



# BD Alaris™ neXus PK Syringe Pump

## Timely, precise and effective anaesthesia<sup>1</sup>

Managing your patients' anaesthesia requires precise devices<sup>1</sup>. 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.<sup>1</sup>

### Improving workflow efficiency\*

Workflow efficiency is highly important in busy operating rooms (OR). BD Alaris™ neXus PK Syringe Pump offers a user-friendly interface and a large display showing all infusion data at a glance.<sup>1,2</sup>

### Promoting patient safety\*\*

During complex OR procedures, patient safety is a concern. The BD Alaris™ neXus PK Syringe Pump offers a broad range of plasma (PK) and effect site Pharmacodynamic (PD) targeting models. The Eleveld Propofol and Eleveld Remifentanil models are able to provide PD target steering for children. They help anaesthetists meet IV anaesthesia requirements in a timely and accurate way.<sup>3</sup>

### Wi-Fi enabled

Wireless transfer of infusion data through the BD Alaris™ Communication Engine to the hospital information systems. The updated datasets can be uploaded from anywhere in the hospital without interrupting clinical workflows as pumps are infusing.<sup>1</sup>

### Increased medication safety for all populations\*\*\*

The BD Alaris™ neXus PK Syringe Pump offers clinical benefit during administration of anaesthesia with technology proven to improve control and predictability of the medication being delivered. This is done using the latest pharmacokinetic models which allow for both plasma and effect site targeting in adult and paediatric populations.<sup>1</sup>

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.<sup>1</sup>

### TCI drug models†

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

†refer to specifications for full list of drug models.

\*Compared to manual TIVA programming

\*\*By using dose error reduction software

\*\*\*Compared to current PK without TCI models

The BD Alaris™ neXus PK Syringe Pump offers a complete TCI solution, helping to perform smooth procedures and optimising the IV anaesthesia workflow.<sup>3,5</sup>



## Specifications<sup>‡</sup>

### Infusion rate range<sup>1</sup>

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<sup>1</sup>

0.0 to 9,990 ml.

### Maximum bolus rate in total intravenous anaesthesia (TIVA) mode<sup>1</sup>

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)<sup>1</sup>

11 levels L0 to L10 (50 mmHg – 1000 mmHg).

### Purge specifications (syringe size specific)<sup>1</sup>

100 to 500 ml/h. Volume range 0.5 to 5.0ml.

### Flow rate accuracy (ml/h mode)<sup>1</sup>

±2% at rates of 1.0ml/h (23°C) with IEC 60601-2-24.<sup>1</sup>

### Alarm indicator<sup>1</sup>

High visibility alarm indicator

### Dimensions and weight<sup>1</sup>

310 mm (w) x 121 mm (h) x 200 mm (d).

2.4 kg incl. internal battery and integrated pole clamp.

### LCD display

LCD display with white LED backlight.<sup>4</sup>

Up to 20 characters per drug name.<sup>5</sup>

<sup>‡</sup>for full specifications details, please consult the Direction for Use

<sup>†</sup>Nominal conditions apply.

### TCI Plasma (PK) and effect site (PD) models<sup>1</sup>

6 months - 99 years: Propofol 1% Eleveld (PK/PD);  
6 months - 99 years: Remifentanyl Eleveld (PK/PD);  
16 years - 99 years: Dexmedetomidine Hannivoort-Colin (PK);  
16 years - 150 years: Propofol 1% Marsh (PK);  
16 years - 94 years: Propofol 1% Schnider (PK/PD);  
12 years - 100 years: Remifentanyl Minto (PK/PD);  
20 years - 85 years: Remifentanyl Kim-Obara-Egan (PK);  
12 years - 150years: Sufentanyl Gepts (PK/PD);  
18 years - 95years: Alfentanil Maitre (PK/PD);  
3 years - 16years: Propofol 1% Kataria (PK);  
1 years - 18 years: Propofol 1% Paedfusor (PK).

### Configurable options<sup>1</sup>

Pump configuration settings available via the BD Alaris neXus Editor.

### Battery specifications<sup>1</sup>

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<sup>1</sup>

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

### Additional specifications<sup>1,2</sup>

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<sup>1</sup>

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.<sup>2</sup>



### Large and clear display

shows all key parameters at a glance. Unique visual identification of Propofol (white background).<sup>2,5</sup>



### Complete TCI and TIVA set portfolio

For timely, effective and precise IV anaesthesia



**Broad range of drug models** for children (≥ 6 months) and adults (including obese adults).<sup>1</sup>



**Easy to switch** from TCI to TIVA mode and back.<sup>5</sup>



### Long-lasting internal battery.

Charges automatically when connected to AC power.<sup>1</sup>



### Integrated pole clamp

for secure fixing to vertical IV poles (15-40 mm diameter).<sup>1</sup>



### Ability to enable preferred syringes

helps increase workflow efficiency.<sup>5</sup>



### Alaris Gateway Workstation

creates an organised workspace and connects the pump to the hospital information systems, offering data integration throughout the hospital.<sup>2</sup>



**Dual Colour chevrons** to help minimise programming errors. Improved<sup>5</sup> keypad design to enhance visibility in low light conditions.<sup>1</sup>



**Wi-Fi enabled** for automatic transmitting of infusion data through the BD Alaris™ Communication Engine to the hospital information systems.<sup>2</sup>



Able to **standardise protocols hospital wide** with 3,000 drug setups and 30 profiles (Max 200 per profile).<sup>5</sup>

"Additional safety information for BD Alaris™ neXus PK Syringe Pump, including Contraindications, Warnings, and Precautions may be found in the Instructions For Use (IFU)."

<sup>5</sup>Compared to previous versions of BD Alaris™ PK Syringe Pumps

#### References:

1. BD Alaris™ neXus PK Syringe Pump Directions for use
2. BD Alaris™ neXus PK Syringe Pump Product security white paper
3. Vandemoortele, O, Hannivoort, LN, Vanhoorebeeck, F, et al. General Purpose Pharmacokinetic-Pharmacodynamic Models for Target-Controlled Infusion of Anaesthetic Drugs: A Narrative Review. *Journal of Clinical Medicines*. 2022;11(9): 2487. <https://doi.org/10.3390/jcm1109248>
4. BD Alaris neXus PK Technical Service Manual
5. BD Alaris neXus Editor Direction for use

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