BD Alaris™ neXus PK Syringe Pump

Timely, precise and effective anaesthesia

Managing your patients' anaesthesia requires precise devices[1]. Built on the BD Alaris neXus platform, the BD Alaris neXus PK syringe pump is designed to offer timely, precise and effective anaesthesia for children and adults.

Improving workflow efficiency

Workflow efficiency is highly important in busy operating rooms (OR)[2]. BD Alaris neXus PK offers a user-friendly interface and a large display showing all critical infusion data at a glance.

Promoting patient safety

During complex OR procedures, patient safety is a concern. The BD Alaris neXus PK offers a broad range of plasma (PK) and effect site (PD) targeting models. The Eleveld Propofol and Eleveld Remifentanil models are the only TCI models able to provide PD target steering for children. They help anaesthesiologists meet IV anaesthesia requirements in a safe, timely and accurate way[3].

Wi-Fi enabled

Wireless transfer of infusion data through the Alaris™ Communication Engine to the hospital information systems. Automatic wireless download of pump event logs and the update of datasets from anywhere in the hospital improves the process without interrupting clinical workflows as pumps are infusing.

Increased medication safety for all population

The BD Alaris™ neXus PK syringe pump has **patent pending medication safety** to **minimize** the potential for **programming errors**, especially when setting up infusions **for children**. This technology automatically adjusts the suggested default settings for height and weight based on the patient's age that is entered when using the Eleveld propofol and Eleveld remifentanil TCI model.

New TCI drug models*

- Dexmedetomidine (Hannivoort-Colin)
- Propofol (Eleveld),
- Remifentanil (Eleveld),
- Remifentanil (Kim-Obara-Egan)

*refer to specifications for full list of drug models.

BD

BD Alaris neXus PK Syringe Pump

The BD Alaris neXus PK syringe pump offers a complete TCI solution allowing for timely, effective and precise IV anaesthesia, helping to perform safe and smooth procedures and optimising the IV anaesthesia workflow.

Specifications

Infusion rate range
5 ml syringe 0.1 to 150 ml/h; 10 ml syringe 0.1 to 300 ml/h; 20 ml syringe 0.1 to 600 ml/h; 30 ml syringe 0.1 to 900 ml/h; 50 ml syringe 0.1 to 1200 ml/h; increments starting at 0.01 ml/h.

Volume infused
0.0 to 9,990 ml.

Maximum bolus rate (in TIVA mode)
5 ml syringe 150 ml/h; 10 ml syringe 300 ml/h; 20 ml syringe 600 ml/h; 30 ml syringe 900 ml/h; 50 ml syringe 1200 ml/h.

Pumping pressure limits (syringe size specific)
11 levels L0 to L10 (50 mmHg – 1000 mmHg).

Purge specifications (syringe size specific)
100 to 500 ml/h. Volume range 0.5 to 5.0ml.

Flow rate accuracy (ml/h mode)
±2% at 25 ml/h in accordance with IEC 60601-2-24*.

Audible alarms & display prompts
Such as safety boundaries for plasma calculation and patient weight; near end infusion.

Dimensions and weight
310 mm (w) x 121 mm (h) x 200 mm (d).
2.4 kg incl. internal battery and integrated pole clamp.

LCD display
35 x 167 mm high resolution LCD display with LED backlight. Minimum viewing angle of 35°, legible from 3m. Up to 20 characters per drug name.

TCI Plasma (PK) and effect site (PD) models**
Adult and Pediatric: Propofol 1%-2% Eleveld (PK/PD); Remifentanil Eleveld (PK/PD) Adult: Dexmedetomidine Hannivoort-Colin (PK); Propofol 1%-2% Marsh (PK); Propofol 1%-2% Schnider (PK/PD); Remifentanil Minto (PK/PD); Remifentanil Kim-Obara-Egan (PK); Sufentanil Gepts (PK/PD); Alfentanil Maitre (PK/PD); Paediatric: Propofol 1%-2% Kataria (PK); Propofol 1%-2% Paedfusor (PK).

Configurable options
Pump configuration settings available via the BD Alaris neXus Editor.

Battery specifications
NiMH – rechargeable and replaceable. Mean battery life 6 hours at 5.0 ml/h. Recharge time 2.5 hours from discharge to 90% charge.

Power requirements
115-230 VAC, 50-60 Hz, 10 VA (nominal).

Additional specifications
IP32 (IP33 with AC Power cable retainer kit); RS232; Alaris Gateway compatible. Configurable through BD Alaris neXus Editor; Event log: up to 1,500 events in pump memory; TIVA modes.

Wi-Fi specifications
Wi-Fi Network Standards: 802.11a, 802.11b, 802.11g, 802.11n
Wireless bands: 2400-2483.5 MHz / 5150-5350 MHz and 5470-5725 MHz.

Features and benefits

Standardised user-friendly interface to start infusion with few key presses.

Large and clear display shows all key parameters at a glance. Unique visual indentification of Propofol (white background).

Complete TCI and TIVA set portfolio for safe, timely, effective and precise IV anaesthesia

Broad range of drug models for children (≥ 6 months) and adults (including obese adults).

Easy to switch from TCI to TIVA mode and back.

Long-lasting internal battery. Charges automatically when connected to AC power.

Integrated pole clamp for secure fixing to vertical IV poles (15-40 mm diameter).

Ability **to enable preferred syringes** helps increase workflow efficiency.

Alaris Gateway Workstation creates an organised workspace and connects the pump to the hospital information systems, offering data integration throughout the hospital.

Dual Colour chevrons to help minimize programming errors. Improved keypad design to enhance visibility in low light conditions

Wi-Fi enabled for automatic transmitting of infusion data through the Alaris™ Communication Engine to the hospital information systems.

Improved durability with a **more resilient material** to a variety of cleaning agents.

Able to **standardize protocols hospital wide** with 3,000 drug setups and 30 profiles (Max 200 per profile).

References

1 Bartels K, Moss DR, Peterfreund RA. An analysis of drug delivery dynamics via a pediatric central venous infusion system: quantification of delays in achieving intended doses. Anesth Analg. 2009;109(4):1156–61. doi: 10.1213/ane.0b013e3181b220c9. **2** The Joint Commission International Standards. 5th Edition: April 2014.
3 Leslie et Al. Target-controlled infusion versus manually-controlled infusion of Propofol for general anaesthesia or sedation in adults. Cochrane Database Syst Rev. 2008, 16:3.
*Nominal conditions apply. **Consult local licensing, availability & prescribing information. Please refer to the DFU for all product and model details.