set in the drug library file.	
Battery Sleep Mode	<p>The battery pack shall support Sleep Mode (Battery) of at least 14 consecutive days under the following conditions:</p> <ul style="list-style-type: none"> • New, fully charged battery • Check-in interval of once per hour • Available wireless network connectivity to IQ Enterprise Connectivity Suite 	
Weight	2.8 kg (6.17 lbs) – excludes power adapter	
Overall Pump Size	Height:	10.2 cm (4 in)
	Width:	24 cm (9.4 in)
	Depth:	16.1 cm (6.3 in)
Linear Travel Accuracy	<p>RATE</p> <p>0.01 – 0.49 mL/hr</p> <p>0.5 – 1200 mL/hr</p>	<p>ACCURACY</p> <p>$\pm 5\%$</p> <p>$\pm 2\%$</p> <p>The overall flow rate accuracy is a factor of pump linear travel accuracy and syringe dimensional accuracy. *These figures are based on sequential 1 hour samples for compatible syringes, subject to the syringe minimum/maximum rates in the Compatible Syringes List (https://service.baxter.com/documents). At flow rates ≤ 0.1 mL/hr, the sample window is defined as the greater of 1 hour or 5% of the syringe volume.</p>

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Infusion Delivery Modes	<ul style="list-style-type: none"> • Continuous • Amount/Time • Volume/Time (including multi-syringe) • Basic Mode • Enteral
Dose Mode Continuous Setting	mL/hr, mL/kg/min, mL/kg/hr, g/hr, mg/hr, mg/kg/hr, mg/min, mg/kg/min, mg/kg/day, mcg/hr, mcg/kg/hr, mcg/min, mcg/kg/min, mcg/kg/day, ng/min, ng/kg/min, Units/hr, Units/kg/hr, Units/min, Units/kg/min, mUnits/min, mUnits/kg/hr, mUnits/kg/min, mEq/hr, mEq/kg/hr, mmol/hr, mmol/kg/hr, MillionUnits/day
Dose Mode Loading Dose and Bolus	mL, mL/kg, g, mg, mg/kg, mcg, mcg/kg, ng, ng/kg, Units, Units/kg, mUnits, mUnits/kg, mEq, mEq/kg, mmol, mmol/kg
Dose Modes: Amount/Time Infusions	mL/kg, g, g/kg, g/m ² , mg, mg/kg, mg/m ² , mcg, mcg/kg, mcg/m ² , Units, Units/kg, Units/m ² , mEq, mEq/kg, mmol, mmol/kg, MillionUnits, MillionUnits/kg, MillionUnits/m ²
Auto-Programming	<ul style="list-style-type: none"> • Continuous Infusions • Amount Over Time Infusions • Volume Over Time Infusions • Bolus and Loading Doses • Rate Changes • Dose Changes • Disposable Changes • Weight or BSA Changes
Flow Rate	0.01 – 99.99 mL/hr (precision 0.01 mL/hr) 100.0 – 999.9 mL/hr (precision 0.1 mL/hr) 1000 – 1200 mL/hr (precision 1 mL/hr)

SPECIFICATION

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KVO

At the completion of an infusion, if the user has configured a KVO for the infusion, the **Novum IQ SYR** pump will infuse at the KVO rate, or the current infusion rate, whichever is lower until the syringe is empty or reaches the end of travel.

Syringe Size (Capacity, mL)	Maximum KVO Flow Rate (mL/hr)
1	1
3	1
5	1.25
6	1.5
10	2.5
12	3
20	5
30	5
35	5
50	5
60	5

Total Volume

The **Novum IQ SYR** pump supports the following range and decimal increment for the total volume given (X):

Range: 0.01 - 999mL

Max Volume Limit
per Line Flush

0.1 to 10 mL (inclusive)

Patient Weight
and BSA Limits

Weight Limits: 0.1 – 500 kg

BSA Limits: 0.1 m² – 4m²

Tall Man Lettering

TALLman lettering functionality is provided to help distinguish between similar sound-alike drug names which may help reduce eye strain and assist the user in making the correct selection.

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<p>Logging Memory</p>	<ul style="list-style-type: none"> • While not in use, the Novum IQ SYR pump’s memory will retain the last programmed setup screen for 24 hours • In case the Novum IQ SYR pump is powered down, the pump history log will be maintained, and a time stamp will be added to the log recording the beginning and end of the down time • After a total loss of power, the contents of the log will not be lost • Minimum 4,400 Event Log Capacity <p>NOTE: An event is any user-confirmed data entered into the pump. Once the maximum log file size is reached, the data for each new event replaces the data for the oldest event (the data for the oldest event is lost).</p>
<p>AC Power Adaptor</p>	<p>AC Power Adaptor, low profile, covers only one outlet, Medical Grade (IEC60601-1-2:2014):</p> <ul style="list-style-type: none"> • Input: 100-240 V~, 50-60 Hz, max current draw of 0.5A • Output: 16 VDC/1.25A, short circuit protected • Cord length: 3.0 m (approximately 9.8 ft)
<p>Battery Power and Capacity</p>	<p>Novum IQ SYR Smart Battery Pack</p> <ul style="list-style-type: none"> • Lithium Ion, 10.8 VDC Nominal • Capacity 10.5 hrs typical (at 5 mL/hr at the highest backlight setting) • Capacity 8 hrs (at 10 mL/hr at the medium backlight setting and Wi-Fi on) • 16 hr recharge time at 23°C ± 2°C (73.4° ± 3.6°F)
<p>Device Classification</p>	<p>The Novum IQ SYR pump is classified according to Medical Electrical Equipment standards as:</p> <ul style="list-style-type: none"> • Class II Equipment • Type CF Applied Part (Note: Applied part is IV Administration Set) • Continuous Operation • Disinfect according to manufacture cleaning instructions <p>Not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.</p> <p>IPX2 – Water protection (offers protection from dripping water when the Novum IQ SYR pump is rotated 15 degrees any direction from vertical for at least 10 minutes).</p>
<p>Pumping Mechanism</p>	<p>Motorized pumping lead screw mechanism</p>
<p>Display</p>	<p>Color LCD Front-Lit Super Fine TFT Screen with 800x480 pixel resolution</p>

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Alarm Volume and Tone	<ul style="list-style-type: none"> Variable, three levels: high, medium (default), low Alarm tone IEC 60601-1-8 Compliant 																												
Maximum Allowable Pressure while in Downstream Occlusion	310 kPA (45 psi)																												
Downstream Occlusion Detection	<p>Adjustable Pressure</p> <table border="1"> <thead> <tr> <th>Setting</th> <th>Occlusion Pressure (PSI)</th> <th>Lower Limit (PSI)</th> <th>Upper Limit (PSI)</th> </tr> </thead> <tbody> <tr> <td>Very High (VH)</td> <td>32.5</td> <td>20</td> <td>45</td> </tr> <tr> <td>High (H)</td> <td>17</td> <td>10</td> <td>24</td> </tr> <tr> <td>Medium High (MH)</td> <td>15</td> <td>10</td> <td>20</td> </tr> <tr> <td>Medium (M)</td> <td>11</td> <td>6</td> <td>16</td> </tr> <tr> <td>Low (L)</td> <td>9</td> <td>4</td> <td>14</td> </tr> <tr> <td>Very Low (VL)</td> <td>6</td> <td>1</td> <td>11</td> </tr> </tbody> </table> <p>Note: The very high setting applies only to a 1 mL syringe and is available only when a 1 mL syringe is loaded.</p> <p>Detection sensitivity is dependent on the flow rate and is configurable through user settings to trigger an alarm at specified limits.</p>	Setting	Occlusion Pressure (PSI)	Lower Limit (PSI)	Upper Limit (PSI)	Very High (VH)	32.5	20	45	High (H)	17	10	24	Medium High (MH)	15	10	20	Medium (M)	11	6	16	Low (L)	9	4	14	Very Low (VL)	6	1	11
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Bi-Directional Wireless Communication	<ul style="list-style-type: none"> EMR Integration Drug Library Transfer CQI Reporting. <p>Conforms to industry standards IHE profiles for device integration.</p> <ul style="list-style-type: none"> PCD-01 (Auto-documentation volume increments) PCD-10 (Auto-documentation events) PCD-03 (Auto-programming) PCD-04 (Alarm routing) 																												
Operational Conditions	<p>Operating temperature: 10 to 40 °C (50 to 104 °F), 10–95% relative humidity non-condensing</p> <p>Atmospheric Pressure: 70 kPA to 102 kPA</p>																												
Storage and Packing Conditions	Storage temperature: -10 to 49 °C (14 to 120 °F), 10–95% relative humidity non-condensing																												
Wireless Network Interface	<ul style="list-style-type: none"> Frequency: 2.4 Ghz, 5.0 Ghz Standard: IEEE 802.11 a/b/g/n/ac 																												

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Software Updates	Wireless OTA Firmware, USB flash drive
Wireless Security	<ul style="list-style-type: none">• WEP (Wired Equivalent Privacy)• Encryption: 64/128-bit (RC4) WPA/WPA2/802.11i• Encryption: TKIP, CCMP (AES) Wireless Security• WPA-PSK• WPA2-PSK• 802.1X authentication<ul style="list-style-type: none">– PEAP/MSCHAPv2– EAP-TLS– EAP-TTLS/PAP– EAP-TTLS/MSCHAPv2
External Interfaces	USB 2.0 Type-A receptacle, 250 mA
Device Useful Life	10 years