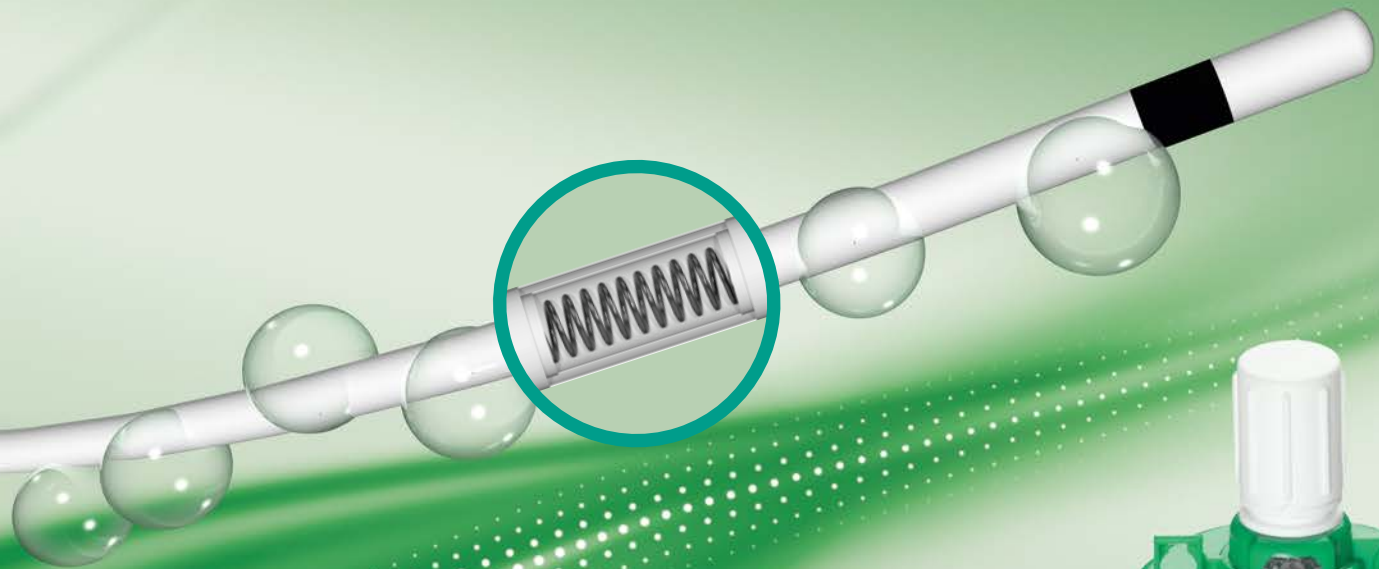


PAJUNK®

*InfiltraLong Catheter
and FuserPump
For infiltration analgesia*



Wound infiltration

MADE IN GERMANY

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 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 treatment¹*
- and reduces the need for opioids¹*

Against this background, the use of wound infiltration catheters in practice is likely to increase.²

The InfiltraLong device developed by PAJUNK® is a self-contained 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.

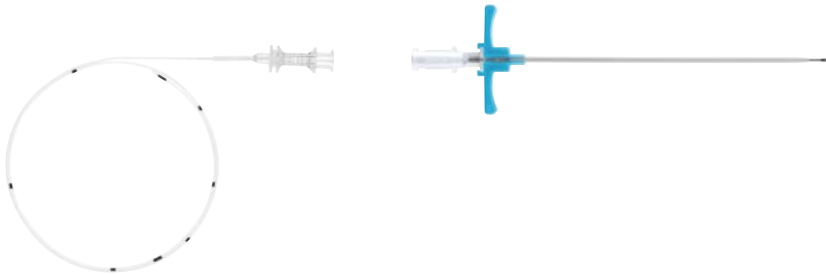
The particular nature of the catheter allow a smooth, targeted administration of local anaesthetic. This is the only way of ensuring that the patient remains completely pain-free throughout the area on which surgery is being conducted.

The kit options

InfiltraLong

with split cannula

InfiltraLong catheter, split cannula with puncture cannula



Optionally available:

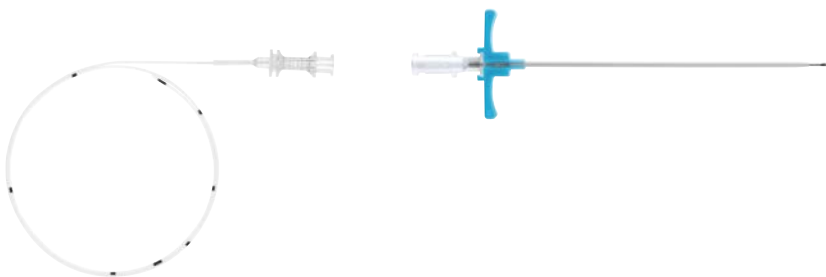
with Filter 0,2µm and FixoLong



NEW InfiltraLong Forte

with split cannula

InfiltraLong Forte catheter, split cannula with puncture cannula



with FuserPump



InfiltraLong TUN

with tunnelisator

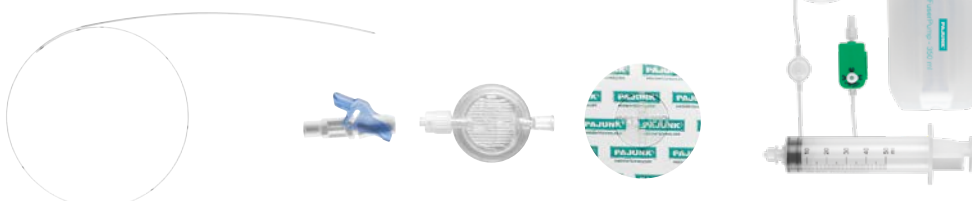
InfiltraLong catheter with tunnelisator, ClampingAdapter, Filter 0,2µm and FixoLong



NEW FuserPump TUN

with tunnelisator

InfiltraLong catheter with tunnelisator, ClampingAdapter, Filter 0,2µm, FixoLong, FuserPump and syringe



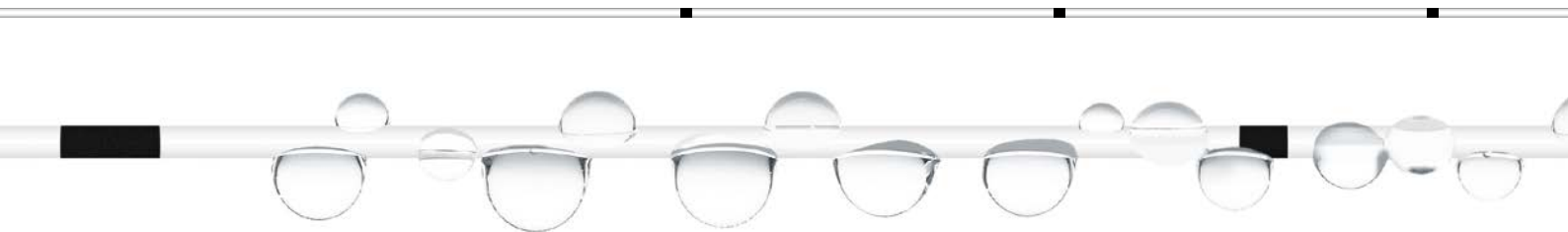
The InfiltraLong Catheter

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.³

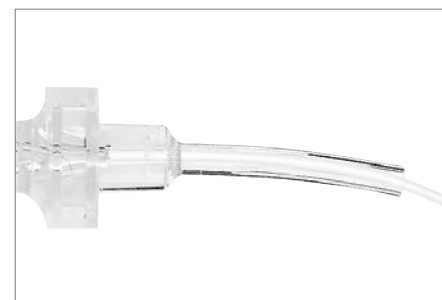
InfiltraLong is the only wound infiltration catheter that can be combined with all common infusion devices, leaving the practitioner freedom of choice. The wide range of catheter and perforation lengths available make it suitable for many different requirements and areas of use. Other key features of 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.

As an alternative to the standard version, PAJUNK® now provides the InfiltraLong Forte catheter – a thicker-walled and thus more robust catheter that is particularly suitable for applications in the vicinity of joints such as post-operative analgesia after total knee replacement (TKR).⁴



White catheter material

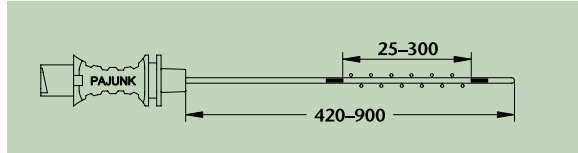
- ➔ Secure flow thanks to stainless steel helical coil and kink protection
- ➔ The white catheter is easy to identify in the wound
- ➔ Is both echogenic and radiopaque
- ➔ Positional control at any time, even when the wound has been closed
- ➔ Infiltration of analgesics via intra-articular catheters following TKR enables safe and rapid self-mobilisation⁴



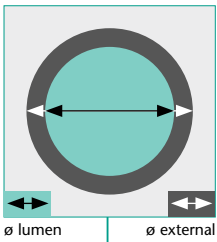
Kink protection included

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

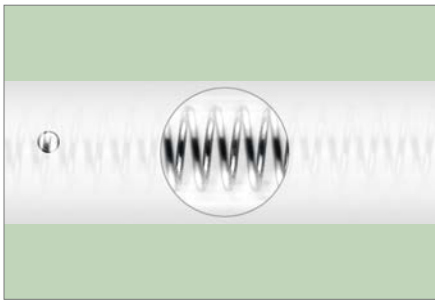
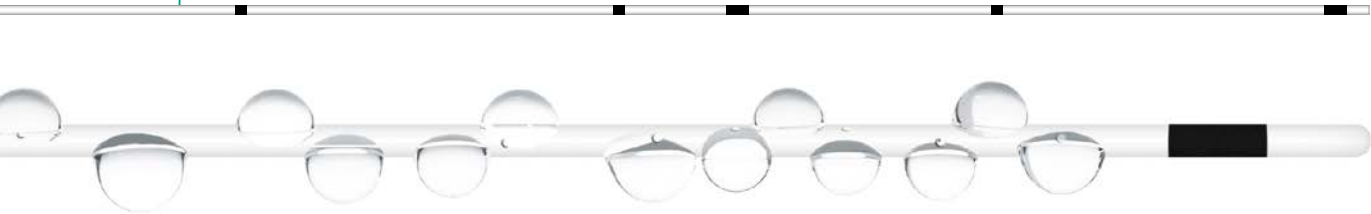
➔ Optimum conditions for maximum freedom of movement and earlier patient mobilisation.



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.

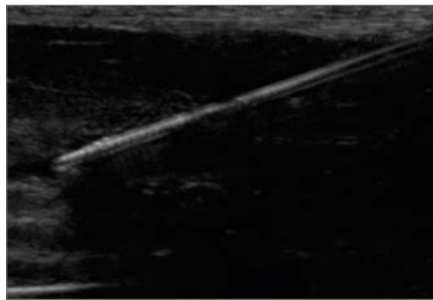


Compared with three other standard catheters, the PAJUNK® wound infiltration catheter has the largest inner lumen and the thinnest walls.³ Together with the stainless steel helical coil, this improves the flow of anaesthetic.



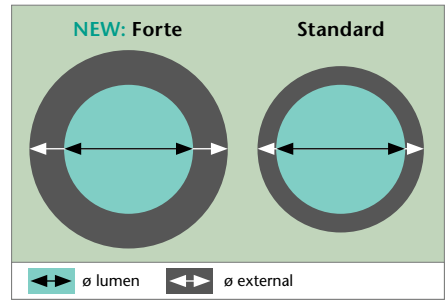
Integrated stainless steel helical coil

PAJUNK® is the only manufacturer of wound infiltration catheters with integrated 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

Due to the integrated stainless steel helical coil, the catheter is both echogenic and radiopaque.
 ➔ The position can be checked at any time, even if the wound has been closed.



NEW Alternative thick-walled version

The wall of the InfiltraLong Forte catheter is 70% thicker than that of the standard infiltration catheter, while the diameter of the internal lumen is the same.
 ➔ Therefore it is more stable and better suited for use in the vicinity of joints.

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. Against this background, four standard catheters were under examination in a comparative study, 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.⁴

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

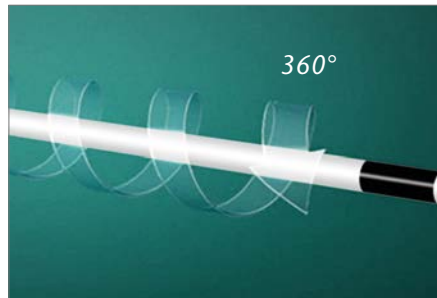
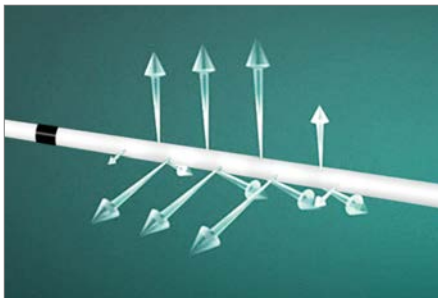
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2

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

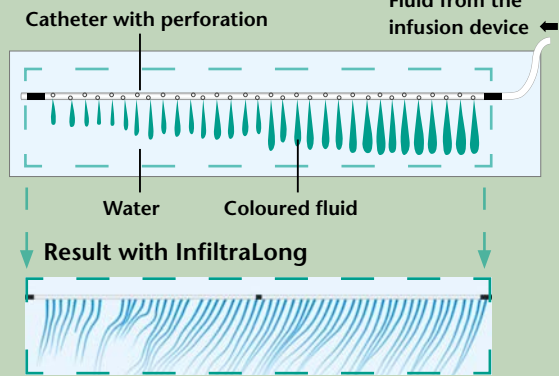
These microperforations run in a spiral line around the catheter, closely and evenly spaced.



Close and even distribution

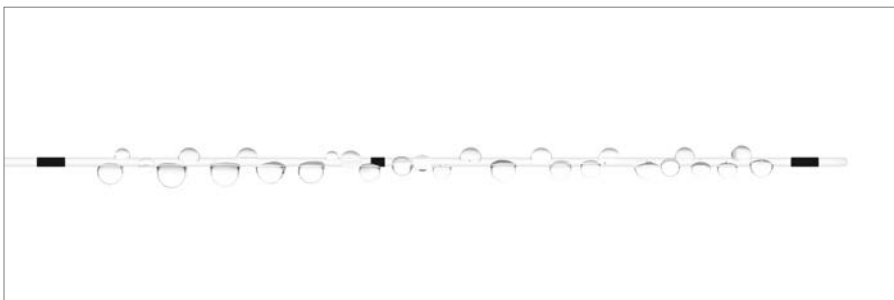
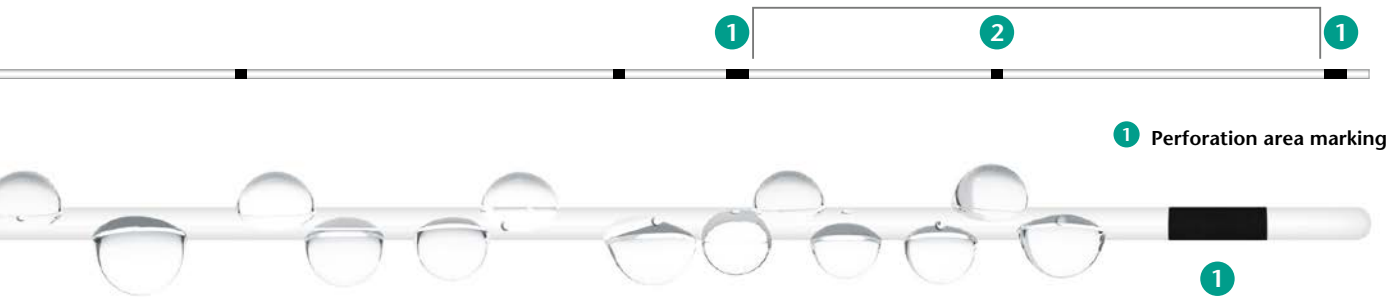
This ensures fine, even and close distribution of the anaesthetic along the entire length of the perforation, and in a radius of 360° around the catheter. This provides optimum conditions for good analgesia and reduces the need for opioids.

Design of the experimental setup by Campolo et al.⁴



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.⁵

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 perforated segment is actually inside the wound on its whole length.

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 low, 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.⁶

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 an elastomer pump 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
- ➔ Faster, safe and sterile filling of the pain pump with FuserPump Filler



Filling with the syringe

The FuserPump can be filled with the syringe on top or from 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.

Greater filling efficiency with the FuserPump Filler

With the FuserPump Filler, a direct connection is made between the anaesthetic sachet and the pump system. The integrated non-return valve prevents backflow of liquids.

➔ This enables faster, safe and sterile filling of the pain pump.

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.



InfiltraLong

All information at a glance

FuserPump



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

FuserPump Filler



Product	Item no.	PU
FuserPump Filler Filling system for FuserPump with non-return valve, spike	001151-38L	10

TunnEler



Product	Item no.	PU
TunnEler 105 with split cannula 95 mm, obturator 1 cm overlapping, for catheter 18 G	001151-54	10
TunnEler 235 with split cannula 230 mm and white handle, obturator 0.5 cm overlapping, for catheter 18 G	001151-55	10

InfiltraLong TUN Duo



- Kit consisting of:
- 2x InfiltraLong catheter 19 G x 600 mm with integrated stainless steel helical coil and 60 openings along the first 150 mm, with 360° markings
 - 1x Injection tube with Y-connector
 - 1x Filter 0.2µm
 - 1x FixoLong
 - 1x TunnEler 235
 - 1x Split cannula
 - 1x Luer-Lock syringe 20 ml
 - 2x transparent adhesive

Product	Item no.	PU
InfiltraLong TUN Duo	021154-20B	3

InfiltraLong

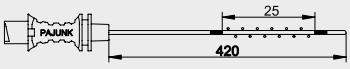
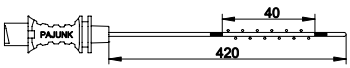


All information at a glance

InfiltraLong

with split cannula



Split cannula with
puncture cannula
Filter 0.2-µm
FixoLong

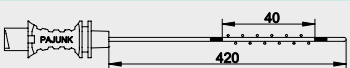

Product	Catheter size	Item no.	PU
 InfiltraLong 420 InfiltraLong catheter, with flexible helical coil and 10 openings along the first 25 mm	19 G x 420 mm	001158-00D	10
 InfiltraLong 420 InfiltraLong catheter, with flexible helical coil and 15 openings along the first 40 mm	19 G x 420 mm	001158-00Z	10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

InfiltraLong Forte

with split cannula

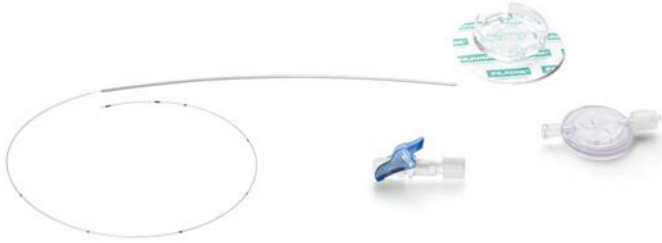


Split cannula with
puncture cannula
Filter 0.2-µm
FixoLong

Product	Catheter size	Item no.	PU
 InfiltraLong Forte 420 InfiltraLong Forte catheter, with flexible helical coil and 15 openings along the first 40 mm	18 G x 420 mm	001158-01Z	10
 InfiltraLong Forte 500 InfiltraLong Forte catheter, with flexible helical coil and 30 openings along the first 75 mm	18 G x 500 mm	001158-11A	10

InfiltraLong TUN

with tunnelisator



with preconnected, curved tunnelisator

Clamping-Adapter
Filter 0.2-µm
FikoLong

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

FuserPump TUN

with tunnelisator



Clamping-Adapter
Filter 0.2-µm
FikoLong
FuserPump 350 ml
50 ml - syringe

Product	Catheter size					Item no.	PU
<p>FuserPump TUN 420T InfiltraLong catheter, with flexible helical coil and 15 openings along the first 40 mm</p>	19 G x 420 mm	•	•	•	•	021157-00Z	3
<p>FuserPump TUN 500T InfiltraLong catheter, with flexible helical coil and 30 openings along the first 75 mm</p>	19 G x 500 mm	•	•	•	•	021157-10A	3
<p>FuserPump TUN 600T InfiltraLong catheter, with flexible helical coil and 60 openings along the first 150 mm</p>	19 G x 600 mm	•	•	•	•	021157-20B	3

InfiltraLong

All information at a glance

FuserPump / FuserPump Forte

with split cannula



Split cannula
with puncture cannula
350ml FuserPump
50 ml syringe

Product	Catheter size				Item no.	PU
<p>FuserPump 420 InfiltraLong catheter, with flexible helical coil and 15 openings along the first 40 mm</p>	19 G x 420 mm	•	•	•	001157-00Z	3
<p>FuserPump 500 InfiltraLong catheter, with flexible helical coil and 30 openings along the first 75 mm</p>	19 G x 500 mm	•	•	•	001157-10A	3
<p>FuserPump 600 InfiltraLong catheter, with flexible helical coil and 60 openings along the first 150 mm</p>	19 G x 600 mm	•	•	•	001157-20B	3
<p>FuserPump 600 InfiltraLong catheter, with flexible helical coil and 45 openings along the first 100 mm</p>	19 G x 600 mm	•	•	•	001157-20D	3
<p>FuserPump 700 InfiltraLong catheter, with flexible helical coil and 88 openings along the first 220 mm</p>	19 G x 700 mm	•	•	•	001157-30C	3
<p>FuserPump 900 InfiltraLong catheter, with flexible helical coil and 88 openings along the first 300 mm</p>	19 G x 900 mm	•	•	•	001157-40C	3
<p>FuserPump Forte 420 InfiltraLong Forte catheter, with flexible helical coil and 15 openings along the first 40 mm</p>	18 G x 420 mm	•	•	•	001157-01Z	3
<p>FuserPump Forte 500 InfiltraLong Forte catheter, with flexible helical coil and 30 openings along the first 75 mm</p>	18 G x 500 mm	•	•	•	001157-11A	3

Studies

- Braun J.P., Krämer M., Schwenk W., Spies C. Medizinökonomische Aspekte des Fast-Track-Konzeptes, Fast Track in der operativen Medizin, Springer Medizin Verlag Heidelberg 2009
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