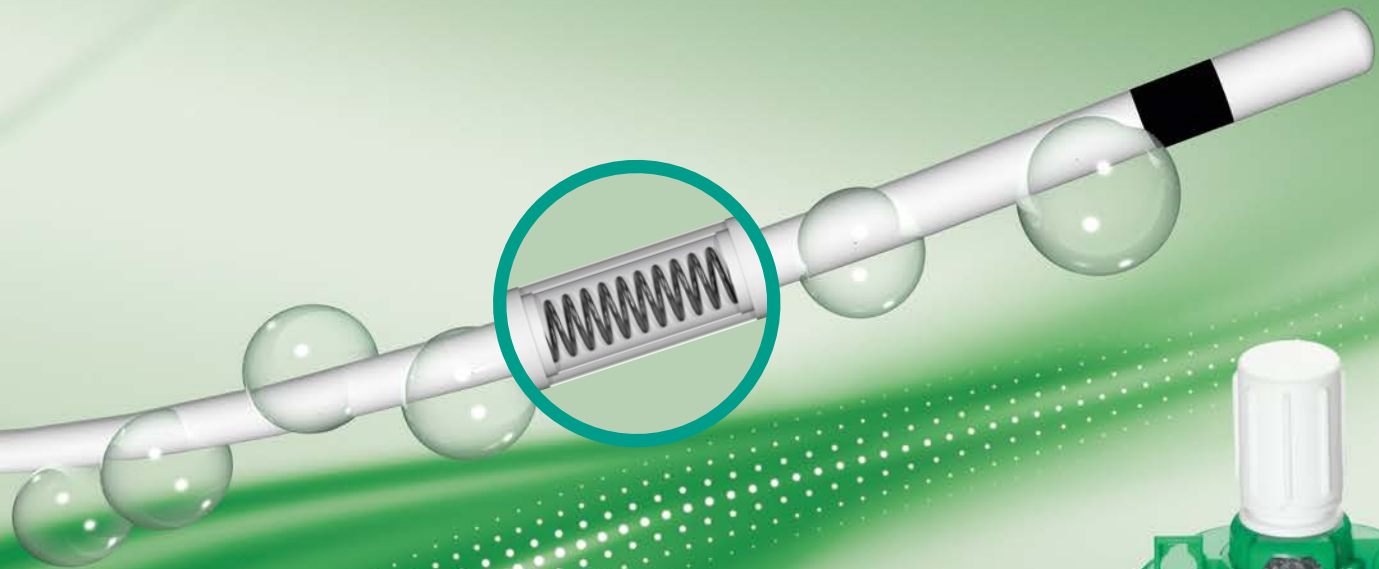


**PAJUNK®**

*InfiltraLong Catheter  
and FuserPump  
For infiltration analgesia*



**Peripheral infiltration**

## *Peripheral nerve blocks/post-operative pain treatment*

# **Wound infiltration technique – the safe and economical alternative**

*Multimodal pain therapy is nowadays a vital part of a fast-track concept, preventing long-term consequences such as the chronification of pain. This means that it makes a significant contribution to reducing overall costs.*

*Continuous wound infiltration offers the following particular benefits:*

- It is simpler, safer and cheaper than other procedures,*
- avoids the risk of motor blocks,*
- enables earlier mobilisation,*
- offers the option of comprehensive pain treatment<sup>1</sup>*
- and reduces the need for opioids.<sup>1</sup>*

*Against this background, the use of wound infiltration catheters is likely to increase.<sup>2</sup>*

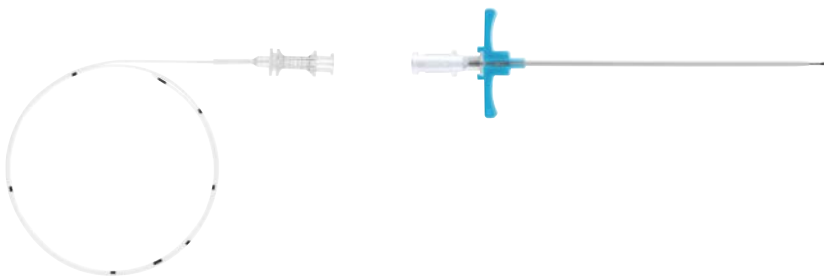
*The InfiltraLong device developed by PAJUNK® is a complete system for continuous infiltration analgesia. Decades of experience in catheter manufacture and familiarity with the special requirements of pain treatment lie behind this product development.*

*The special features of the catheter allow for smooth, targeted administration of local anaesthetic. This is the only way of ensuring that the patient remains completely pain-free throughout the area on which surgery is being conducted.*

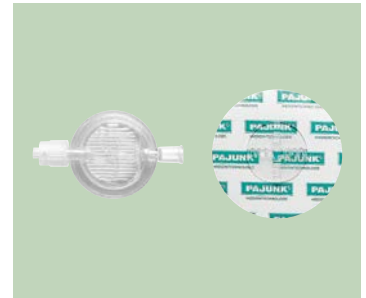
## The set options

### InfiltraLong with split cannula

Split cannula with puncture cannula, InfiltraLong catheter



### with FixoLong and filter

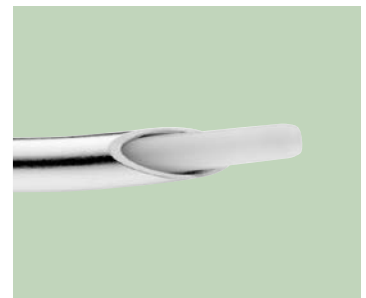
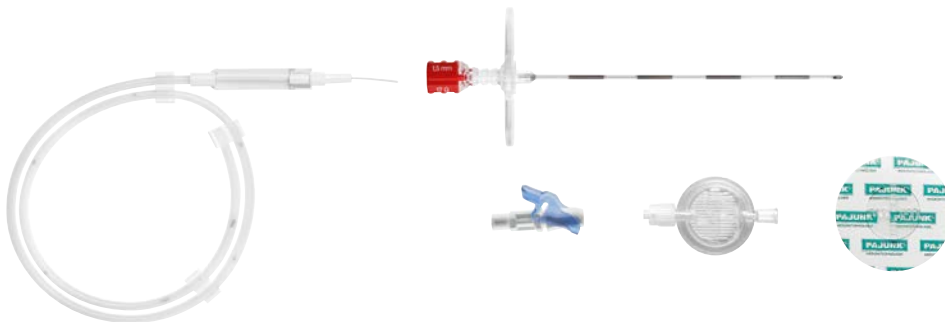


### with FuserPump



### InfiltraLong with Tuohy cannula

Tuohy cannula with InfiltraLong catheter, clamping adapter, FixoLong and filter



### InfiltraLong with tunnelisator

InfiltraLong catheter with tunnelisator, clamping adapter, FixoLong and filter



## The InfiltraLong Catheter

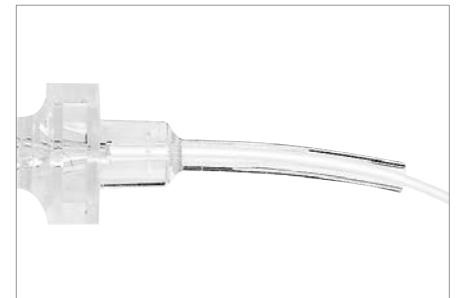
# Painlessness all along the line

Various factors need to be taken into account when selecting an infusion system in order to ensure that the treatment is successful. These include the necessary duration of infusion in the particular case, the type of infusion pump (portable or stationary), the flow rate of the drug being administered and the stability of the catheter.<sup>3</sup>

InfiltraLong is the only wound infiltration catheter that can be combined with all common infusion apparatus, leaving the practitioner freedom of choice. The wide range of catheter and perforation lengths available make it suitable for many different requirements and areas of use. Other key features of the InfiltraLong are its large inner lumen and thin walls. These features, combined with its internal stainless steel helical coil, make it totally flexible and allow continuous flow and high stability.



**NEW: white catheter material**

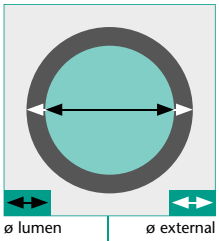


- ➔ *Secure flow thanks to stainless steel helical coil and kink protection*
- ➔ *The white catheter is easy to identify in the wound*
- ➔ *Is both echogenic and radiopaque*
- ➔ *The position can be checked at any time, even when the wound has been closed*

### **Kink protection included**

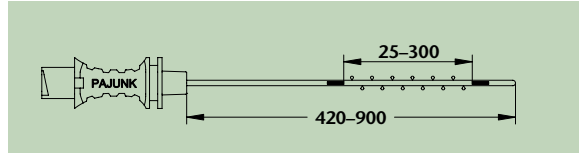
Additional kink protection has been fitted at the hub of the catheter to enable secure anaesthetic flow.

➔ **Optimum conditions for maximum freedom of movement and earlier patient mobilisation.**

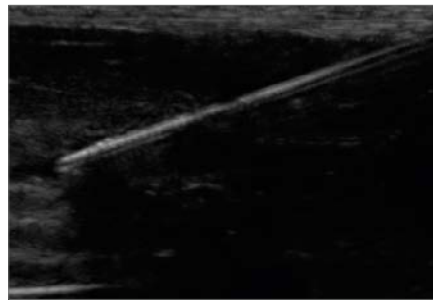
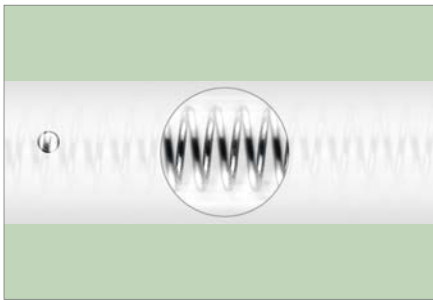


Compared with three other standard catheters, the PAJUNK® wound infiltration catheter has the **largest inner lumen and the thinnest walls.**<sup>3</sup>

Together with the stainless steel helical coil, this improves the flow of anaesthetic.



The InfiltraLong catheter has a diameter of 19 G and is available in five different catheter lengths and seven perforation lengths. The right size is always available for any surgical wound.



### Built-in stainless steel helical coil

PAJUNK® is the only manufacturer of wound infiltration catheters with built-in stainless steel helical coils. Therefore the catheter remains open along its entire length even if tissue is pressing on it.  
 ➔ Reliable analgesia depends on a continuous flow and discharge of anaesthetic.

### Echogenic/radiopaque

The built-in stainless steel helical coil means that the catheter is both echogenic and radiopaque.  
 ➔ The position can be checked at any time, even if the wound has been closed.

Effective and precise

# InfiltraLong for smooth, comprehensive infusion

Even and comprehensive distribution of the local anaesthetic in the wound area is crucial to highly effective analgesia. This was the background to a comparative study of four standard catheters, looking at the specific properties of infusion perforations, especially their diameter and spacing, as well as the resulting flow pattern. The InfiltraLong catheter produced by PAJUNK® performed extremely well because of its numerous fine infusion perforations, which are closely and evenly spaced in the perforation segment.<sup>4</sup>

Length gradation in 5-cm increments  
to monitor the catheter's position

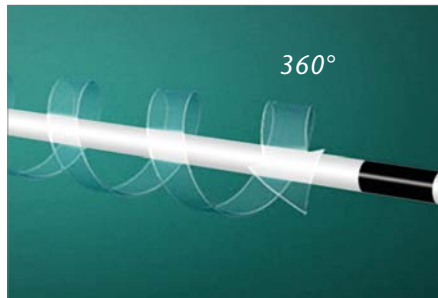
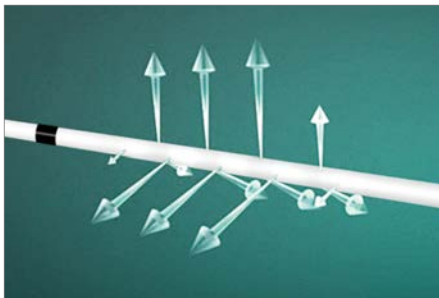
2

2

1 Perforation area marking

2 Length gradation (360°)

1



## Precise microperforation

The PAJUNK® InfiltraLong has microperforations applied using a special technique. They are extremely fine.



## Spiral arrangement

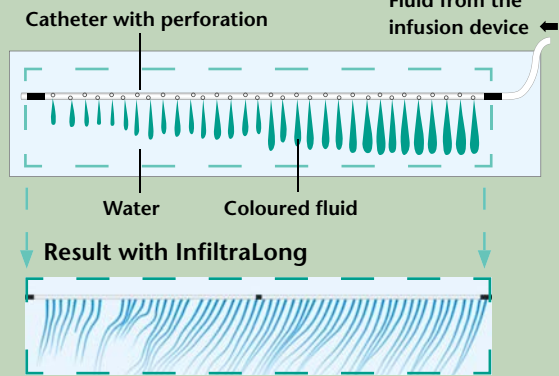
These microperforations run in a spiral line around the catheter, closely and evenly spaced.



## Close and even distribution

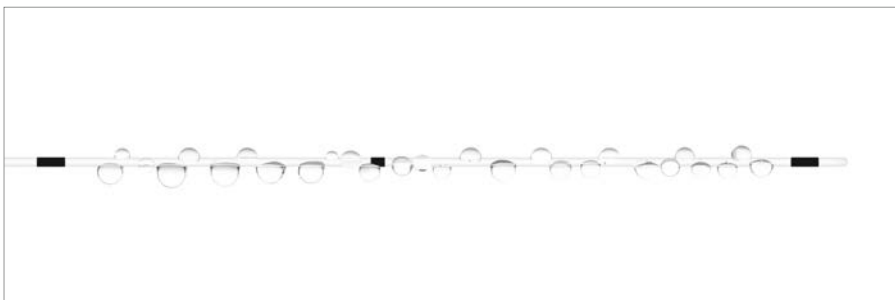
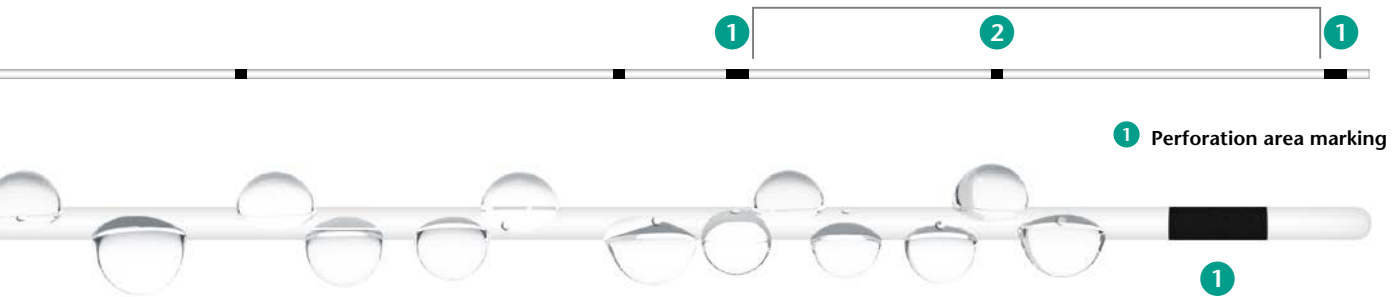
This ensures fine, even and close distribution of the anaesthetic along the entire length of the perforation, and in a radius of 360° around the catheter. This provides optimum conditions for good analgesia and reduces the need for opioids.

## Design of the experimental setup by Campolo et al.<sup>4</sup>



The amount of anaesthetic flowing through the system is homogeneous at both the proximal and distal ends of the perforation segment, and remains so over time. This means that practitioners can rely on a very even distribution of anaesthetic throughout the infusion site. This should, according to the study's findings, lead to more effective pain relief.<sup>4</sup>

Example: InfiltraLong 500  
30 openings along the first 75 mm



### Perforation marking

1 The start and end of the perforated section are marked all the way around.  
 ➔ This is a safety advantage for the user, as he/she can see at a glance whether the whole of the perforated segment is actually inside the wound.

### Perforation length

The PAJUNK® InfiltraLong catheter has also been found in a comparative study to have a longer perforation section than other devices. The pressure drop along the length of the catheter is small, and the test fluid moves more quickly towards the tip of the catheter before passing through the lateral openings.  
 ➔ Flow resistance when diffusing through the lateral openings is relatively low. This means that the infusion reaches its target by the fastest and most direct route.<sup>5</sup>

## All-in-One

# InfiltraLong with split cannula and FuserPump

The InfiltraLong developed by PAJUNK® is the only wound infiltration catheter that can be combined with all commercial pumps. This means that hospital physicians can decide whether they want to use a portable system in the form of elastomer pumps or a stationary system such as a syringe pump.

PAJUNK® also offers an alternative in the form of a closed system comprising a pump, weld-bonded infusion tube, filter and InfiltraLong catheter.

- ➔ High capacity: maximum filling volume 350 ml
- ➔ Variable flow rate of 3 ml/hr., 5 ml/hr. or 8 ml/hr.
- ➔ Visual check: shatter-proof, clear shell
- ➔ Non-compressible – no excess dosage due to compression
- ➔ Easy to use
- ➔ 50-ml filling syringe



### Filling the FuserPump

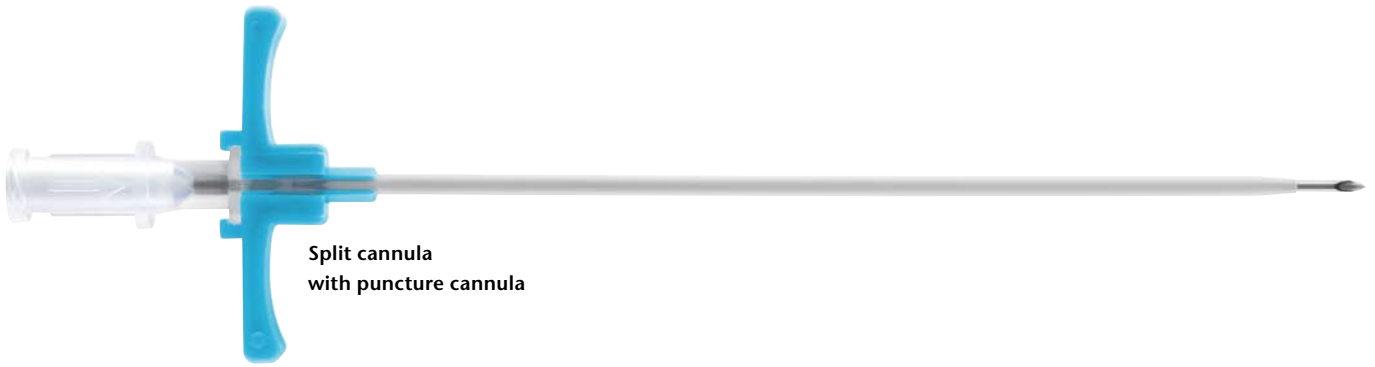
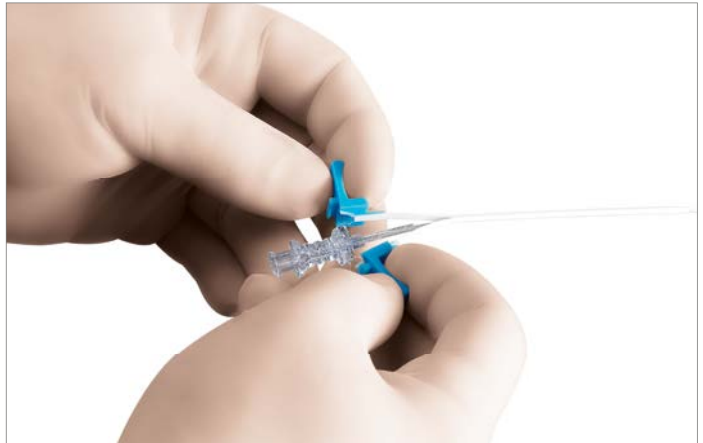
The FuserPump can be filled with the syringe on top or underneath, whichever method is most familiar to the user. The pump is filled by opening the cap and injecting the anaesthetic into the pump via the syringe.

### Variable flow rate

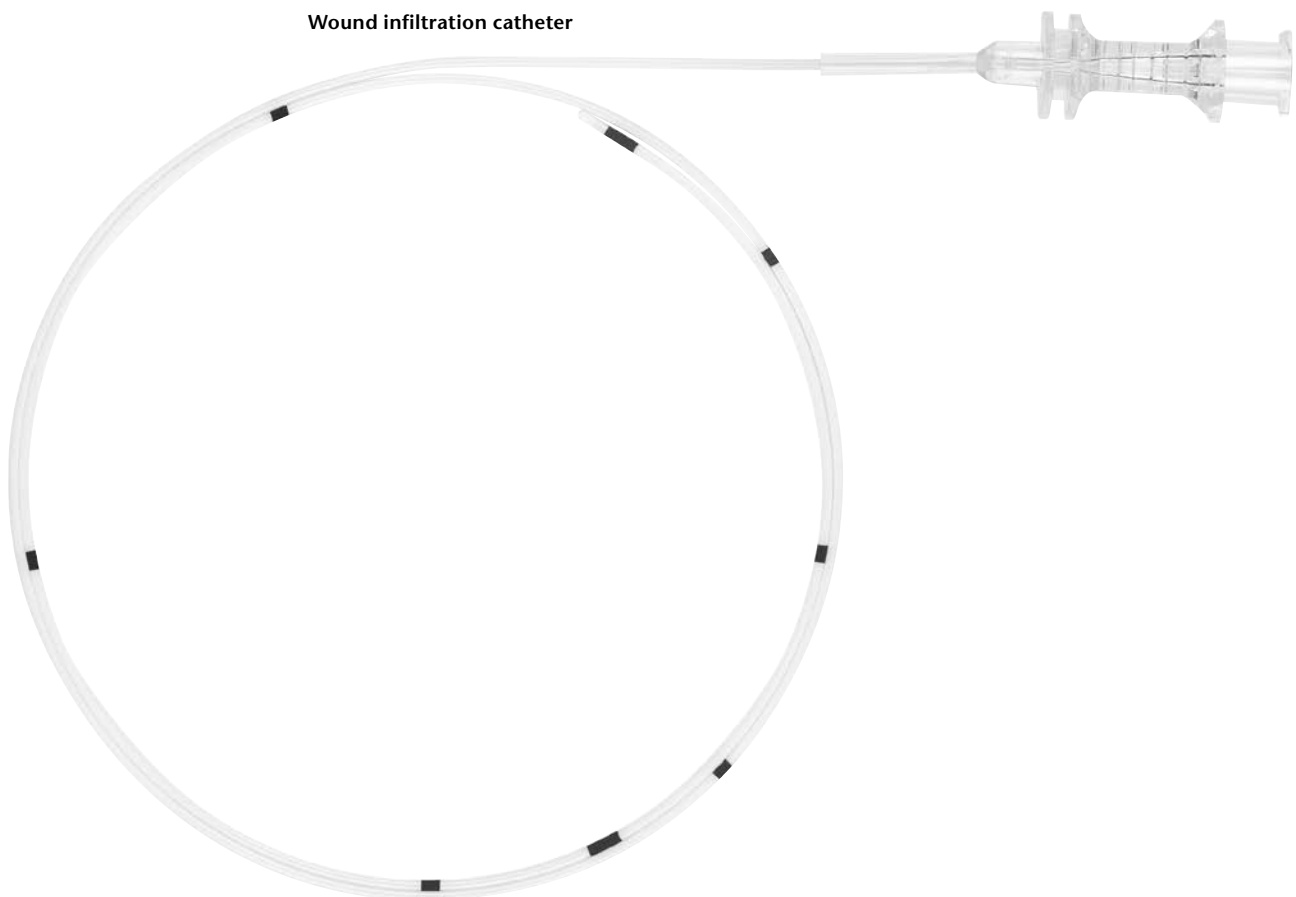
The user can set the desired flow rate appropriate for the severity of pain by means of a key that is inaccessible to the patient (i.e. kept separately from the system). The system is also protected against accidental changes to the desired dose.







**Split cannula  
with puncture cannula**



**Wound infiltration catheter**

# InfiltraLong


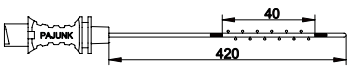
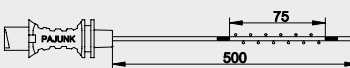
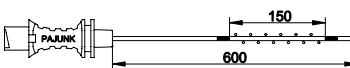
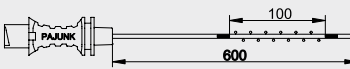
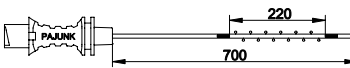

## All the information at a glance

### InfiltraLong

with split cannula



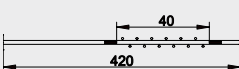
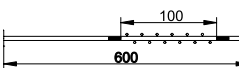
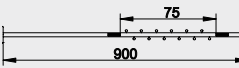
Split cannula with  
puncture cannula  
Filter  
FixoLong

Product	Catheter size	Item no.	PU
 <b>InfiltraLong 420</b> InfiltraLong catheter, with flexible helical coil and 10 openings along the first 25 mm	19 G x 420 mm	001158-00D	10
 <b>InfiltraLong 420</b> InfiltraLong catheter, with flexible helical coil and 15 openings along the first 40 mm	19 G x 420 mm	001158-00Z	10
 <b>InfiltraLong 500</b> InfiltraLong catheter, with flexible helical coil and 30 openings along the first 75 mm	19 G x 500 mm	001158-10A	10
 <b>InfiltraLong 600</b> InfiltraLong catheter, with flexible helical coil and 60 openings along the first 150 mm	19 G x 600 mm	001158-20B	10
 <b>InfiltraLong 600</b> InfiltraLong catheter, with flexible helical coil and 45 openings along the first 100 mm	19 G x 600 mm	001158-20D	10
 <b>InfiltraLong 700</b> InfiltraLong catheter, with flexible helical coil and 88 openings along the first 220 mm	19 G x 700 mm	001158-30C	10
 <b>InfiltraLong 900</b> InfiltraLong catheter, with flexible helical coil and 88 openings along the first 300 mm	19 G x 900 mm	001158-40C	10

### InfiltraLong

with Tuohy cannula



Product	Catheter size	Item no.	PU
 <b>InfiltraLong 420 with Tuohy cannula</b> InfiltraLong catheter with helical coil and 15 openings along the first 40 mm, Tuohy cannula 17 G x 90 mm, clamping adapter, filter, FixoLong	19 G x 420 mm	001159-00Z	10
 <b>InfiltraLong 600 with Tuohy cannula</b> InfiltraLong catheter with helical coil and 45 openings along the first 100 mm, Tuohy cannula 17 G x 90 mm, clamping adapter, filter, FixoLong	19 G x 600 mm	001159-20D	10
 <b>InfiltraLong 900 with Tuohy cannula</b> InfiltraLong catheter with helical coil and 30 openings along the first 75 mm, Tuohy cannula 17 G x 90 mm, clamping adapter, filter, FixoLong	19 G x 900 mm	001159-40C	10

## InfiltraLong

with tunnelisator



with preconnected, curved tunnelisator

Product	Catheter size	Clamping adapter	Filter	FixoLong	Item no.	PU
<p><b>InfiltraLong TUN 420T</b> InfiltraLong catheter, with flexible helical coil and 10 openings along the first 25 mm</p>	19 G x 420 mm	•	•	•	021159-00D	10
<p><b>InfiltraLong TUN 420T</b> InfiltraLong catheter, with flexible helical coil and 15 openings along the first 40 mm</p>	19 G x 420 mm	•	•	•	021159-00Z	10
<p><b>InfiltraLong TUN 500T</b> InfiltraLong catheter, with flexible helical coil and 30 openings along the first 75 mm</p>	19 G x 500 mm	•	•	•	021159-10A	10
<p><b>InfiltraLong TUN 600T</b> InfiltraLong catheter, with flexible helical coil and 60 openings along the first 150 mm</p>	19 G x 600 mm	•	•	•	021159-20B	10
<p><b>InfiltraLong TUN 600T</b> InfiltraLong catheter, with flexible helical coil and 45 openings along the first 100 mm</p>	19 G x 600 mm	•	•	•	021159-20D	10
<p><b>InfiltraLong TUN 700T</b> InfiltraLong catheter, with flexible helical coil and 88 openings along the first 220 mm</p>	19 G x 700 mm	•	•	•	021159-30C	10
<p><b>InfiltraLong TUN 900T</b> InfiltraLong catheter, with flexible helical coil and 88 openings along the first 300 mm</p>	19 G x 900 mm	•	•	•	021159-40C	10

## FuserPump

with split cannula



Product	Catheter size	Split cannula with puncture cannula 350-ml FuserPump 50-ml syringe	Item no.	PU
<p><b>FuserPump</b> InfiltraLong catheter, with flexible helical coil and 15 openings along the first 40 mm</p>	19 G x 420 mm	•	001157-00Z	3
<p><b>FuserPump</b> InfiltraLong catheter, with flexible helical coil and 30 openings along the first 75 mm</p>	19 G x 500 mm	•	001157-10A	3
<p><b>FuserPump</b> InfiltraLong catheter, with flexible helical coil and 60 openings along the first 150 mm</p>	19 G x 600 mm	•	001157-20B	3
<p><b>FuserPump</b> InfiltraLong catheter, with flexible helical coil and 88 openings along the first 220 mm</p>	19 G x 700 mm	•	001157-30C	3
<p><b>FuserPump</b> InfiltraLong catheter, with flexible helical coil and 88 openings along the first 300 mm</p>	19 G x 900 mm	•	001157-40C	3

## InfiltraLong

# All the information at a glance

### FuserPump



Product	Item no.	PU
FuserPump	1157-00-00	3

### Tunneler



Product	Item no.	PU
Tunneler with split cannula, obturator 1 cm overlapping, for 18 G catheter	001151-54	1

## Studies

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