intra special catheters

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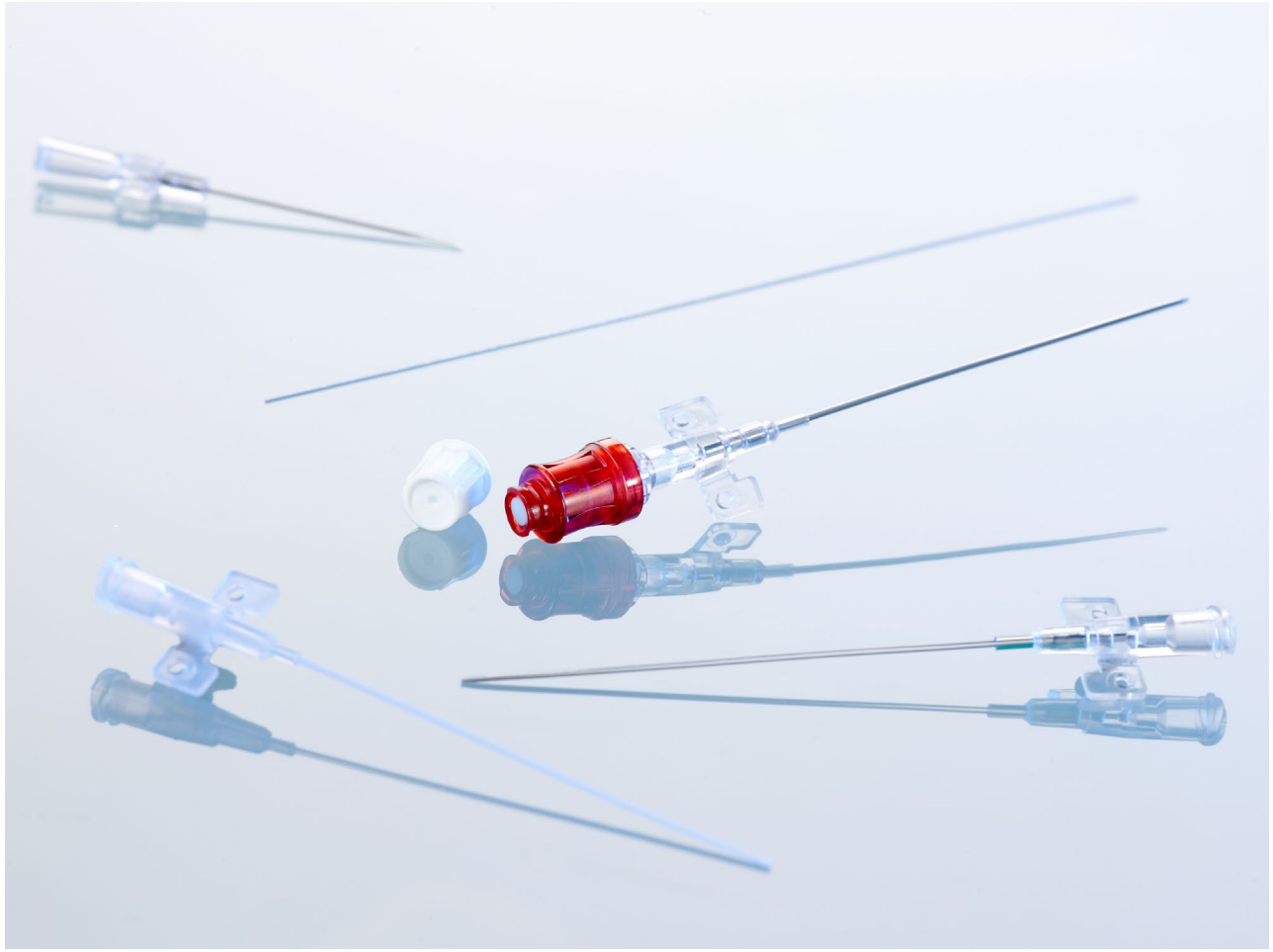
Arterial Catheter Kits



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Intended use

The arterial catheters are intended for short-term (< 30 days) invasive arterial blood pressure measurement and blood gas analysis, and are inserted using the Seldinger technique.

The system is suitable for atraumatic puncture of peripheral arteries and for safe and complication-free positioning in the vessel. The catheter can be used for all interventions where continuous blood pressure measurement is required in **Anaesthesia**, **Intensive Care** and other (post-) surgery where vascular damage is to be avoided.

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Seldinger technique

- An outstanding puncture technique used for catheter insertion
- The most used method for diagnostic uses (i.e. measuring and analysing arterial blood parameters)
- This technique at least reduces the difficulties that can occur with other methods (i.e. puncture and treatment by needle only)

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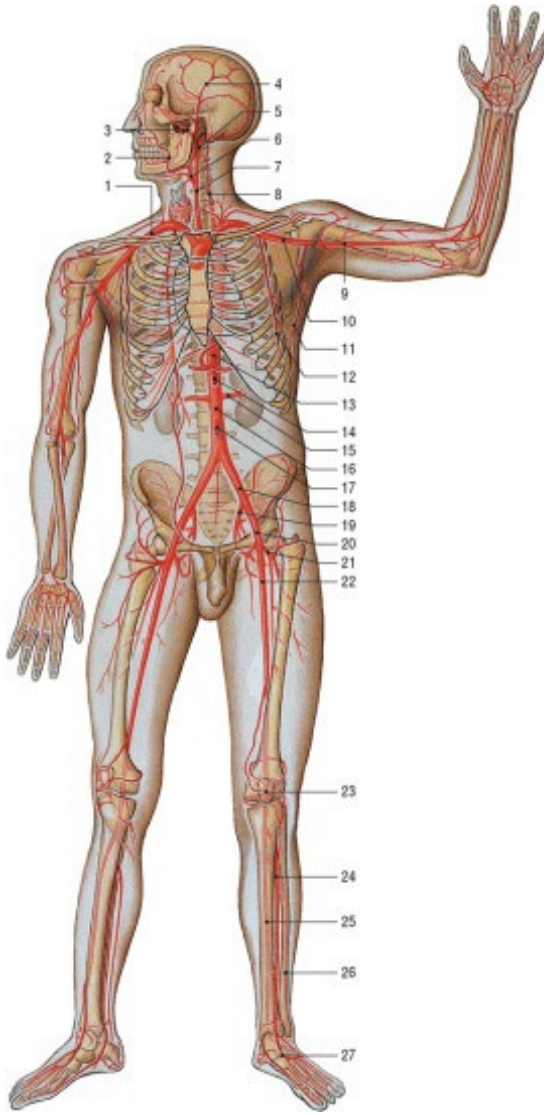
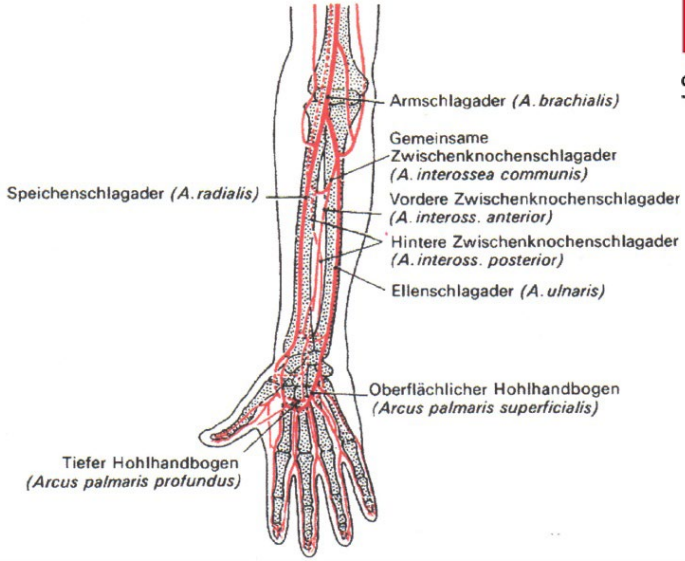
Important access points

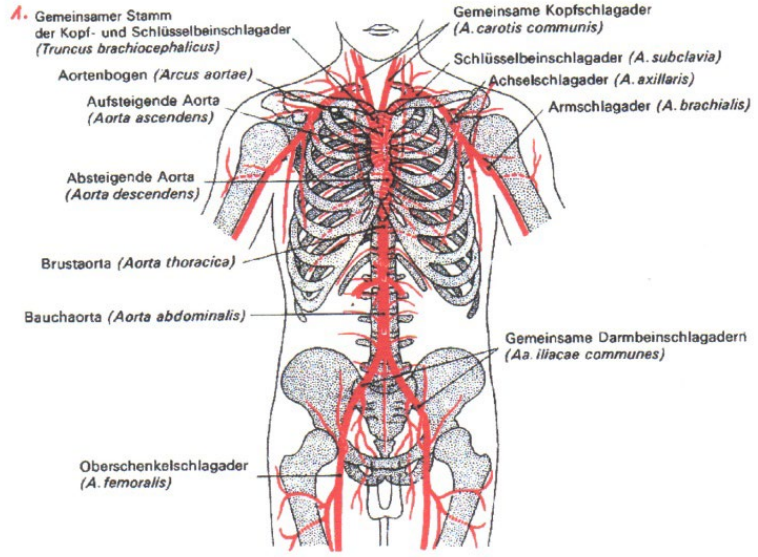
Brachial artery

Radial artery

Femoral artery







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Blood pressure measurement

- A continuous measurement of blood pressure (in this case the middle arterial blood pressure) is an essential factor for monitoring critically ill patients during **anaesthesia** or in **intensive care**.
- It is here an invasive form of cardiac output measurement with possibility of blood sampling for blood gas analysis and that is performed continuously and/or as often as required.
- Continuous measurements can only be performed invasively.

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Blood pressure measurement

Error-free measurements are dependent on the following components:

a) A suitable catheter (i.e. **MICROSELD®** microcatheter)

b) A connecting line

c) A transducer (including monitoring kit)

The choice of catheter is essential because arterial cannulation can lead to complications. Important is the used material and the quality of processing.

The catheter is the interface between patient and physiologist.

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Blood pressure measurement

In our case it is a direct measurement and allows:

- accurate mechanical transmission of all the profile-determining frequencies in the original systems.
- distortion-free visualisation of even the most rapid pressure changes.

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Blood pressure measurement

Advantages of invasive measurement:

- Continuous measurement
- Immediate visualisation of the influence to infusion treatment
- Possibility of displaying trends
- Accurate measurements, even in shock
- Pulse visualisation
- Direct indication of pulse deficits with extrasystoles
- Efficiency assessment of cardiac massage during reanimation
- Constant arterial access for blood sampling

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Blood pressure measurement

Disadvantages of invasive measurement:

- Additional risk for the patient
- Possible system error
- Intensive monitoring work
- More expensive than other methods

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Blood pressure measurement

Possible complications of arterial cannulation:

- Ischaemia* (Consequence: permanent arterial occlusion)
- Arterial catheter embolism
- Air embolism
- Perforation of the arterial wall
- Arterial wall aneurysm
- Nerve damage

* Decrease or interruption of blood supply to an organ

Intended User and Patient Target Group

The product may only be inserted, applied and removed by Healthcare Professionals, i.e., by qualified physicians or by qualified medical personnel under the instruction of a qualified physician.

Of particular importance are the processes in anaesthesia and intensive care, for all other patients with the listed indications, and where the qualified user considers this necessary or useful.

Taking into account the contraindications, sizes and length of catheter provided, the medical device can be used on both adults and children, without any fundamental distinction as to age, anatomy or physiology.
The anatomical and physiological conditions of the patient must be checked by the attending Healthcare Professional before the product is used.

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Arterial Catheter Kits

intra special catheters

Description

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Arterial Catheter Kits

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Description

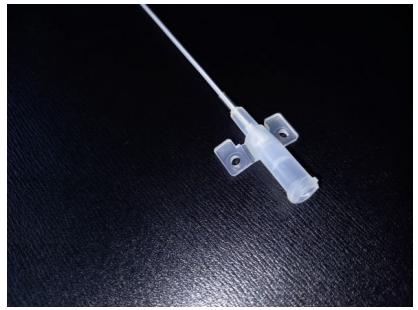
- Arterial catheter according to Seldinger, consists of

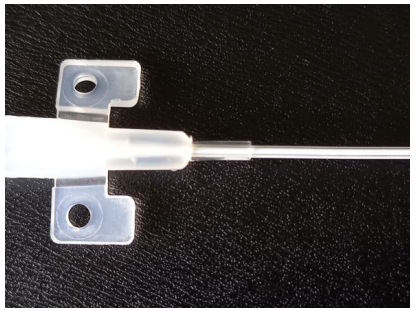
  - a radiopaque PTFE (black) or Pebax (white) catheter

  - an anti-kink-protection

  - hub with female LL-adapter

  - and movable wings for attachment to the skin.





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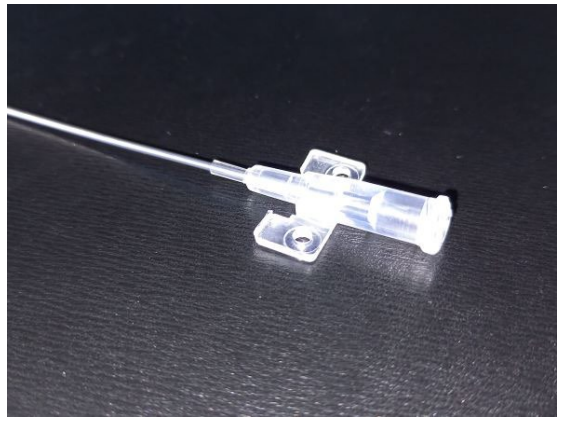
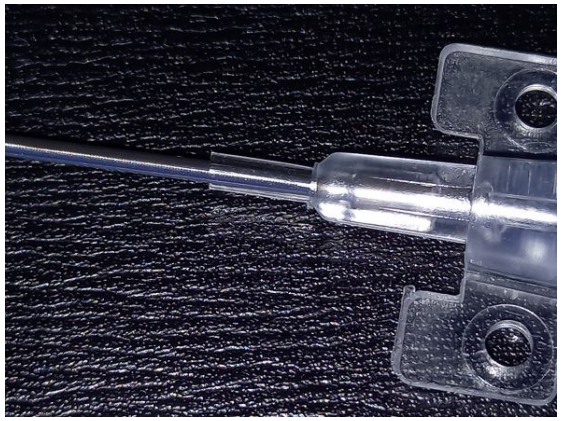
Description

- Due to the biocompatible PTFE material used, the catheters are particularly suitable for longer retention time of > 48 hours.





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Arterial Catheter Kits

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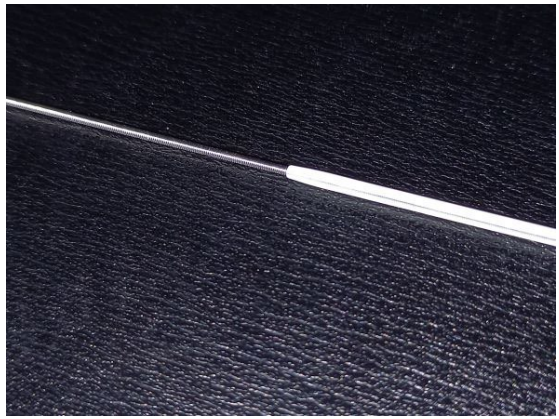
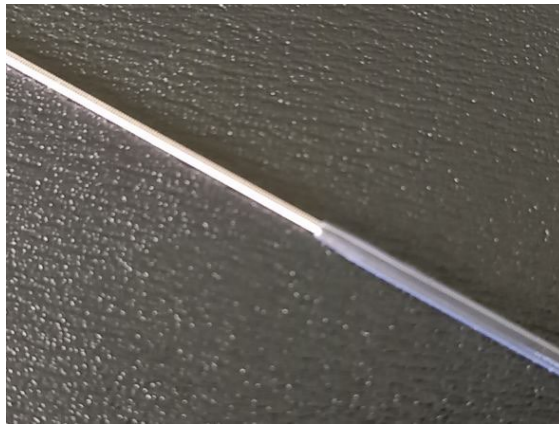
Description

Components of the kit:

- Catheter (as described)
- Introducer needle
- Guide wire





The specifications of components have to be adapted to the size and length of the catheter.

The puncture needle should have the same diameter as the catheter.

In this case, a dilator is not needed.

We have a very smooth transition from catheter tube to outer diameter of guide wire.

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Arterial Catheter Kits

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How to use

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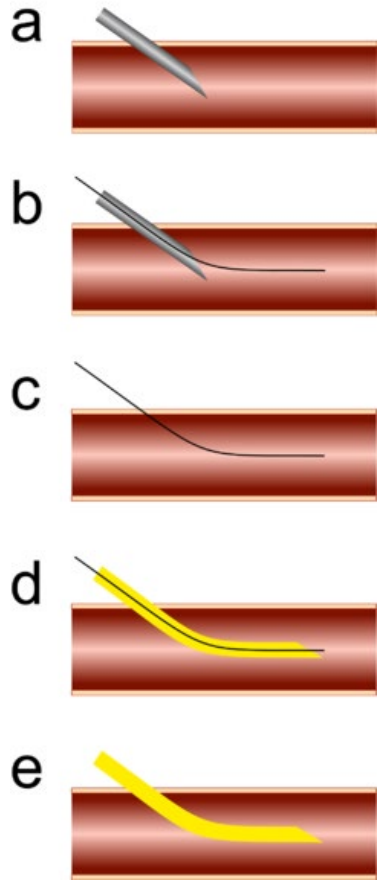
Arterial catheter puncture procedure

1. Puncture using Seldinger needle after local anesthesia
2. Insert the guidewire through the needle
3. Withdraw needle
4. Introduce catheter over the guidewire
5. Withdraw guidewire
6. Connect the catheter with appropriate components



→ More information in IFU

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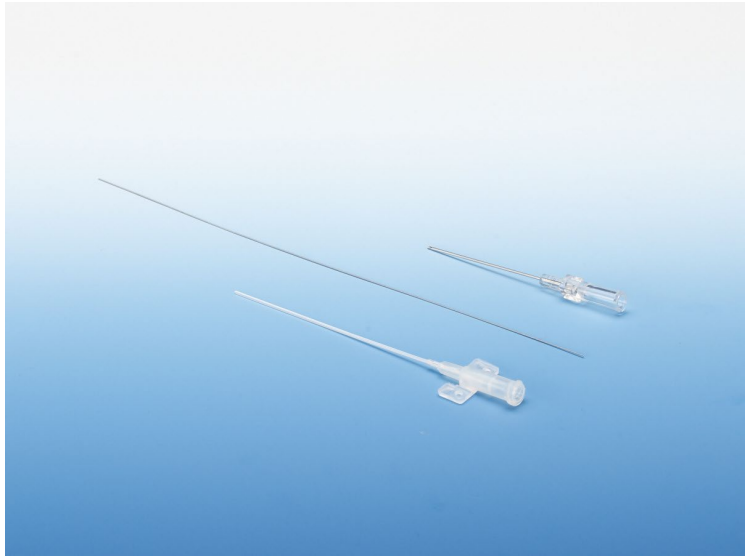
Procedure

1. Prepare the required material for the application
2. Open the packaging and remove the components
3. Carefully remove the protective tube from the puncture needle



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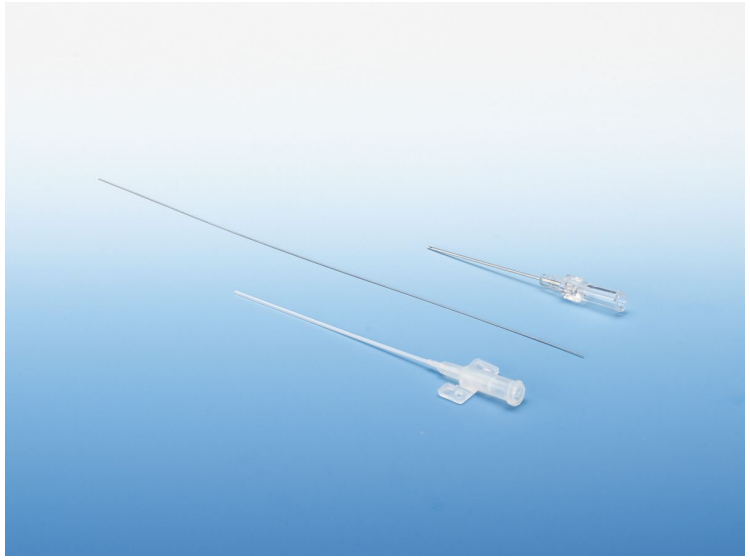
4. Determine the puncture site depending on the indication

5. Disinfect the puncture site and apply local anaesthesia

Attention! ⚠

Use only alcohol or iodine-based disinfectants.

Other disinfectants may cause weakening of the material, leakage or air aspiration when in contact with the catheter.



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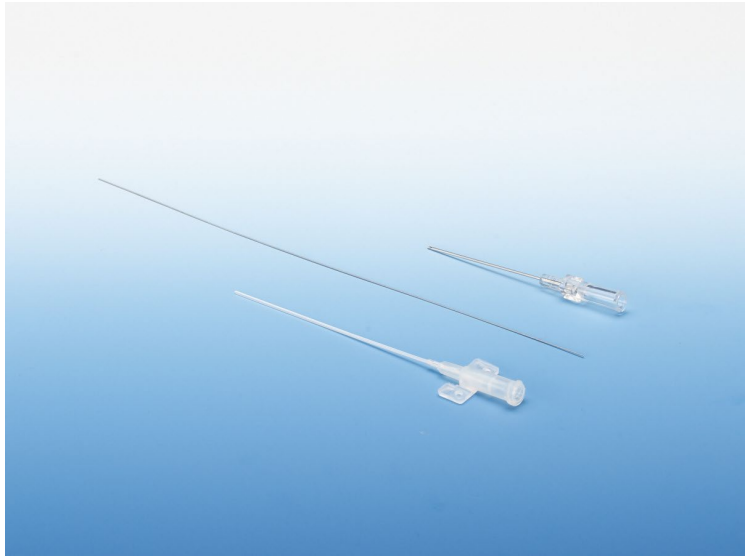
6. Hold the puncture needle with your thumb and index finger

7. Puncture the designated artery at an angle of no more than 30° to the skin



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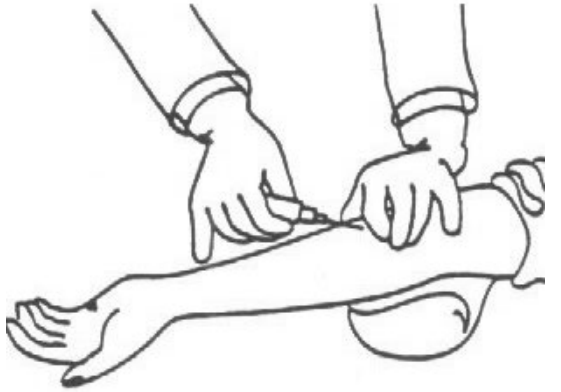
8. Slowly advance the puncture needle until pulsatile arterial blood emerges from the rear end of the puncture needle

9. Insert the guide wire into the vessel in the direction of the artery course at least in the desired catheter length to be inserted



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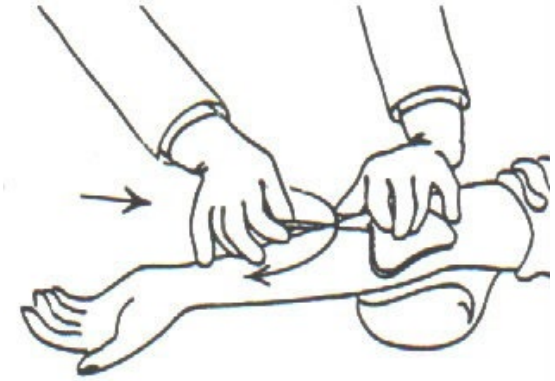
10. Remove the puncture needle while fixing the guidewire

11. Insert the catheter into the vessel up to the desired site. During insertion, the catheter can be rotated slightly to facilitate penetration into the puncture site



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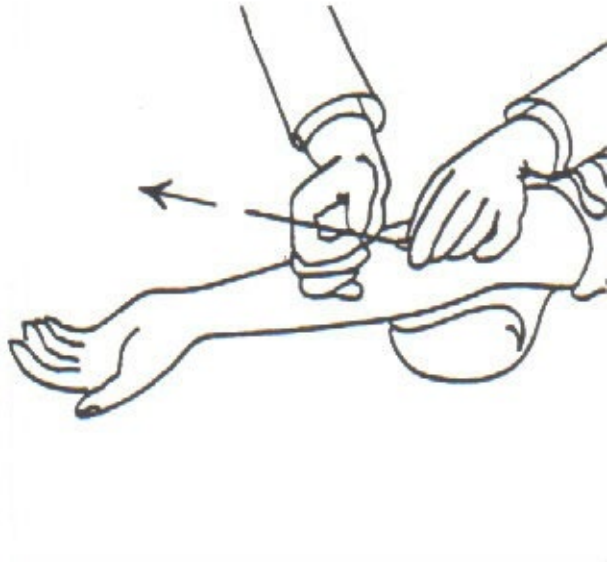
12. Pull back the guide wire while fixing the catheter

13. If necessary, the position of the catheter can be checked by appropriate imaging techniques



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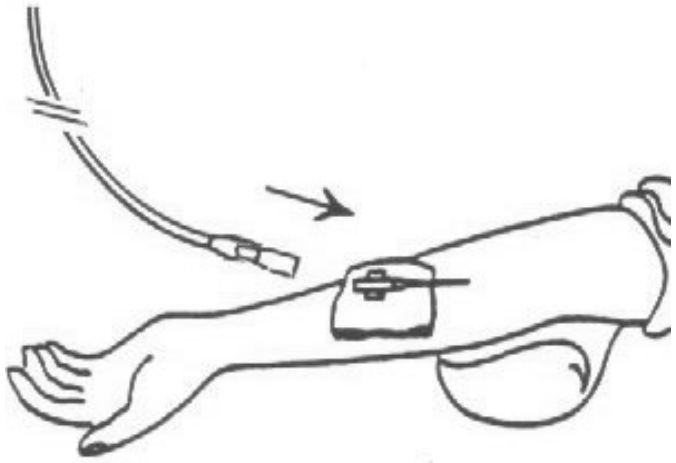
14. By default, a syringe can be used to draw blood for blood gas analysis
15. Connect an extension and / or additional components to the Luer-Lock connector
16. If necessary, fix the catheter with a skin suture
17. Carry out the appropriate investigation
18. After the application is completed, loosen the fixation, carefully pull the catheter out of the patient and protect the puncture site immediately afterwards (e.g. with gauze swab and bandage)



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Arterial Catheter Kits

MICROSELD® models

PTFE		
302 042	**4 cm x 0,7 mm**	**2 F**
302 062	6 cm x 0,7 mm	2 F
302 063	**6 cm x 1,0 mm**	**3 F**
302 083	**8 cm x 1,0 mm**	**3 F**
302 113	11 cm x 1,0 mm	3 F
302 084	8 cm x 1,3 mm	4 F
302 114	**11 cm x 1,3 mm**	**4 F**
302 154	15 cm x 1,3 mm	4 F
302 204	20 cm x 1,3 mm	4 F
302 115	11 cm x 1,7 mm	5 F
302 205	20 cm x 1,7 mm	5 F

PEBAX		
305 063	**6 cm x 1,0 mm**	**3 F**
305 083	**8 cm x 1,0 mm**	**3 F**
305 113	11 cm x 1,0 mm	3 F
305 114	**11 cm x 1,3 mm**	**4 F**

Other lengths are available on enquiry.

Most used sizes are highlighted in **bold**.

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Arterial Catheter Kits

intra special catheters

Summary

- Suitable for atraumatic puncture of peripheral arteries, for safe and simple delivery.
- Can be used for all operations where accurate blood pressure measurement is required, anaesthesia, intensive care and/or procedures to prevent vessel damage.
- Also suitable for monitoring of heart, circulation and pulmonary functions, blood gas analysis, as well as other forms of therapy such as intra-arterial infusion therapy.
- Needle size with small calibre (same or similar) as the catheter.
- PTFE is histocompatible (body neutral) and prevents deposits of blood components (fibrin, erythrocytes, leucocytes) at the catheter wall. Suitable for long term monitoring of > 48 hours.

Important 

Indications, Contraindications, Risks, Side Effects and Warnings are mentioned in IFU.

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Advantages of catheters

- Very good tip forming and shape of catheter.
  Tip area should be as straight as possible to enable the catheter to swim freely inside the artery.
- Tip-size smoothly adapted to diameter of the guidewire.
- Anti-kink-protection
- Movable wings
- Clear hub

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Packaging

- Kits come with peel package
- 20 pcs. in one box
- 10 boxes in one outer carton box (200 pcs.)
- Each box of 20 pcs. contains one IFU

- Singe use only
- To be used only if package is not damaged

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Labelling

- Labelling with symbols to ISO standard
- Other text in English language

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Sterilization

- Sterilization by ETO (Ethylene oxide)
- No re-sterilization possible
- Temperatures during process are not so high and therefor this type of sterilization is suited for used materials

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Storage conditions

- 10°C – 35°C
- 30-70% relative humidity
- Dry
- No direct sunlight

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For additional information and training courses for users or healthcare professionals, please contact us at:

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Thank you for your attention!