Single-lumen radiopaque central venous catheter made of polyurethane, with a catheter length of 32cm, 45cm or 70cm (length indicated on package) and permanent length markings at 5cm intervals. For vein puncture, a Braunule-MT is enclosed with a plastic capillary.

**Materials Used**

ABS, FEP, PA, PE, PP, PTP, PUR, SB, SBS, stainless steel.

**Areas of application**

For catheterization of the superior vena cava in long-term infusion therapy or parental nutrition administration of highly osmolar solutions of vein irritants, administration of medication and infusion solutions, for intermittent or continuous supervision of central venous pressure, as well as collection of blood, where peripheral vein puncture is impossible due to shock, injury to the extremities or lack of peripheral veins.

**Contraindications**

Inflammatory changes of the skin in the puncture area, severe disturbance of coagulation or therapy with anticoagulants, difficult anatomical conditions, e.g. large goiter, tumors in the area of the neck, high grade pulmonary emphysema, kyphoscoliosis and postoperative changes in the area of puncture.

**Risks**

Complications arising due to incorrect puncture and incorrect catheter placement are pneumothorax, haemothroax, infusion hydrothorax, chylothroax, damage to the brachial plexus, phrenic nerve lesion, thoracic duct injuries, haematoma at the puncture site, incorrect intracardial positioning with cardiac arrhythmias, danger of atrial rupture, development of endocarditis due to mechanical irritation, arterial injuries due to incorrect puncturing technique, catheter-induced thrombosis and thrombophlebitis of the superior vena cava, thromboembolism, catheter sepsis.

**Warnings**

- Use strictly aseptic methods.
- Puncture lege artis in the head-down position to avoid air embolism. – Check position of catheter tip by X-ray; if the tip position is uncertain, inject contrast medium or carry out intra-arterial ECG.
- Securely fasten the catheter. – Look after the catheter daily using strictly aseptic methods. – Replace dirty and soaked-through dressings in good time.
- To reduce the risk of infection, blood-sampling should as a rule be carried out separately from infusions and administration of medication.
- After transfusions or blood sampling, rinse the catheter thoroughly with physiological electrolyte solution.
- Ensure a secure connect to the catheter because there is a danger of air embolism if the catheter becomes disconnected, only use infusion sets with luer lock connectors.
- Do not let the polyurethane catheter come into contact with acetone solution as this reduces catheter stability and leads to leakages.
- Do not resterilize use only if packaging is intact.
Storage

The packaged product must be stored at a temperature of between 15°C and 25°C and at a relative humidity of between 50% and 60% until usage. Protect the packed products from direct sunlight. With proper storage the product may be used until the expiry date given on the packaging.

Caution

Apply strict aseptic techniques. Carry out puncture lege artis in a head-down position to avoid air amolisms.

Directions

1. After degreasing and thoroughly disinfecting the skin, remove the puncture cannula (A) from the peel package. Remove the protective cap with a light screwing action.
2. After successful puncture, pull back and remove the steel cannula from the Braunüle (A).

Caution

Do not reinsert the steel cannula into the plastic cannula, as this can be cut by the sharp edge, possibly leading to a catheter embolism.

3. Take the catheter with the protective cover (B) out of the peel package, remove the protective cap from the yellow connecting piece and connect to the plastic cannula
4. To insert, push forward the catheter (B) alternately with the protective cover and extend the protective cover again. To prevent the catheter moving to the side, hold it close to the plastic cannula.
5. After placing the catheter (B), pull the red socket from the yellow connecting piece and remove the protective cover backwards over the catheter attachment.
6. Detach the two-piece yellow connecting piece from the plastic cannula, separate the two halves by pressing together the grips and remove the catheter.
7. Pull the plastic cannula back over the catheter (B) and out of the vein, and turn the Luer lock coupling ring of the catheter into the attachment of the plastic cannula.
8. After x-ray control of the position, remove the mandarin from the catheter (B) and connect the prepared infusion.

Caution

Make a secure connection with the catheter, as there is a danger of air embolism, if it becomes disconnected. Only use infusion devices with a Luer lock connection.

9. Fasten the catheter (B) using a slit plaster

Caution

Do not directly sew on the catheter tube as the catheter might sheer off and be flushed into the vein, possibly resulting in a catheter embolism.