B BRAUN
SHARING EXPERTISE

NRFit®

Reducing Risks of Misconnections in Regional Anaesthesia[1]

Connecting what belongs together

Medical device connectors for Neuraxial & Regional Anaesthesia applications are changing to meet international design standards.

Medication errors during Regional Anaesthesia procedures

The universally compatible Luer connector has been identified as a key element in 'wrong route' medication errors. Luer connectors are widely used for delivery of infusions. Literature shows that any patient having multiple access systems in place are exposed to higher risks of misconnections.[2]

The increasing sensitivity to medication errors in clinical settings is visible in an increasing number of publications on this subject in Pubmed between 2000 and 2014.

Enhancing patient safety with NRFit®

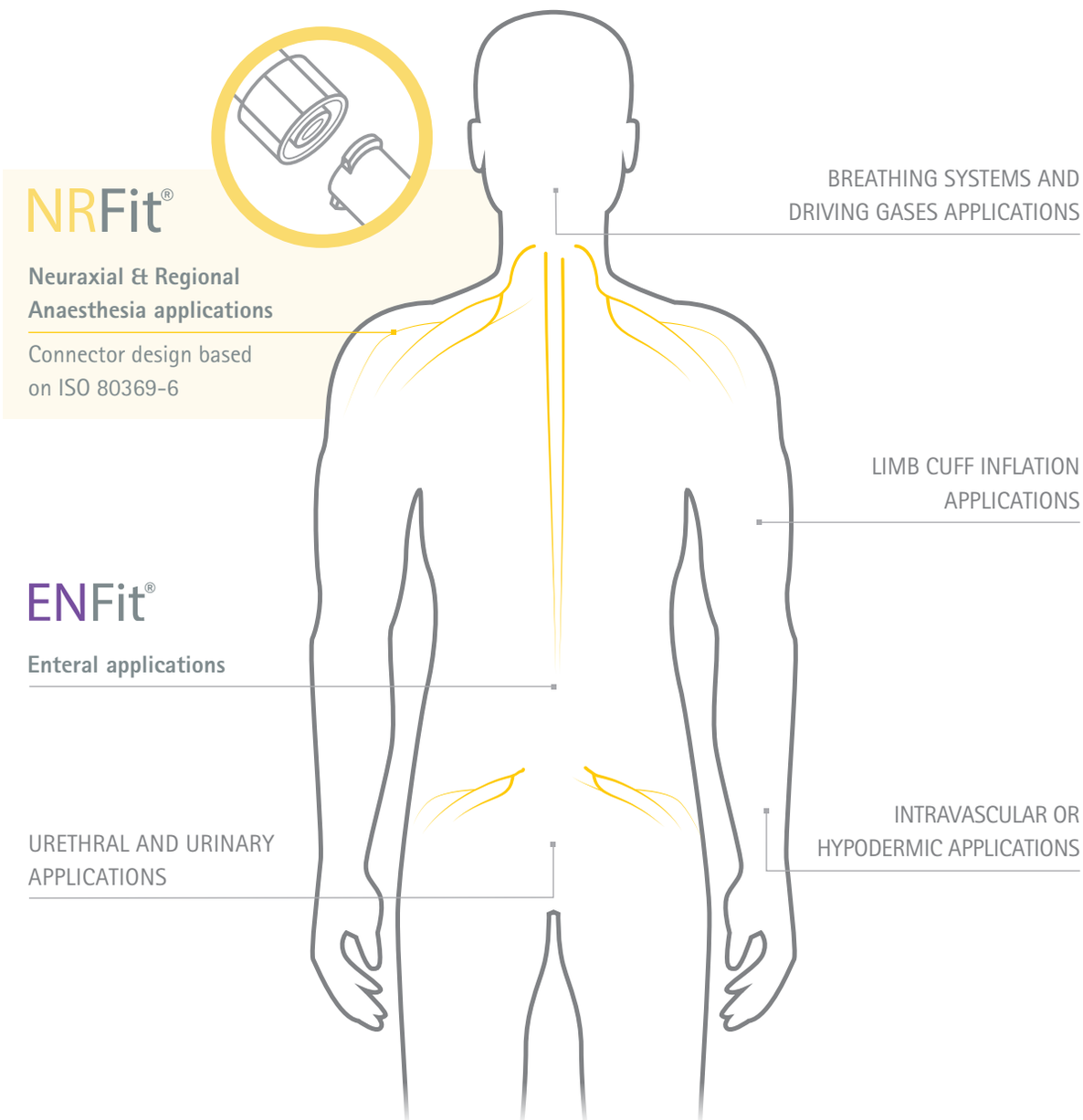
To reduce the risk of wrong route medication errors the International Organization for Standardization (ISO) has developed standards for small-bore connectors, one being in the field of Neuraxial and Regional Anaesthesia (ISO 80369-6 [1]). The name that will be used to identify devices that comply with the ISO 80369-6 standard is: [1]

NRFit®

ISO 80369-6 in detail

The ISO Standard 'specifies requirements for small-bore connectors intended to be used for connections in Neuraxial applications. Neuraxial applications involve the use of medical devices intended to administer medications to neuraxial sites, wound infiltration anaesthesia delivery, and other Regional Anaesthesia procedures or to monitor or remove cerebro-spinal fluid for therapeutic or diagnostic purposes.' [3]

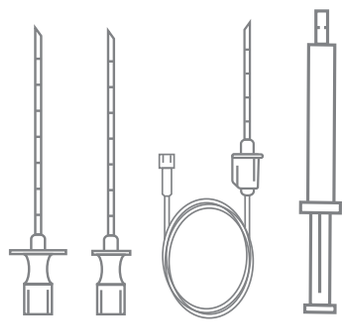
The International Organization for Standardization (ISO) has identified several medical application areas for which an ISO standard will be developed. These standards are part of the ISO 80369 series. Each standard will provide design and performance specifications for the specific connectors.[3]



Connector Changes in Regional Anaesthesia

And how it impacts your working process

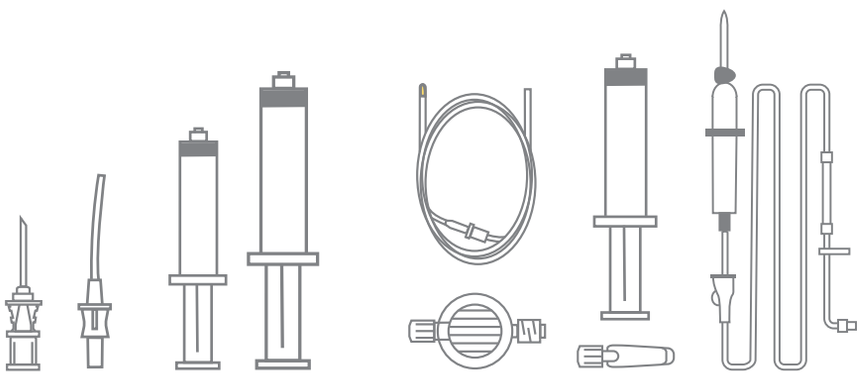
Observe. Listen. Understand. To find solutions that fit into everyday clinical life, B. Braun conducts a vivid dialogue with customers. Learning the importance of clear structures, we identified five major steps that represent customary therapy processes. Each of these steps is mapped with aligned products that are dedicated towards improving comfort and achieving a higher level of safety for users and for patients.



PRESCRIPTION | PATIENT ACCESS

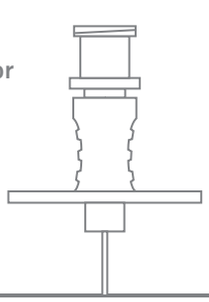
Regional Anaesthesia products with NRFit® connectors
In line with the ISO Standard for Neuraxial and Regional Anaesthesia devices, B. Braun has developed a comprehensive portfolio with NRFit® connectors for the corresponding process steps:

PATIENT ACCESS: Spinal, Epidural and PNB needles and LOR syringes
PREPARATION: Filter needles, straws and syringes
APPLICATION: Catheters, syringes, filters, catheter connectors, pump disposables

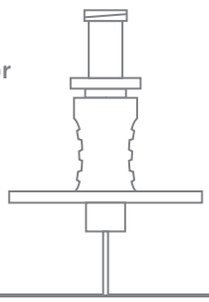


PREPARATION | APPLICATION | DISCHARGE MANAGEMENT

Luer connector



NRFit® connector



User Benefits

- Dedicated connectors intended to help reduce the risks of misconnections
- 20 % smaller in diameter
- Yellow colour coding where feasible allows faster identification of Regional Anaesthesia devices

» B. Braun, as a true System Partner, helps to stay on top of evolving standards and their realisation across multiple stakeholders, e. g. nurses, pharmacists and anaesthetists. With access to our comprehensive product portfolio in Pain Therapy and through constructive dialogue, our partners benefit from B. Braun´s know-how and expertise.

Neuraxial Anaesthesia with NRFit®

Connecting what belongs together

Therapeutic and anaesthetic decisions depend upon a number of factors, including the type and duration of the surgical intervention, patient status and selected postoperative patient management approaches.

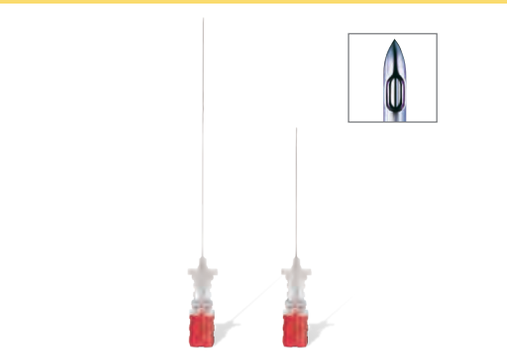
Regional Anaesthesia can be divided into central and peripheral techniques. When a local anaesthetic agent is used next to the spinal cord, this is referred to as Neuraxial Anaesthesia. Neuraxial methods include Spinal and Epidural Anaesthesia.

Products with NRFit® connectors

PATIENT ACCESS: SPINAL ANAESTHESIA PRODUCTS

Spinocan®

Spinocan® spinal needles with Quincke bevel provide sharpness for low puncture force. A prism in the spinal needle hub, supports identification of CSF flashback.



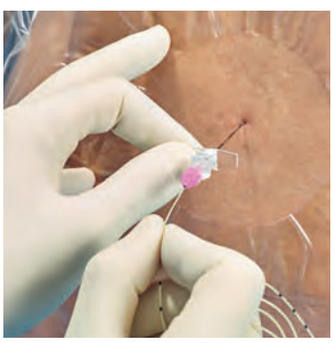
Pencan® and Pencan® Paed

Pencan® spinal needles have an atraumatic Pencil point bevel, which helps reduce PDPH.[4] They are available in adult and paediatric sizes. A prism in the spinal needle hub, supports identification of CSF flashback.

PATIENT ACCESS: EPIDURAL ANAESTHESIA

Perican®

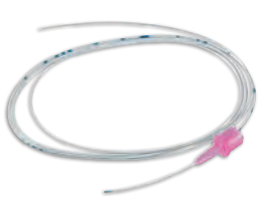
Perican® epidural needles with Tuohy bevel are available in different sizes. Their polished inner bevel edge helps to reduce the risk of catheter shearing.[5]



NRFit®

Perifix® LOR syringe

Perifix® LOR is a dedicated device for the loss of resistance technique in Epidural Anaesthesia. Suitable for air and saline application. Its parabolic graduation helps to differentiate it from conventional syringes.



Perifix® catheters

Perifix® catheters for Epidural Anaesthesia are available in different versions – Soft Tip and ONE.

Perifix® filter and Perifix® catheter connector

Filters can help to reduce the risk of bacterial infections.[6] The design of the Perifix® catheter connector and its 'click and ready' mechanism helps to ensure easy use in daily practice.

Peripheral Nerve Blocks with NRFit®

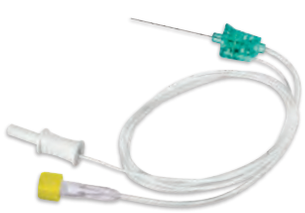
Connecting what belongs together

Peripheral and Plexus Nerve Blocks are one of the segments of Regional Anaesthesia, where a local anaesthetic agent is used next to a nerve to provide sensory and motor blockades.

Peripheral nerve blocks can be employed for Anaesthesia and for Postoperative Analgesia in order to support early patient mobilisation and rehabilitation. PNBs are also used in combination with other forms of Anaesthesia and where volatile anaesthetics are contraindicated.

Products with NRFit® connectors

PATIENT ACCESS: SINGLE SHOT PNB PRODUCTS



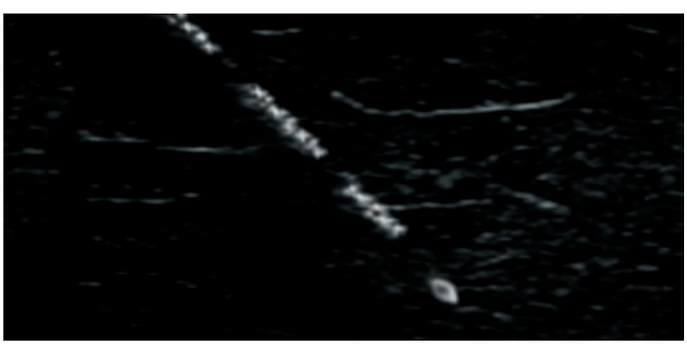
Stimuplex® Ultra 360® needles

Stimuplex® Ultra 360® is designed to perform an ultrasound guided peripheral nerve block and nerve stimulation. The 360° X-pattern markings and clear coating results in better ultrasound visualisation and tip identification[7].

Ultraplex® 360 needles

Ultraplex® 360 is a non-stimulating ultrasound needle, equipped with 30° back-cut bevel plus 360° X-shaped markings and a clear coating for better ultrasound visualisation and tip identification from all angles[7] , when nerve stimulation is not indicated (e.g. transversus abdominal plane block).

NRFit®



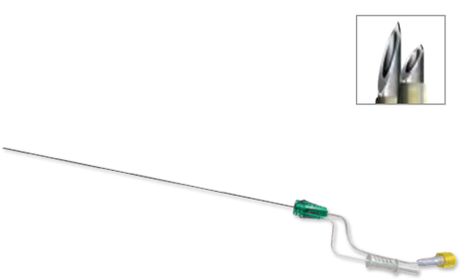
PATIENT ACCESS: CONTINUOUS PNB PRODUCTS

Contiplex® S Ultra 360® needles

Contiplex® S Ultra 360® is a continuous technique needle with a 20° facet bevel, designed to perform ultrasound guided peripheral nerve blocks in combination with nerve stimulation.

Contiplex® Tuohy Ultra 360® needles

Contiplex® Tuohy Ultra 360® is a continuous technique needle with Tuohy bevel, designed to perform ultrasound guided peripheral nerve blocks in combination with nerve stimulation.

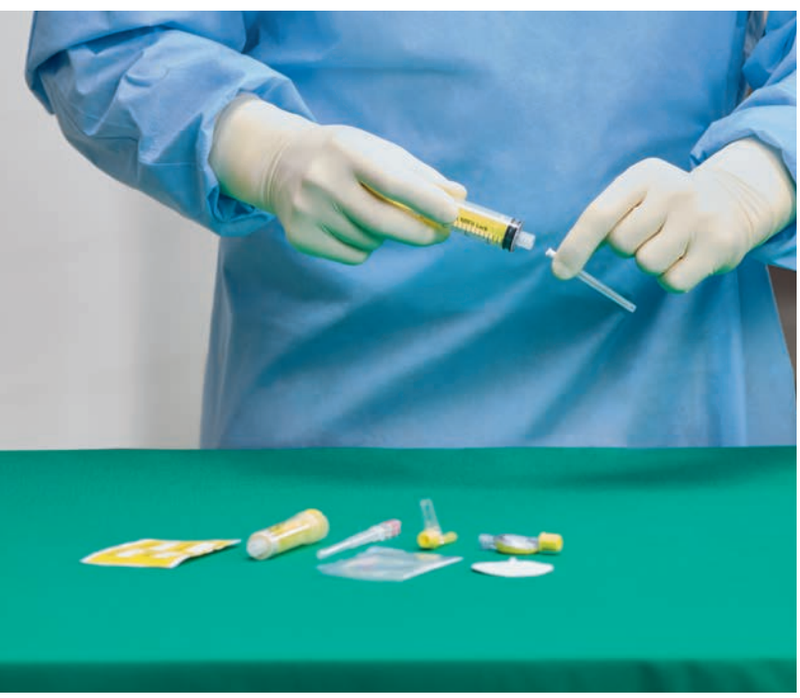


Contiplex® C

Contiplex® C is a patented catheter placement system with a catheter-over-needle design. It is designed to help overcome the limitations associated with peripheral catheters, such as complexity of catheter placement, leakage and catheter displacement.

Regional Anaesthesia Accessories and Complementary Portfolio

Connecting what belongs together



Preparation is a fundamental and irreplaceable part of health care practices. B. Braun preparation devices with NRFit® connectors are designed to reduce risks of wrong route medication errors and particulate contamination from the very beginning in Neuraxial and Regional Anaesthesia procedures.

NRFit®

Products with NRFit® connectors

PREPARATION: DRAWING-UP DEVICES, FILTER AND CONNECTOR

Sterifix® filter needle

Equipped with a 5 µm filter, Sterifix® filter needle allows for filtering particles during the injection or the withdrawal of medication for Regional Anaesthesia.

Sterifix® filter straws

Sterifix® filter straws for Regional Anaesthesia with a 5 µm integrated filter allow for the withdrawal of solutions whilst filtering particles.

Perifix® filter

Perifix® filters for Regional Anaesthesia are pressure resistant up to 7 bar. In combination with Perifix® PinPad, a self-adhesive fixation device, they can easily be attached to the patient's skin.

Perifix® catheter connector

Perifix® catheter connectors are available in two sizes (19G and 20/24G). A viewing window allows for catheter insertion control to ensure successful connection.

PRESCRIPTION | PATIENT ACCESS | **PREPARATION**

The method of drug application depends on the chosen technique of anaesthesia and on the selected post-operative pain management approach. Different options require dedicated systems. Whether the chosen method of delivery is a bolus or a continuous application, the variety of B. Braun's portfolio ensures flexibility.

NRFit®

The yellow product colour coding of syringes and lines helps to visually differentiate between regular and NRFit® dedicated equipment.

Dedicated pump disposables with NRFit® connectors are pressure resistant and suitable for use with compatible electronic pumps.

Products with NRFit® connectors

APPLICATION: SYRINGES AND PUMP DISPOSABLES

NRFit® syringe caps and NRFit® stoppers

NRFit® syringe caps are a single sterile solution for storage and/or transport alongside our Omnifix® portfolio. NRFit® stoppers are there to close our NRFit® filter or Perifix® catheter connector.

Omnifix® 1-50 ml

Omnifix® 3-piece syringes are available in a broad range of sizes in NRFit® Slip (1ml-20ml) and NRFit®Lock (3-20ml) formats plus a 50 ml syringe with NRFit® Lock connector can be used in combination with compatible syringe pumps.

Original Perfusor® Line

The Original Perfusor® Line equipped with the NRFit® connector enables compatibility to NRFit® syringes for pump applications. The translucent yellow tubes help to visually differentiate from other lines.

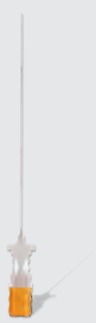
Infusomat® Space Lines

Dedicated Infusomat® Space Lines have a piercing spike and an NRFit® patient connector. The translucent yellow tubes help to visually differentiate from other lines.

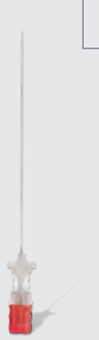
Regional Anaesthesia Products with NRFit®

Product specifications

SPINAL NEEDLES

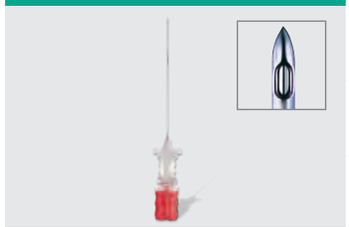
Spinocan® Quincke	Colour code	Size (G) / Length (inch)	ø / Length (mm)	Units per box	Code no. (REF)
		29 x 3 1/2"	0.35 x 88	25	4501900N-01*
		27 x 3 1/2"	0.40 x 88		4503902N-01
		26 x 3 1/2"	0.45 x 88		4502906N-01
		25 x 3 1/2"	0.50 x 88		4505905N-01
		22 x 1 1/2"	0.70 x 40		4507401N-01
		22 x 3"	0.70 x 75		4507754N-01
		22 x 3 1/2"	0.70 x 88		4507908N-01
		20 x 3 1/2"	0.90 x 88		4509900N-01
		19 x 3 1/2"	1.10 x 88		4501195N-01
		18 x 3 1/2"	1.30 x 88		4501390N-01
	Long Length				
		29 x 4 3/4"	0.35 x 120	25	4501918N-01
		27 x 4 3/4"	0.40 x 120		4502140N-01
		25 x 4 3/4"	0.50 x 120		4505913N-01
		22 x 4 3/4"	0.70 x 120		4506090N-01
		22 x 6"	0.70 x 150		4506095N-01

*With Spinal Introducer Needle

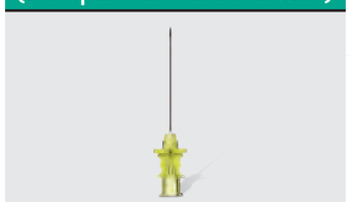
Pencan® Pencil Point	Colour code	Size (G) / Length (inch)	ø / Length (mm)	Units per box	Code no. (REF)
		27 x 3 1/2"	0.40 x 88	25	4502027N-01 4502051N-01*
		25 x 3 1/2"	0.50 x 88		4502019N-01 4502043N-01*
		22 x 3 1/2"	0.70 x 88		4502035N-01
	Long Length				
		27 x 4"	0.40 x 103	25	4502124N-01*
		27 x 4 3/4"	0.40 x 120		4502132N-01
		25 x 4"	0.50 x 103		4502116N-01*
		25 x 6.1"	0.50 x 156		333877N-01

*With Spinal Introducer Needle

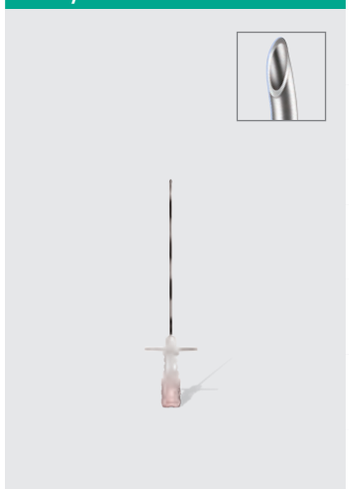
SPINAL NEEDLES

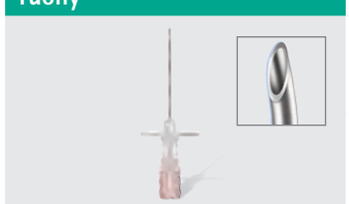
Pencan® Paed Pencil Point	Colour code	Size (G) / Length (inch)	ø / Length (mm)	Units per box	Code no. (REF)
		27 x 2"	0.40 x 50	25	4502175N-01
		25 x 1"	0.50 x 25		4502167N-01
		25 x 2"	0.50 x 50		4502159N-01

INTRODUCER (COMPATIBLE WITH BOTH LUER AND NRFIT)

Spinal Introducer Needles (for Spinocan® and Pencan®)	Colour code	Size (G) / Length (inch)	ø / Length (mm)	Units per box	Code no. (REF)
	**For Spinal Needles 26 G and 25 G**				
		20 x $1^{3}/_{8}$"	0.90 x 35	25	4505000

EPIDURAL NEEDLES

Perican® Tuohy	Colour code	Size (G) / Length (inch)	ø / Length (mm)	Units per box	Code no. (REF)
		18 x $3^{1}/_{4}$"	1.30 x 80	25	4512383N-01
		16 x $3^{1}/_{4}$"	1.70 x 80		4512782N-01
	Long Length				
		18 x $4^{3}/_{4}$"	1.30 x 120	25	4512453N-01
		18 x 6"	1.30 x 150		4512200N-01
		16 x $4^{3}/_{4}$"	1.70 x 120		4512785N-01
		16 x 6"	1.70 x 150		4512784N-01

Perican® Paed Tuohy	Colour code	Size (G) / Length (inch)	ø / Length (mm)	Units per box	Code no. (REF)
		22 x 2"	0.73 x 50	25	4502078N-01
		20 x 2"	0.9 x 50		4502094N-01

Regional Anaesthesia Products with NRFit®

Product specifications

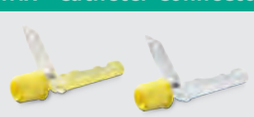
EPIDURAL CATHETERS

Perifix® catheter	Catheter ø outer/inner/ Length (mm) (G)	Suitable for Perican® Size (G)	Units per box	Code no. (REF)
	Perifix® Soft Tip catheter (with 3 lateral eyes)			
	0.85/0.45/1000 (20)	18	25	4515048N-01
	Perifix® ONE catheter (with 6 lateral eyes)			
	1.05/0.60/1000 (19)	16	25	45132581N-01
	0.85/0.45/1000 (20)	18		45131501N-01

ACCESSORIES & COMPLEMENTARY PORTFOLIO

Sterifix® filter straws	Particle filter (µm)	Length (cm)	Units per box	Code no. (REF)
	5	4.50	50	4550250N
	5	10		4550200N

Sterifix® filter needle	Size (G)	Particle filter (µm)	Length (cm)	Units per box	Code no. (REF)
	19	5	3.80	50	4550404N

Perifix® catheter connector	Size (G)	Units per box	Code no. (REF)
	19	50	4513801N-01
	20/24		4513800N-01

Perifix® filter	Particle filter (µm)	Units per box	Code no. (REF)
	0.20	25	4515501N-01

Perifix® Catheter Fixation	Description	Units per box	Code no. (REF)
	Perifix® PinPad Filter Fixation	25	4515510

Perifix® Catheter Fixation	Description	Units per box	Code no. (REF)
	Perifix® catheter fixation, consisting of a fixation ring and a non-woven cover foil	25	4511200
	Perifix® non-woven replacement cover foil		4511201

ACCESSORIES & COMPLEMENTARY PORTFOLIO

Infusomat® Space Line	Length (cm)	Units per box	Code no. (REF)
	300	100	8700132SP

Original Perfusor® Line	Length (cm)	Units per box	Code no. (REF)
	200	25	8722865

Omnifix®	Description	Filling volume (ml)	Units per box	Code no. (REF)
	Slip NRFit®	1	100	9164001
		3		4616003
		5		4616005
		10		4616014
		20		4616021
	Lock NRFit®	3	100	4617003
		5		4617006
		10		4617014
		20		4617021
		50		4617508F-01

Perifix® Loss-of-Resistance (LOR) Syringe NRFit®	Description	Units per box	Code no. (REF) NRFit®
	Perifix® LOR Syringe, Slip NRFit®	25	4637110
	Perifix® LOR Syringe, Lock NRFit®		4638110

NRFit® syringe caps NRFit® stoppers	Description	Units per box	Code no. (REF)
	Syringe cap with NRFit® connector	25	4517501N
	Stopper with NRFit® connector	25	4517502N

Regional Anaesthesia Products with NRFit®

Product specifications

EPIDURAL ANAESTHESIA SETS

Legend

- 20 G x 2", ø 0.9 x 50 mm
- 18 G x 3 ¼", ø 1.3 x 80 mm,
- 18 G x 2", ø 1.3 x 50 mm (Paed Set)
- 16 G x 3¼ ", ø 1.7 x 80 mm

Perican® Tuohy needle

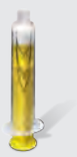
50 mm | 80 mm

Perifix® ONE epidural catheter, 6 lateral eyes

24 G | 20G

Perifix® Soft Tip epidural catheter, 3 lateral eyes

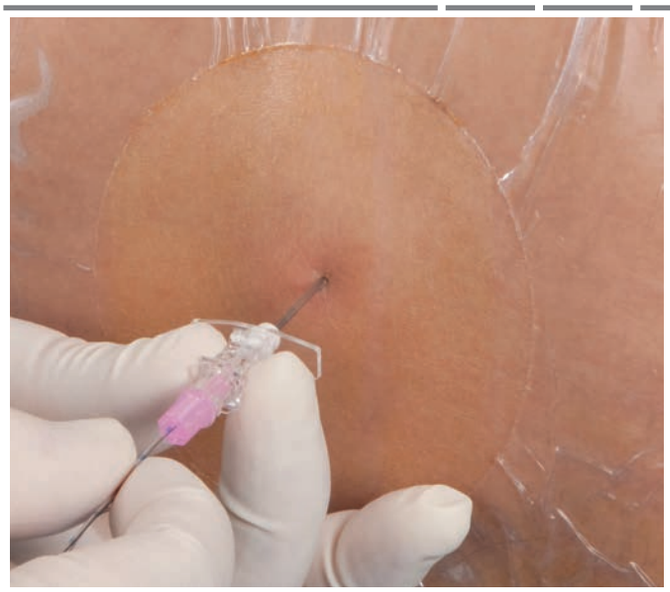
20 G | 19G



Perifix® Loss of Resistance syringe

Omnifix® three part syringe, 20 ml, Lock, Sterifix® filter needle

Set versions	Perican® with NRFit®		Perifix® ONE with NRFit®		Perifix® Soft Tip with NRFit®		Perifix® LOR with NRFit®	Omnifix® and Sterifix® with NRFit®
Complete Sets								
Perifix® Soft Tip 901		■			■		■	■
Perifix® ONE 421		■		■			■	■
Filter Sets								
Perifix® 402 Filter Set 16G NRFit		■				■	■	
Paediatric Sets								
Perifix® ONE Paed 18	■			■			■	
Perifix® ONE Paed 20	■		■				■	



					*** Sterican® needles** 25 G, 16 mm, ø 0.5 mm 21 G, 40 mm, ø 0.8 mm 18 G, 40 mm, ø 1.2 mm **Caution: Hypodermic needles (for skin infiltration) stay Luer**	
Omnifix® three part syringe, 3 ml, Lock, Sterifix® filter needle	Perifix® Filter 0.2 µm, pressure resistant up to 7 bar	Perifix® catheter connector 19 G or 20 / 24 G	Perifix® PinPad filter fixation	Omnifix® three part syringe, 3ml, Luer Lock, 3 Luer hypodermic needles*		

Omnifix® and Sterifix® with NRFit®	Perifix® Filter with NRFit®	Perifix® catheter connector with NRFit®	Perifix® PinPad	Omnifix® and hypodermic needles with Luer	Units per box	Code no. (REF) NRFit®
	■	■	■	■	10	4510305N-01
	■	■	■	■		45142111N-01
	■	■			10	4514025N-01
■	■	■	■		10	45120061N-01
■	■	■	■			45120141N-01

Adapting to the unique anatomical challenges of each patient, it is important to use the appropriate needle and accessories.

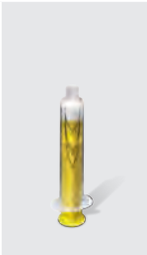
B. Braun focuses on

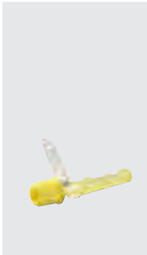
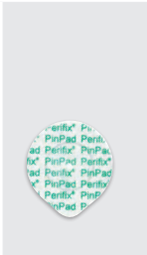
QUALITY & PRACTICALITY

Regional Anaesthesia Products with NRFit®

Product specifications

SETS FOR COMBINED SPINAL AND EPIDURAL ANAESTHESIA (NRFit®)



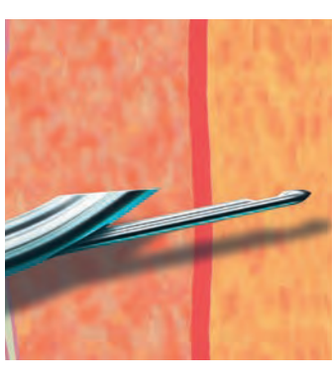
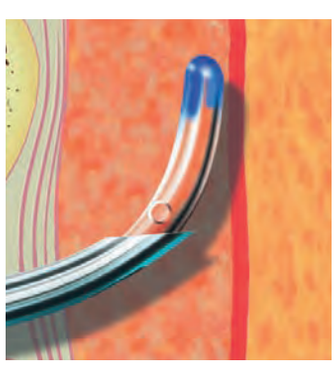



Set versions	Perican® epidural cannula ø 1.3 mm, 18 G x 90 mm with NRFit	Perifix® Soft-Tip catheter 3 lateral eyes, with NRFit	Perifix® LOR syringe with NRFit	Perifix® flat filter 0.2 µm with NRFit	Perifix® catheter connector with NRFit	Perifix® PinPad	Units per box	Code Number
Espocan® with Docking Station & Pencan 27G x 141mm NRFit	▪	▪	▪	▪	▪	▪	10	4556763N-01

Combined Spinal-Epidural Anaesthesia (CSE):

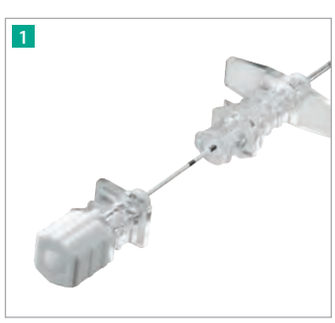
THE BENEFITS

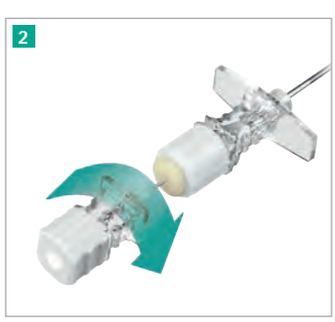
of Spinal and Epidural Anaesthesia in the Espocan® Sets

Special Pencan Tuohy Epidural needle with additional back eye in the Tuohy curve plus a Pencan Spinal needle with sleeve to centre the needle inside the epidural Tuohy needle.

- Tip of the spinal needle exits straight through the back eye of the Tuohy needle
- Docking system to hold the spinal needle in place
- Sleeved spinal needle for smooth exit through the back eye





1 Markings on the Spinal Needle

The markings on the spinal needle show, when the tip leaves the back-eye.

2 USER BENEFITS

- The docking system allows rotation of the spinal needle even in the fixed position. Avoids the difficult and uncomfortable finger grip to steady fix the spinal needle in position
- The docking system ensures fixation of the spinal needle inside the tuohy needle after successful dura puncture and injection of the local anaesthetic

Notes

Regional Anaesthesia Products with NRFit®

Product specifications

SINGLE-SHOT BLOCK NEEDLES

Ultraplex® 360	Size (G) / Length (inch)	ø / Length (mm)	Bevel (°)	Units per box	Code no. (REF)
	22 x 1 3/8"	0.70 x 35	30	25	4892603NR-01
	22 x 2"	0.70 x 50			4892605NR-01
	22 x 3 1/8"	0.70 x 80			4892608NR-01
	20 x 4"	0.90 x 100			4892610NR-01
	20 x 6"	0.90 x 150			4892615NR-01

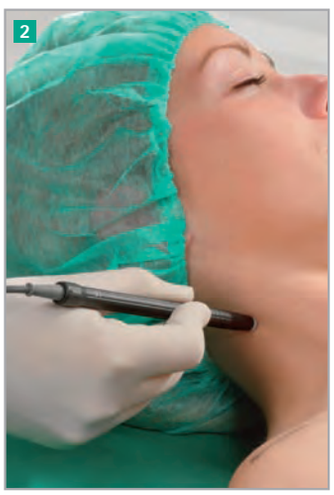
Stimuplex® Ultra 360®	Size (G) / Length (inch)	ø / Length (mm)	Bevel (°)	Units per box	Code no. (REF)
	22 x 1 3/8"	0.70 x 35	30	25	4892503NR-01
	22 x 2"	0.70 x 50			4892505NR-01
	22 x 3 1/8"	0.70 x 80			4892508NR-01
	20 x 4"	0.90 x 100			4892510NR-01
	20 x 6"	0.90 x 150			4892515NR-01

ACCESSORIES (COMPATIBLE WITH BOTH LUER AND NRFit®)

Nerve Stimulation	Description	Units per box	Code no. (REF)
	Stimuplex® HNS 12 Nerve Stimulator for Stimuplex®, Ultraplex® and Contiplex® needles	1	4892098

Nerve Stimulator Accessories and Spare Parts	Units per box	Code no. (REF)
Battery cover for Stimuplex® HNS 12	1	4892094
Carrying Case for Stimuplex® HNS 12		4892095
Test resistor for Stimuplex® HNS 12		4892096
Knob for special handling		4892283
Stimuplex® Pen for cutaneous nerve mapping		4892099
Electrode Cable for Stimuplex® HNS 11/12		4892070

1 Stimuplex® HNS 12 with SENSe



2 Stimuplex® Pen for cutaneous nerve mapping

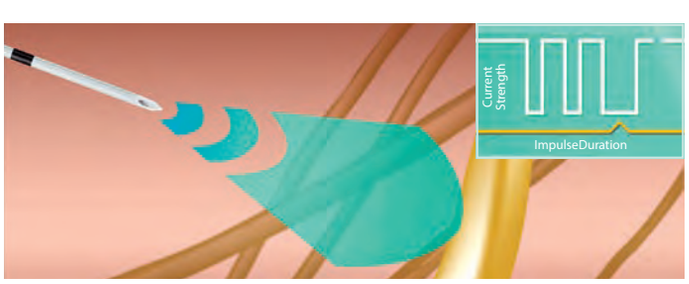
B. Braun Nerve Stimulator – Stimuplex® HNS 12 with SENSe

What is SENSe?

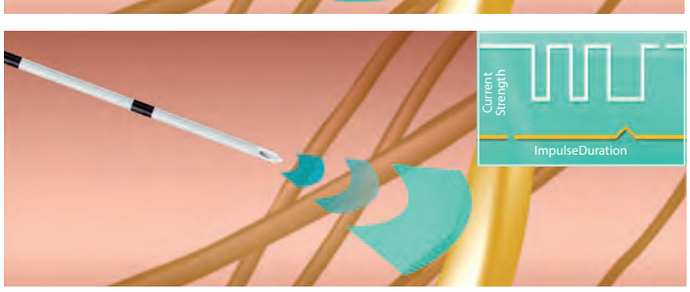
In practice, marginal needle movements often lead to losing the muscle twitch. The SENSe technology (Sequential Electrical Nerve Stimulation) is a sequence of two fixed impulse durations of 0.1 ms along with a third longer impulse duration.[8] Most traditional nerve stimulators emit two very short pulses every second. That's because short pulses improve accuracy or specificity when closer to the nerve. The downside is that sensitivity, or the availability to elicit visual feedback at a distance from the nerve, is lost. SENSe technology increases both sensitivity and specificity by adding a third, longer pulse. This results in eliciting a motor response even when the needle is far from or not aimed directly at the nerve and requires less adjustment to the amperage control while retaining visual feedback.

USER BENEFITS

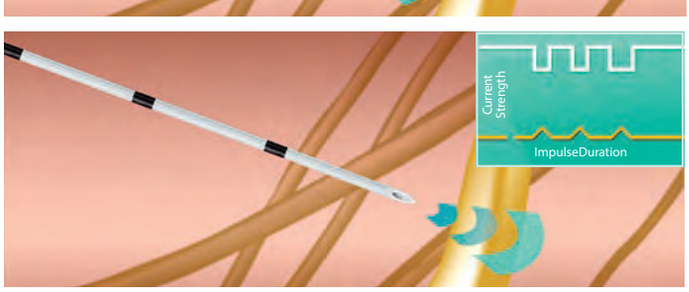
- Stimulation with SENSe-technology designed for more efficient nerve stimulation[8]
- Menus designed for easy control of sound and other settings
- Acoustic signals inform the user of any relevant deviations



As the needle is advanced, SENSe generates two short and one long pulse. From the alternating sequence of three impulses, the third longer impulse stimulates the nerve already at a distance. One muscle twitch is visible and indicates that the needle is directed to the nerve.



The stimulation needle is further advanced towards the nerve while SENSe maintains the motor response. Current strength adjustments lead to definite reductions of the third impulse.



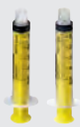
At the threshold level of approximately 0.5 mA three muscle twitches are visible as all three impulses stimulate the nerve.

Regional Anaesthesia Products with NRFit®

Product specifications

SETS FOR CONTINUOUS NERVE BLOCKS

Set Specifications	Contiplex® Needle			Cannula Bevel (*)		Tuohy Bevel	Contiplex® ONE Catheter Catheter over needle system (mm)	20 Ca
	Size (G)	Size Ø (mm)	Length (mm)	Contiplex® C	Contiplex® S Ultra 360	Contiplex® Tuohy Ultra 360	Contiplex® ONE Catheter (6 lateral openings, closed tip, open tip for Contiplex® C)	20G Cath eyes,
	Luer and NRFit®			Luer and NRFit®	Luer and NRFit®	Luer and NRFit®		
Contiplex® C Sets								
Contiplex® C	25	0.53	190	15			188	
Contiplex® C	25	0.53	190	30			188	
Contiplex® S Ultra 360® Sets								
Contiplex® S Ultra 360	18	1.3	50		20			
Contiplex® S Ultra 360	18	1.3	100		20			
Contiplex® S Ultra 360	18	1.3	150		20			
Contiplex® Tuohy Ultra 360® Sets								
Contiplex® Tuohy Ultra 360	18	1.3	40			■		
Contiplex® Tuohy Ultra 360	18	1.3	50			■		
Contiplex® Tuohy Ultra 360	18	1.3	100			■		
Contiplex® Tuohy Ultra 360	18	1.3	150			■		

						
20G Perifix® ONE Catheter (6 lateral eyes, closed tip)	Perifix® Catheter Connector 19G or 20/24G	Perifix® PinPad filter fixation	Perifix® Filter 0.2 µm, Pressure resistant up to 7 bar	Omnifix® syringe 5 ml **Caution: Hypodermic needles (for skin infiltration) stay Luer**		
20G Perifix® ONE Catheter Catheter through needle system (mm)	**Perifix® Catheter Connector**	**Perifix® PinPad**	**Perifix® Filter**	**Omnifix®**	**Units per box**	**Code no. (REF) NRFit®**
	■	■	■	-	5	4898115NR
	■	■	■	-		4898130NR
400	■	■	■	■	10	4898650NR-27
1000	■	■	■	■		4898610NR-27
1000	■	■	■	■		4898615NR-27
400	■	■	■	■	10	4898704NR-01
400	■	■	■	■		4898705NR-01
1000	■	■	■	■		4898710NR-01
1000	■	■	■	■		4898715NR-01

Xperius® Ultrasound System

Responsive | Advanced | Simple

Xperius® is an Ultrasound system jointly developed by B. Braun and Philips which has been specifically designed to support the current and future needs in regional anaesthesia and vascular access at the point of care.

RESPONSIVE

The system offers a high degree of mobility and flexibility combined with an ergonomic design to improve daily practice. A fully articulating arm allows easy adjustments of the Ultrasound monitor position and the angle of the screen for ergonomic use and better line of sight. Besides the cart based system, a dedicated ultra portable tablet device allows quick bedside scanning or interventions in your facility, on-the-go and at satellite locations.

Designed to fit seamlessly at the anaesthetist's point of care

- Ergonomic design
- Convenient accessory bins
- High mobility & portability
- Designed by Philips & B. Braun

ADVANCED

Xperius® provides high quality imaging of nerves and tissue structures for confident diagnoses and precise needle guidance. The predetermined settings (presets) are designed so you can spend less time adjusting controls and more time focusing on your patients.

High performance technology delivers exceptional image quality

- High definition imaging
- Enhanced needle visualisation
- New generation of probes

SIMPLE

Xperius® comes with intuitive touch and gesture controls that you already know from your smart devices – to keep your focus on your work and not on the controls. Its simple interface supports daily routines and provides specific presets for procedures in regional anaesthesia and vascular access.

Easy to use touchscreen interface

- Mobile ultrasound solution helps the user align the needle with the probe in a user-friendly interface that can lead to reduction in procedural time.[9]
- Intuitive user experience
- Touch screen & gesture control
- Dedicated regional anaesthesia & vascular access presets

Note: This product may not be available in your region.
Please contact your local B. Braun representative for more information.

Touch Screen Interface & Advanced Technology

Multiple presets - 4 specific ones for regional anaesthesia / vascular access

Touch Screen Interface

Start scanning in a few seconds

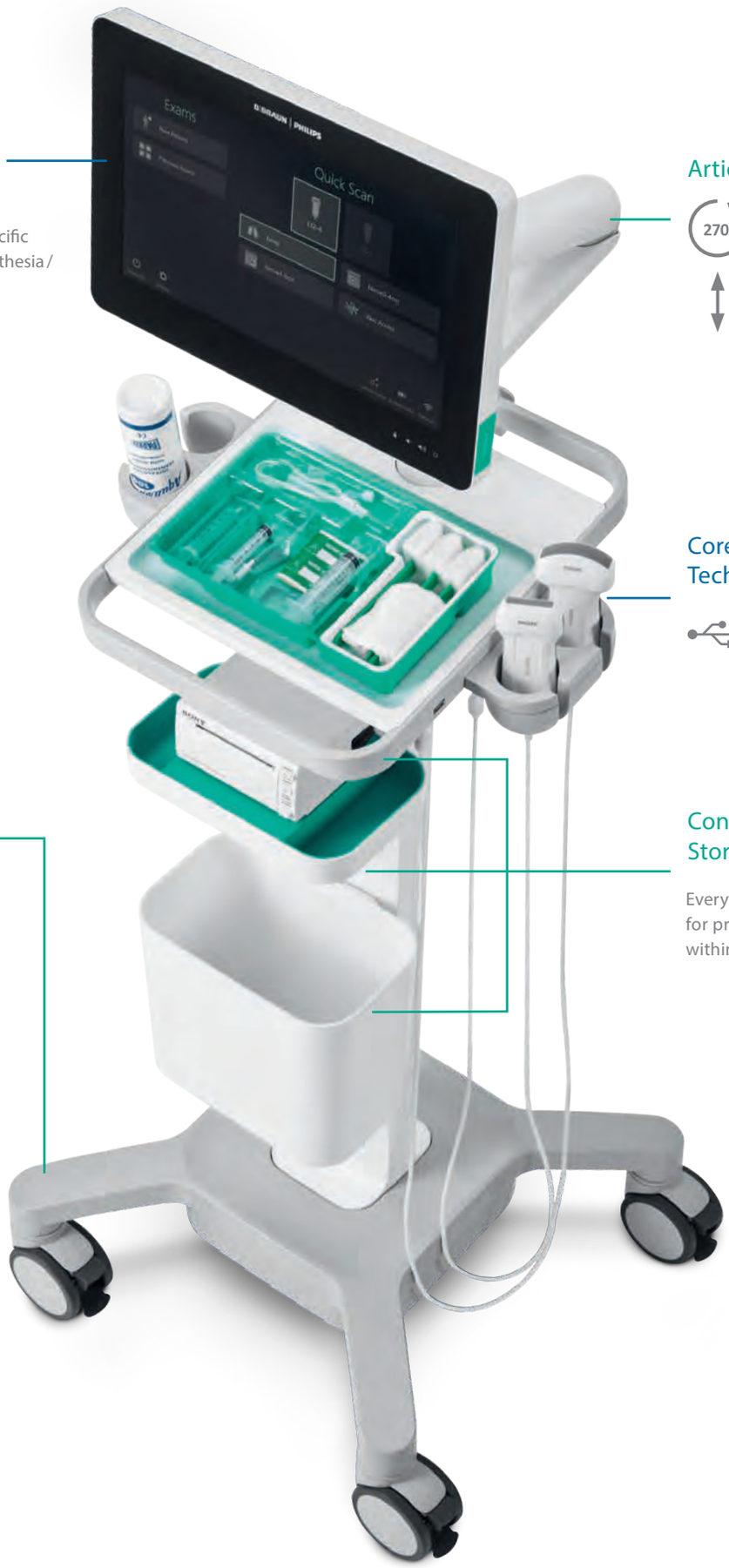
Built-in Wi-Fi for DICOM data transfer

Needle Vis Technology

Ready-to-go for Bedside Scanning

Long lasting battery up to 3 h of scanning

Lightweight and easy to handle



Articulating Arm

270°

Flexible rotation in every direction

Height-adjustable

Core Ultrasound Technology

Transducer with USB connector

Convenient Storage

Everything needed for procedures is within reach

Onvision® Needle Tip Tracking

Precise | Predictable | Empowering

Onvision® is an Ultrasound based Needle-Tip tracking technology for peripheral nerve blocks which works exclusively with the Xperius® Ultrasound system and the dedicated Stimuplex® Onvision® needle. In real-time, Onvision® better indicates where the needle tip is inside the body, both in and out of plane. It helps users align the needle with the probe in an easy to use manner – to improve pain relief and minimise risk of unintended nerve puncture or collateral damage to surrounding tissue or vessel.[9,10,11]

Onvision® is an Ultrasound based Technology for reliable Needle Guidance

The dedicated Stimuplex® Onvision® needle is embedded with a tip sensor, which allows better detection of the tip location and displays this information in real time on the live Ultrasound image.[11] Needle-Tip tracking can be used in 2D Mode with the nerve 0-4 cm and the nerve 4-6 cm preset on the L12-4 transducer and nerve 6+ cm presets on the C5-2 transducer depending on the anatomical depth of the nerve.

ACCURATE

Know where you are in real-time [9,10]

- Tip visualisation in both superficial and deeper blocks
- Ultrasound based detection and accuracy
- Can reduce complications during PNB placement
- Designed to prevent unintended overshooting

PREDICTABLE

Helping make first-time-right the new standard [9,10]

- Confidently perform local anaesthetics injection
- Reduction in overall procedure time
- Fits in to current workflow (no workflow disruption)

EMPOWERING

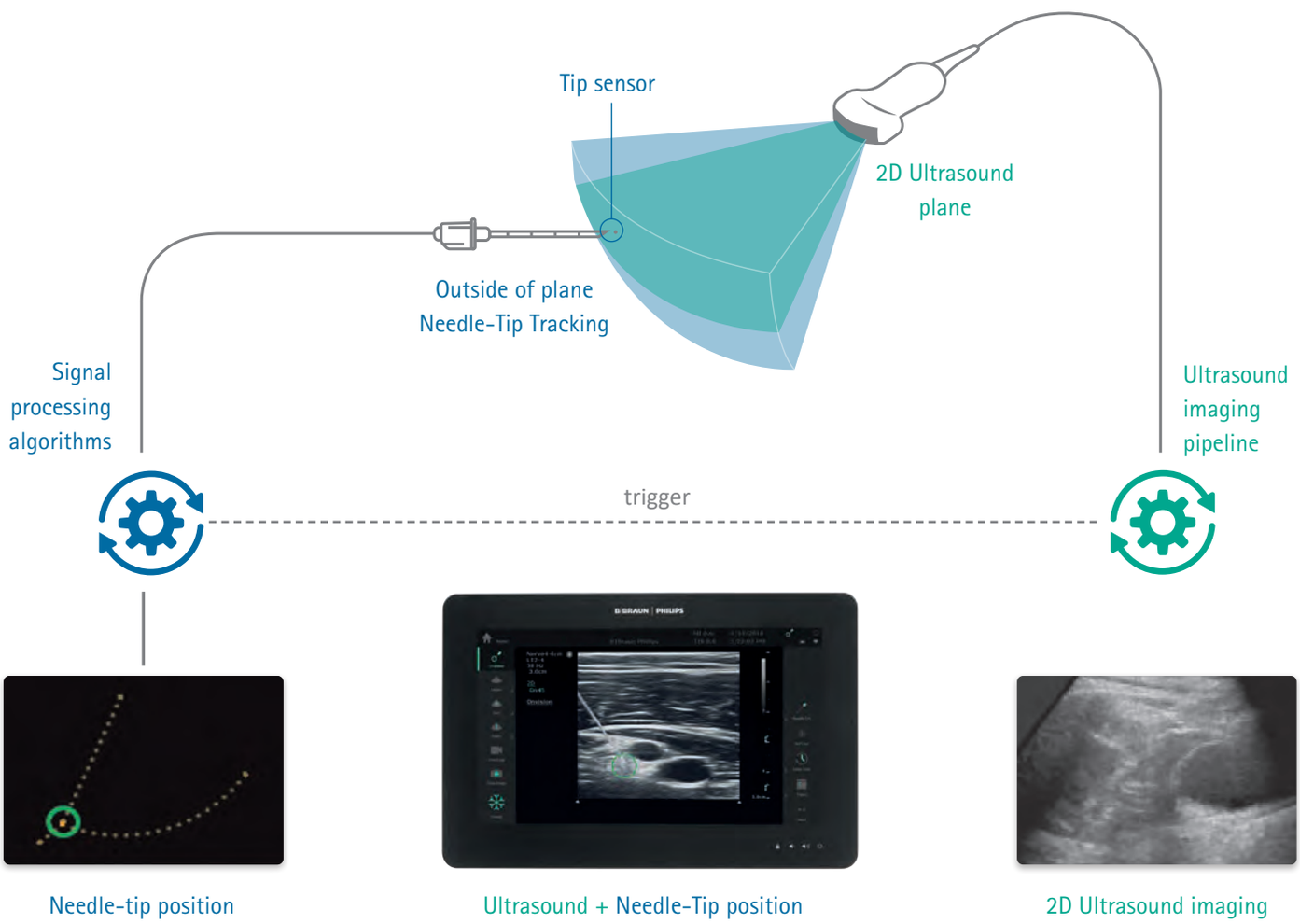
More anaesthetists can carry out regional anaesthesia [11]

- Better user experience
- Easy to adopt
- Can increase proficiency level

Note: This product may not be available in your region.
Please contact your local B. Braun representative for more information.

Needle Tip Navigation to the Point

With Onvision®, users experience a real time guidance which empowers them to quickly adopt and integrate PNB into their daily practice. Onvision® enables more physicians to be proficient in performing PNBs.[12]



Ultrasound based Technology to improve Accuracy[12]

- Onvision® works up to 12 cm
- Onvision® is shielded against electromagnetic interferences (EMI)
- Onvision® remains stable even when the needle bends

Portfolio Overview

ULTRASOUND SYSTEM AND ONVISION® TECHNOLOGY

Xperius®	Description	Units per box	Code no. (REF)
Xperius® Cart System with 1 transducer L12-4 and Onvision® Needle Tip Tracking Technology			
with Onvision®	▪ Type of unit: Compact Cart based Point of Care Ultrasound System with Linear L12-4 and Onvision® Technology ▪ Dimensions: 132.5 cm x 56.0 cm x 66 cm (H/W/D) ▪ Weight: 36.0 kg ▪ Display: 39.6 cm (15.6 in) flat-panel touch-screen ▪ Imaging mode keys: 2D, Colour Doppler, Colour Power Angio (CPA), M-Mode	1	NUSM621
Xperius® Cart System with 1 transducer L12-4			
	▪ Type of unit: Compact Cart based Point of Care Ultrasound System with fully articulating arm and Linear L12-4 ▪ Dimensions: 132.5 cm x 56.0 cm x 66 cm (H/W/D) ▪ Weight: 34.0 kg ▪ Display: 39.6 cm (15.6 in) flat-panel touch-screen ▪ Imaging mode keys: 2D, Colour Doppler, Colour Power Angio (CPA), M-Mode	1	NUSM623
Xperius® Stand-alone Tablet with 1 transducer L12-4			
	▪ Type of units: Point of Care Tablet Ultrasound System with Kickstand and Linear 12-4 ▪ Dimensions: 28 cm x 42 cm x 5 cm (H/W/D) ▪ Weight: 3.6 kg	1	NUSM626
Peripherals			
	Printer Sony UP-D711MD ▪ High-quality digital graphic printer ▪ Easy to connect within dedicated Xperius® printer slot ▪ Dimensions: 7 cm × 14 cm × 12.5 cm (H/W/D) ▪ Weight: 1 kg ▪ Monochrome, black/white, A7 paper size	1	NUSM620

Note: This product may not be available in your region.
Please contact your local B. Braun representative for more information.

COMPLEMENTARY PRODUCTS

Xperius® Upgrade Items	Description	Units per box	Code no. (REF)
Single Transducer Linear			
	L12-4 broadband linear array transducer ▪ 12 to 4 MHz extended operating frequency range ▪ Aperture size: 34 mm ▪ High resolution imaging for shallow applications ▪ Center line marker ▪ USB transducer with replaceable cable	1	FUS5716
Single Transducer Curved			
	C5-2 broadband curved array transducer ▪ 5 to 2 MHz extended operating frequency range ▪ 50 mm radius of curvature ▪ High resolution imaging for deeper applications ▪ Center line marker ▪ USB transducer with replaceable cable	1	FUS5712

ONVISION® SINGLE SHOT BLOCK NEEDLES

Stimuplex® Onvision®	Needle ø (G) and Length (inch)	Needle ø and Length (mm)	Units per box	Code no. (REF) NRFit®
NRFit® Version				
	Insulated Needles with 30° Bevel			
	22 G x 2"	0.70 x 50 mm		4892705NR-01
	22 G x 3 1/8"	0.70 x 80 mm		4892708NR-01
	20 G x 4"	0.90 x 100 mm	10	4892710NR-01
	20 G x 4 3/4"	0.90 x 120 mm		4892712NR-01
	20 G x 6"	0.90 x 150 mm		4892715NR-01

Notes

Notes

REFERENCES

1. Institute for Safe Medication Practices (ISMP), "NRFit: A global "fit" for neuraxial medication safety", 16 July 2020, https://www.ismp.org/resources/nrfit-global-fit-neuraxial-medication-safety
2. Kress R. Townley, Jason Lane, Robyn Packer, and Rajnish K. Gupta. Unintentional Infusion of Phenylephrine into the Epidural Space. A&A Case Rep. 2016 Mar 1; 6(5):124-6.
3. https://www.iso.org/standard/50734.html (2017-05-23).
4. Vallejo MC, Mandell GL, Sabo DP, Ramanathan S. Postdural puncture headache: a randomized comparison of five spinal needles in obstetric patients. Anesth Analg. 2000 Oct; 91(4):916-20.
5. Read, M.R. (2013). Equipment for Loco-Regional Anaesthesia and Analgesia. In Small Animal Regional Anaesthesia and Analgesia (eds L. Campoy and M.R. Read). https://doi.org/10.1002/9781118783382.ch5
6. Bruenke J, Riemann T, Kessler P, et al. Reg Anesth Pain Med Epub ahead of print: [accessed June 13, 2021]. doi:10.1136/rapm-2021-102517
7. B. Braun Internal testing: ETRs JMLY-8ADPR2, NPAK9VRK2K
8. Urmey WF, Grossi P. Use of sequential electrical nerve stimuli (SENS) for location of the sciatic nerve and lumbar plexus. Reg Anesth Pain Med. 2006;31(5):463-9.
9. Kåsine T et al. Needle tip tracking for ultrasound-guided peripheral nerve block procedures – An observer blinded, randomised, controlled, crossover study on a phantom model. Acta Anaesthesiol Scand. 2019; 63(8): 1055–62. doi: 10.1111/aas.13379.
10. Kåsine T et al. The effect of needle tip tracking on procedural time of ultrasound-guided lumbar plexus block: a randomised controlled trial. Anaesthesia 2019. 75(1): 72-79. doi: 10.1111/anae.14846.
11. McLeod GA et al. An initial evaluation of the effect of a novel regional block needle with tip-tracking technology on the novice performance of cadaveric ultrasound-guided sciatic nerve block. Anaesthesia 2020;75(1):80-88. doi: 10.1111/anae.14851
12. 2019-04-06_Customer feedback_Onvision performance questionnaire_D000228286 CER

B. Braun Australia Pty Ltd | Level 5, 7-9 Irvine Place, Bella Vista NSW 2153, Australia | Tel: 1800 251 705 | info.au@bbraun.com | www.bbraun.com.au

B. Braun New Zealand | PO Box 37353 Parnell, Auckland 1052, New Zealand | Customer Care 0800 227 286 | Fax (09) 373 5601 | www.bbraun.co.nz

BAUS HC E0728 02/22 |

© 2022 B. Braun Australia Pty Ltd

NRFit® is a federally registered trademark of GEDSA in multiple jurisdictions throughout the world. Used with permission.
ENFit® is a trademark of GEDSA. Used with permission.