

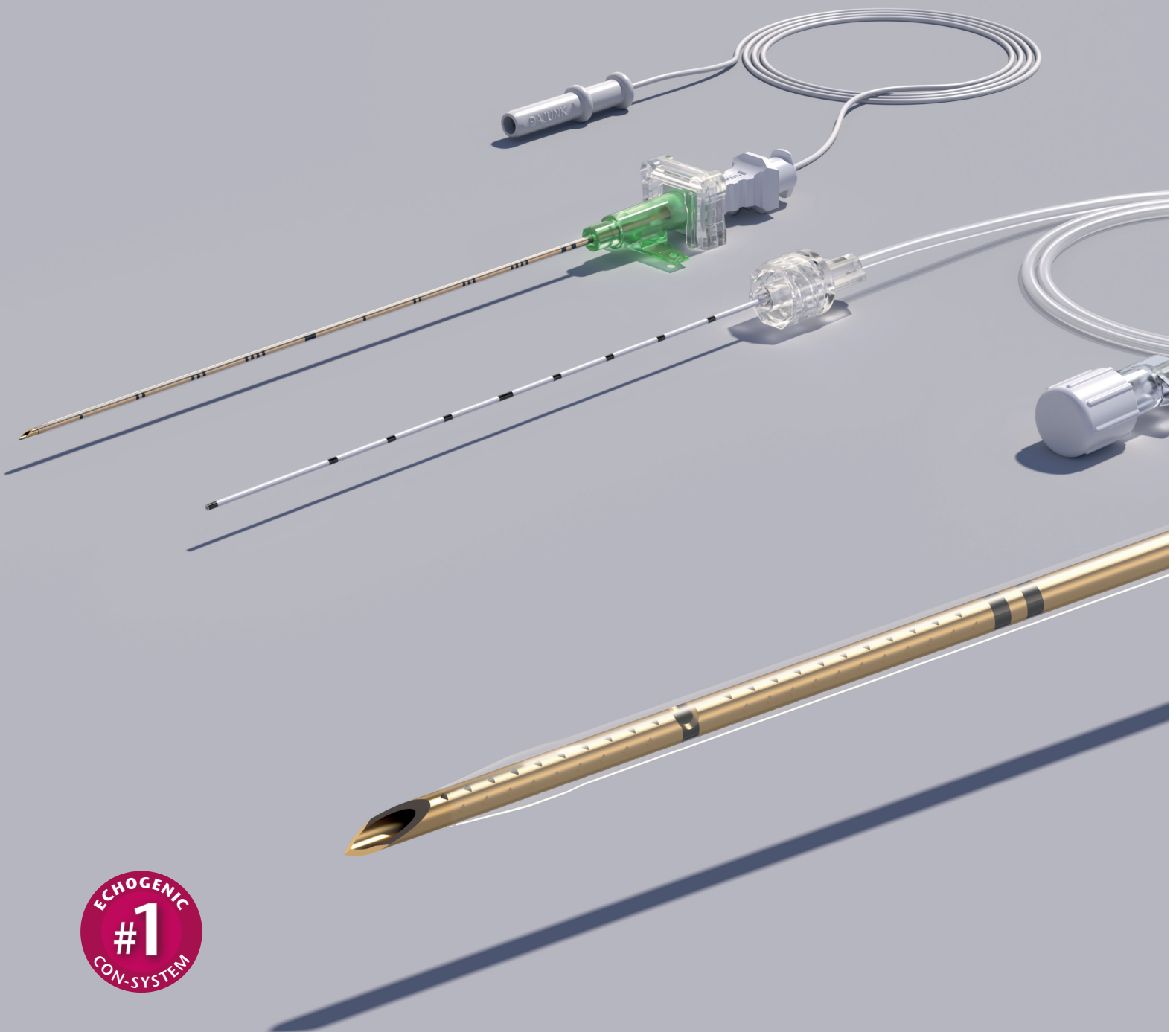
# PAJUNK®



REGIONAL ANAESTHESIA  
& PAIN MANAGEMENT

## E-Cath® & E-Cath® Plus

Echogenic Catheter-Over-Needle  
CNB-System



MADE IN GERMANY 

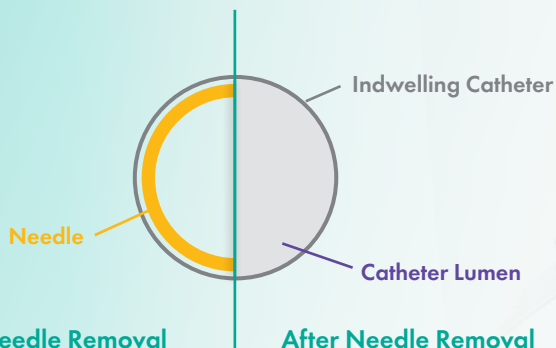
# Catheter-Over-Needle (CON) Echogenic CNB-System

Making catheter placement as easy as a single shot.



## CATHETER-OVER-NEEDLE (CON) TECHNIQUE

- ▶ Significantly reduces the chance of anaesthetic leakage and catheter dislocation or migration<sup>4</sup>

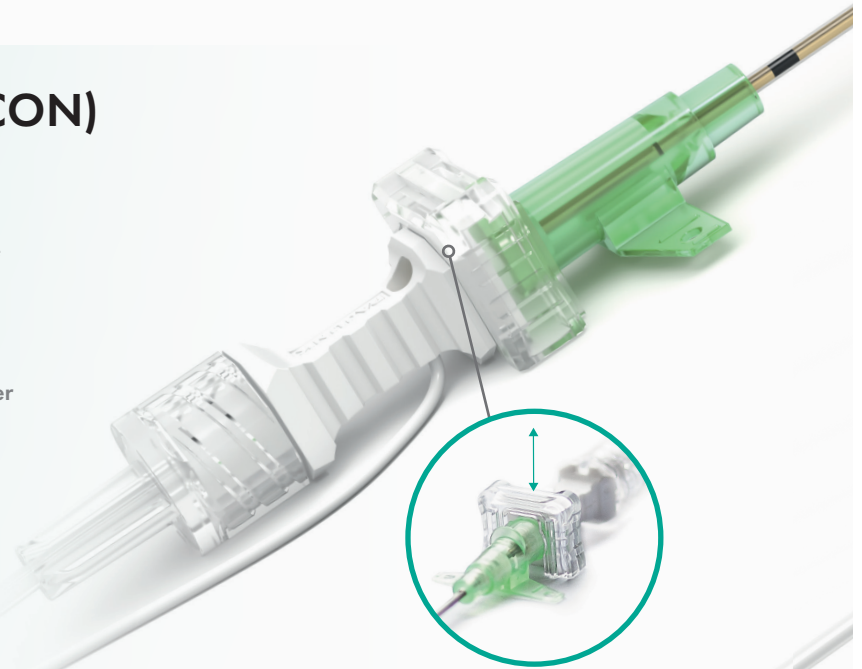


### Before Needle Removal

Outer diameter of needle is **smaller** than the outer diameter of the indwelling catheter.

### After Needle Removal

The puncture hole is **automatically sealed** reducing chance for leakage and dislocation.



### FixClip

- Ensures a fixed connection between the needle and the indwelling catheter

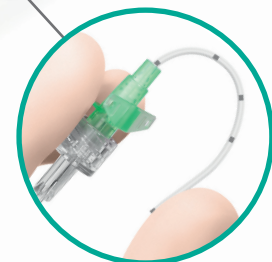
### Integrated Injection Tube

- Reduction of procedural steps
- Catheter adapter is pre-assembled to the catheter system



### Double Layer Catheter Technology

- Significantly reduces the chance of kinking
- Allows for consistent anaesthetic flow





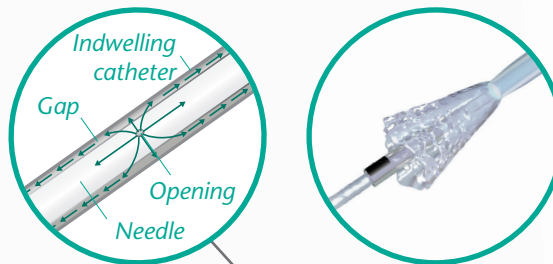
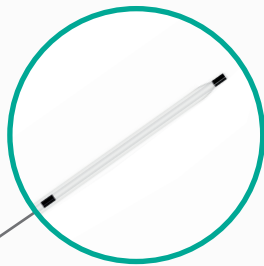
### Self Priming System

E-Catheter comes with a proximal opening which allows the anaesthetic to flow, besides the open tip, also between the outer wall and the indwelling catheter

- Creates 360 degree flow
- Improves the U/S-visibility

### Soft Tip

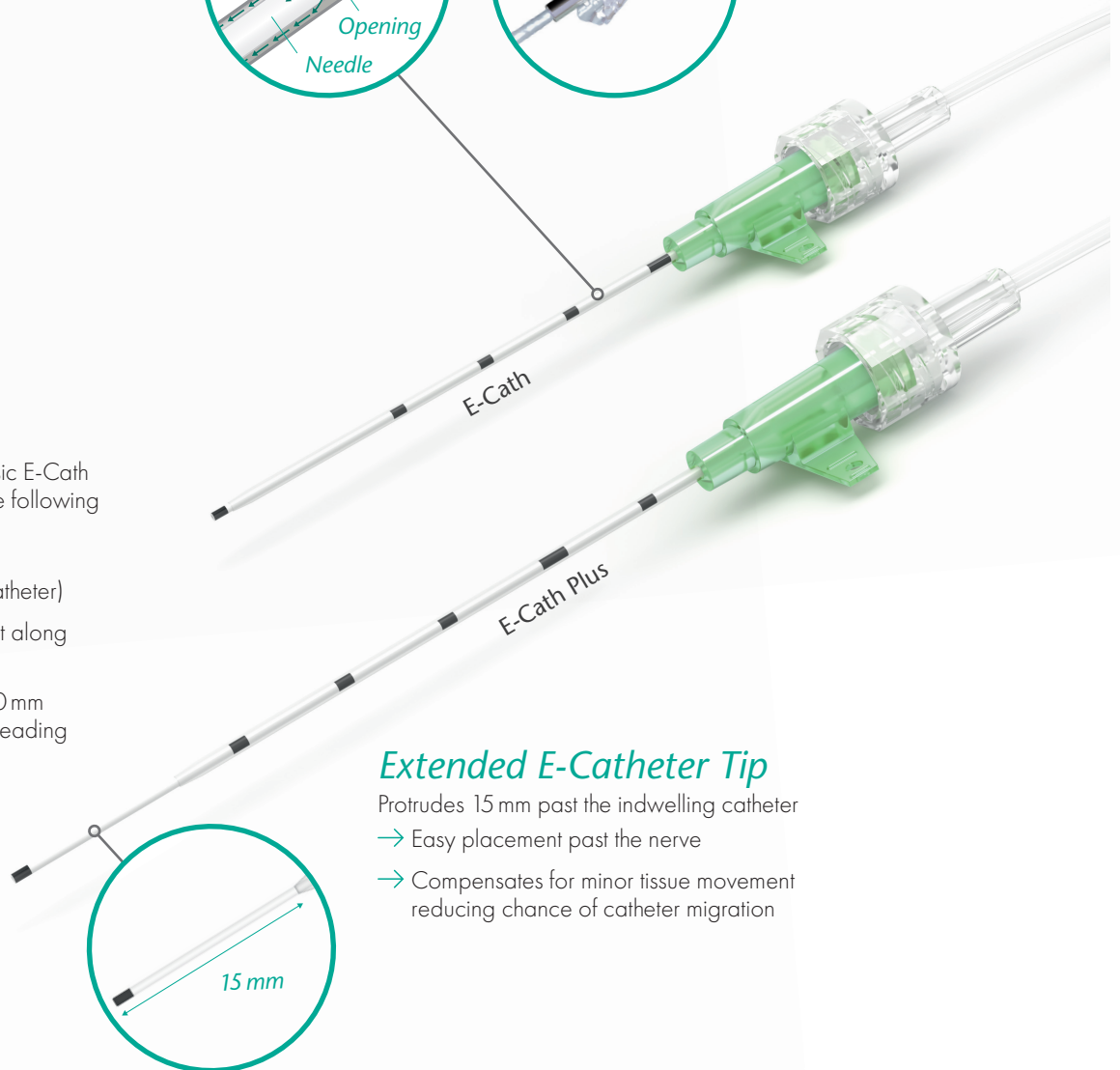
- Reduced chance of nerve damage



### E-Cath Plus

Brings all the benefits of the classic E-Cath system and offers additionally the following features:

- Longer inner catheter tip (15 mm past the indwelling catheter)
- Unique 360 degree side port along the 3 lateral openings
- Integrated stylet beginning 70 mm from tip for easier catheter threading



### Extended E-Catheter Tip

Protrudes 15 mm past the indwelling catheter

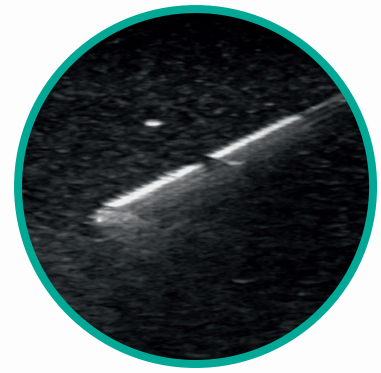
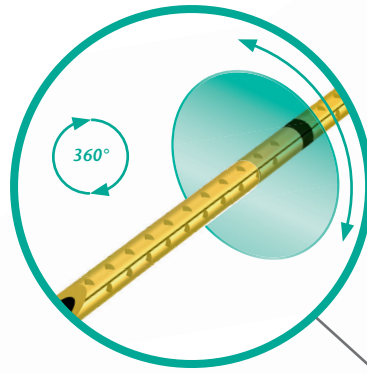
- Easy placement past the nerve
- Compensates for minor tissue movement reducing chance of catheter migration

1. Ip V. H. Y. et al. The catheter-over-needle assembly offers greater stability and less leakage compared to the traditional counterpart in continuous interscalene nerve blocks: a randomized, patient-blinded study. *Can. J. Anesth.* 2013; 60: 1272–1273  
 2. Ip V. H. Y. et al. The safety of an interscalene catheter-over-needle technique. *Anesth.* 2013; 68: 774–775  
 3. Herring A. A. et al. Emergency department placement of perineural catheters for femoral fracture pain management. *Am. J. Emerg. Med.* 2014; 32(3): 287, 1–3  
 4. Tsui B. C. H. et al. Less leakage and dislodgement with a catheter-over-needle versus a catheter-through-needle approach for peripheral nerve block: an ex vivo study. *Can. J. Anesth.* 2012; 59: 655–661 (E-Cath is called Multi-Set in this study)

### Cornerstone Reflectors

360 degree graduations on the first 20 mm of the needle

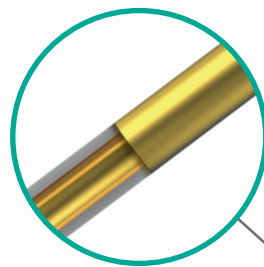
- Optimised ultrasound visibility of needle shaft<sup>5</sup>
- Reliable and optimised needle visualisation at any angle<sup>6,7</sup>



### NanoLine® Coating

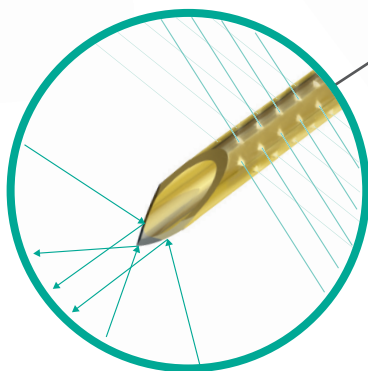
Very thin polymer film, smooth surface, accurate inner and outer diameter

- Excellent puncture and gliding properties through smooth surface
- Improves visibility under ultrasound<sup>7</sup>
- Precise stimulation through the non-insulated needle tip



### Depth Markings

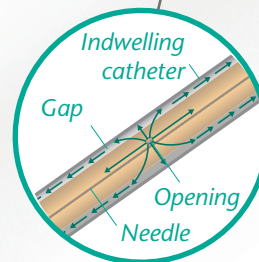
- Easy to read and identify



### Echogenic Needle Tip

Facet tip with two inclination angles

- Improves needle tip visibility under ultrasound



### Self Priming System

Needle comes with a distal opening which allows the anaesthetic to flow, besides the needle tip, also between the outer needle wall and the indwelling catheter

- Improves ultrasound visibility



Also available in NRFit®

5. Fuzier R, et al. The echogenicity of nerve blockade needles. *Anesth.* 2015; 70: 462-466

6. Uppal V, et al. Effect of beam steering on the visibility of echogenic and non-echogenic needles: a laboratory study. *Can. J. Anesth.* 2014 Oct; 61(10): 909-915

7. Hebard S, Hocking G. Echogenic technology can improve needle visibility during ultrasound-guided regional anesthesia. *Reg. Anesth. Pain Med.* 2011 March-April; 36(2): 185-189



# The Clear Choice in Continuous Nerve Blocks (CNB)

Developed together with Dr. Ban Tsui, the E-Cath / E-Cath Plus combines the best from clinical experience and engineering expertise, resulting in a system that addresses the biggest catheter problems in CNBs: complexity, catheter kinking, anaesthetic leakage and catheter dislocation and migration.<sup>1,2,3,4</sup>

→ The results are easier, faster, safer and more reliable continuous nerve blocks and the reduction of workload during postoperative pain management.

*Is your traditional catheter system giving you headaches?*

**LEAKAGE**

**MISSING 3RD HAND**

**DIFFICULT TO PLACE**

**DISLOCATION**

**TOO MANY STEPS**

**MIGRATION**

**KINKING**



## E-CATH / E-CATH PLUS ADVANTAGES

- ▶ Making catheter placement as easy as a single shot
- ▶ Reducing the chance of leakage
- ▶ Reducing the chance of dislocation and catheter migration<sup>1</sup>
- ▶ Reducing the chance of catheter kinking
- ▶ Offering an optimised local anaesthetic spread
- ▶ Providing optimised ultrasound visibility of needle tip, needle shaft, and catheter



## E-Cath® & E-Cath® Plus

### E-Cath

SonoPlex needle with facet tip, indwelling catheter and E-Catheter

Indwelling catheter working length	SonoPlex® needle	E-Catheter	Item no.	NRFit® Item no.	PU	FixoLong	Filter 0.2 µm
18G x 51 mm (2")	21G x 68 mm (2 2/3")	20G	201185-40E	201165-40E	10	•	•
18G x 75 mm (3")	21G x 94 mm (3 2/3")	20G	211185-40E	211165-40E	10	•	•
18G x 83 mm (3 1/4")	21G x 101 mm (4")	20G	241185-40E	241165-40E	10	•	•
18G x 100 mm (4")	21G x 118 mm (4 3/4")	20G	261185-40E		10	•	•
18G x 130 mm (5 2/5")	21G x 150 mm (6")	20G	251185-40E	251165-40E	10	•	•
18G x 150 mm (6")	21G x 168 mm (6 3/5")	20G	271185-40E		10	•	•

### E-Cath Plus

SonoPlex needle with facet tip, indwelling catheter and E-Catheter with stylet (beginning 70 mm from tip) and 15 mm extended tip

Indwelling catheter working length	SonoPlex needle	E-Catheter	Item no.	NRFit Item no.	PU	FixoLong	Filter 0.2 µm
18G x 51 mm (2")	21G x 68 mm (2 2/3")	20G	201185-41E	201165-41E	10	•	•
18G x 75 mm (3")	21G x 94 mm (3 2/3")	20G	211185-41E	211165-41E	10	•	•
18G x 83 mm (3 1/4")	21G x 101 mm (4")	20G	241185-41E	241165-41E	10	•	•
18G x 100 mm (4")	21G x 118 mm (4 3/4")	20G	261185-41E		10	•	•
18G x 130 mm (5 2/5")	21G x 150 mm (6")	20G	251185-41E	251165-41E	10	•	•
18G x 150 mm (6")	21G x 168 mm (6 3/5")	20G	271185-41E		10	•	•

NRFit sets with SonoPlex II needle

NRFit® is a registered trademark of GEDSA used with their permission.

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