



**PAJUNK®**

*IntraLong kit with  
SPROTTE® SPECIAL Cannula  
Atraumatic and trendsetting*



Continuous spinal anaesthesia

MADE IN GERMANY

# Maximum impact with minimum dosage

## Continuous technique with IntraLong

Continuous spinal anaesthesia is used particularly in orthopedics and for large-scale tumor operations. The advantage of this technique is, that immediate and greatest possible pain relief can be achieved with a minimum amount of anaesthetics. The dose can also be reduced considerably by using the continuous technique for intrathecal therapy with cytostatics in neurology, thus reducing the danger of systemic toxic reactions to a minimum. Fast fading away of the blockade and the option for postoperative pain control are very much appreciated factors in rehabilitation, because therapeutic exercise can commence immediately after the operation.

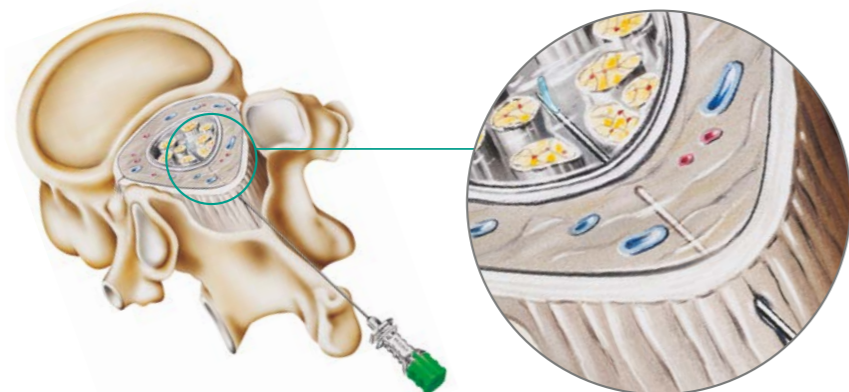
### IntraLong kit with SPROTTE® SPEZIAL cannula



The essential advantages of the legendary SPROTTE® cannula, which have revolutionised regional anaesthesia, are transferred to the continuous spinal anaesthesia technique by utilizing the SPROTTE® SPEZIAL cannula made by PAJUNK®. This cannula

also features the special design with an atraumatic tip and a lateral orifice. The fundamental difference between the two cannulas is that the lateral orifice is relocated forward, far into the cone of the tip in comparison with the standard cannula.

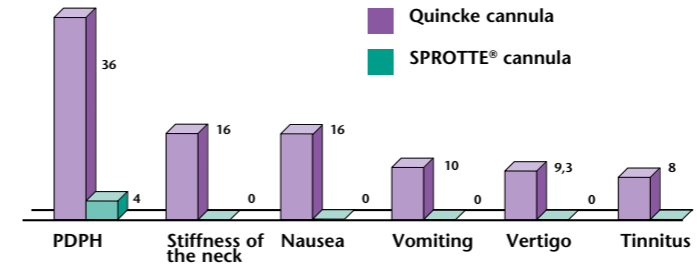
This reduces the "working length" of the cannula tip in the subarachnoid space. The essential advantages, which are indispensable for gentle and safe application of continuous spinal anaesthesia, are therefore combined in this cannula:



### Minimisation of post-spinal complications

The special cannula tip, shaped in the form of an ogive, will penetrate the dura mater and thereby cause comparatively little tissue damage (see illus. on the right). This guarantees that the fibers of the dura mater will seal the catheter in the best possible way.

A large part of the post-puncture headaches and all complications, such as the inability of low frequency hearing loss, stiffness of the neck (nuchal rigidity), nausea and vomiting connected to a loss of liquor, are thus reduced to a minimum.



The use of atraumatic cannula will not only help to effectively avoid headaches, but also to avert stiffness of the neck

(nuchal rigidity), nausea and vomiting; see the results of the first controlled study of Jäger et al 1991, Akt. Neurol. 18: 61-64.

### Controlled catheter guidance

In the SPROTTE® SPEZIAL cannula the outlet point for the injection and for catheter is positioned side ways, above the tissue penetrating tip. The puncture is carried out at a slight ascending angle, with the lateral orifice directed upward. Under these conditions, the catheter in the spinal space is automatically directed upwards from the

puncture plane. This permits the best possible distribution of the anaesthetic, and therefore an immediate effect in the lumbar- and thoracal region. If the catheter cannot be advanced forward due to an unfavorable access-angle, then the catheter can be carefully retracted in order to correct the positioning of the cannula.

### Shearing of the catheter is virtually impossible

The edges of the lateral orifice of the SPROTTE® SPEZIAL are rounded. So a shearing off the catheter, even under unfavorable conditions is virtually impossible. Tearing of the catheter can be reliably

prevented, if the exertion of force to overcome obstacles is avoided during retraction of the cannula. Otherwise, the catheter will be elongated and stretched until the material yields and tears.



A SPROTTE® SPECIAL cannula and a Tuohy cannula have penetrated the multi-layered texture of the spinal dura.



With the Tuohy cannula, the exertion of pressure and the application of tension to the tissue of the dura will inflict a large incised lesion, as may be seen, whereas the SPROTTE® SPEZIAL cannula merely causes a minimal defect. Here the dura largely seals up the catheter ingress.

# Epidural and IntraLong kit

## All the information at a glance

### EpiLong kit and IntraLong kit for continuous epidural and spinal anaesthesia

Product	Size	PA catheter with steel mandrin						Item no.	PU
			X-ray contrast catheter guidance	Fully capable of contrast	MiniFilter 0.2µm	Adapter	LOR syringe		
<b>EpiLong kit (for continuous epidural anaesthesia)</b>									
SPROTTE® SPECIAL cannula	19 G x 90 mm	23 G x 90 cm		•	•	•		0021152-51	10
SPROTTE® SPECIAL cannula	18 G x 90 mm	20 G x 90 cm	•		•	•	•	0031152-51	10
SPROTTE® SPECIAL cannula	19 G x 90 mm	23 G x 90 cm		•	•	•	•	0031152-50	10
SPROTTE® SPECIAL cannula	19 G x 90 mm	23 G x 90 cm		•		•		0001152-54	10
<b>IntraLong kit (for continuous spinal anaesthesia)</b>									
SPROTTE® SPECIAL cannula	22 G x 90 mm	27 G x 90 cm		•	•	•		21151-30CS	10
SPROTTE® SPECIAL cannula	22 G x 90 mm	27 G x 90 cm		•	•	•	•	31151-30CS	10
SPROTTE® SPECIAL cannula	22 G x 103 mm	27 G x 90 cm		•	•	•		21151-30CL	10
SPROTTE® SPECIAL cannula	21 G x 90 mm	25 G x 90 cm		•	•	•	•	31151-30GS	10



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