

VASCULAR ACCESS

BECAUSE EVERY LIFE
DESERVES AFFORDABLE CARE



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Because vascular access is the gateway to quality of life, Nipro is dedicated to providing the best possible care to every vascular access.

Given that the arteriovenous fistula (AVF) is the method of choice for vascular access¹, special care should be taken to ensure its survival. Among others, the following needle specifications for the prevention of vascular access complications are suggested:¹

- First few cannulations of a new fistula should be performed with a 17 G needle^{1,2,4}. At a later stage, the needle gauge may be adapted to the patient's blood flow. A lower needle gauge can withstand higher blood flow rate.²

Recommended needle gauge	Blood flow rate	Color
17	< 300 ml/min	Orange
16	300-350 ml/min	Green
15	350-450 ml/min	Yellow
14	> 450 ml/min	Purple

- Needle length adapted to any fistula depth.
- Turnable wings to improve the needle positioning.
- Back eye on arterial needle to optimize the blood flow and minimize the risk of aspiration to the vessel wall.²

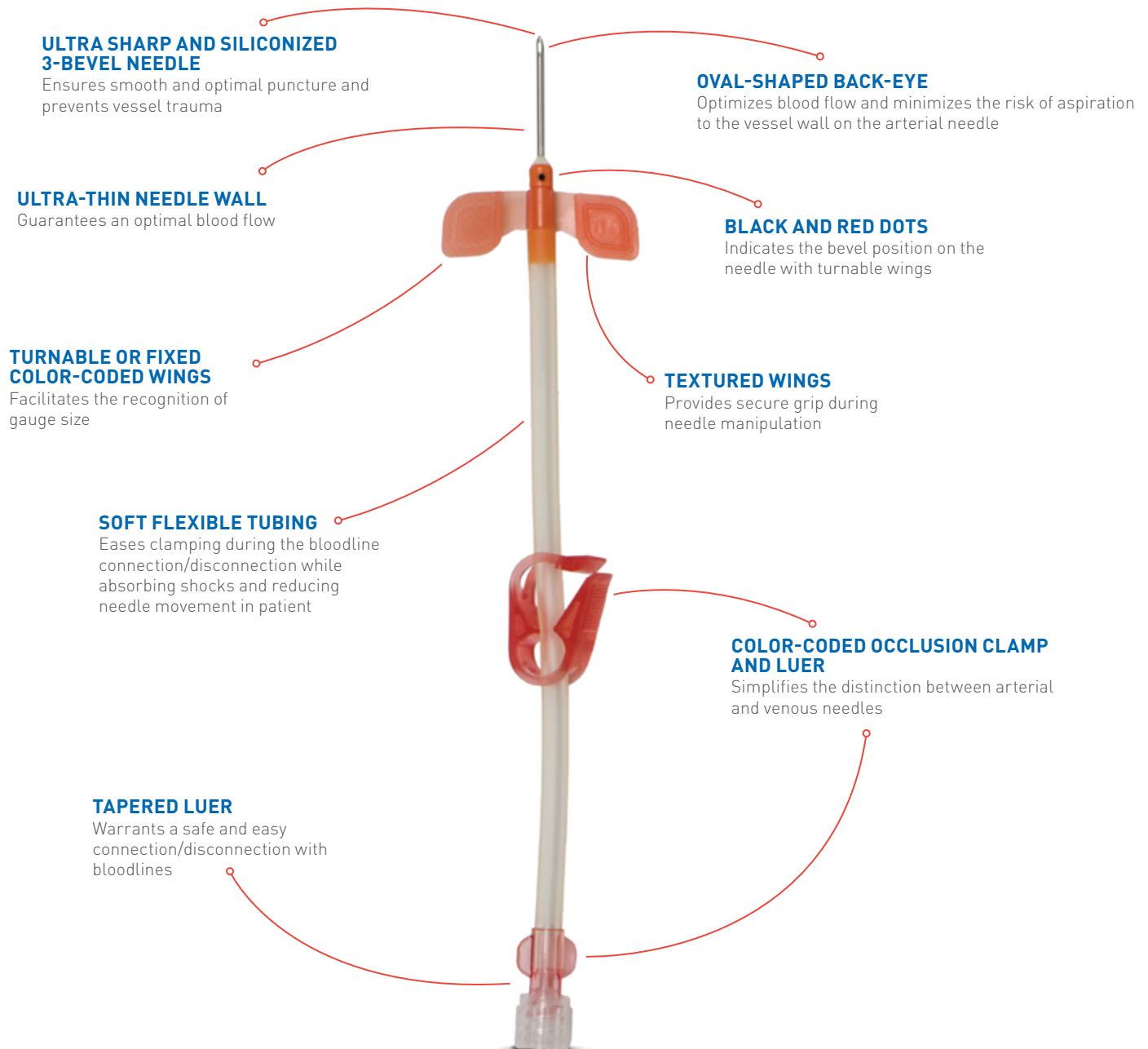
In order to meet individual patient requirements, Nipro offers a wide range of arteriovenous fistula needles and arteriovenous catheter needles with lengths from 20 to 38 mm and gauges from 14 G to 17 G depending on the desired specifications.

REGULAR NEEDLES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION

STANDARD, 2-PACK, SINGLE NEEDLE

OUTSTANDING QUALITY AND PERFORMANCE FROM YEARS OF EXPERIENCE AND RIGID MANUFACTURING CONTROL



STANDARD, 2-PACK

STANDARD, 2-PACK, AND SINGLE NEEDLE ADVANTAGES

- Easy to handle AVF needles
- Smooth cannulation with ultra sharp needle
- Optimal blood flow

SPECIFICATIONS

Standard Needles		2-Pack Needles		Single Needles	Size (Gauge)	Needle Length (mm)	Tube Length (mm)	Color
Arterial Needle*	Venous Needle*	1 Arterial Needle* + 1 Venous Needle*	2 Arterials Needles*	SGN*				
AV-1415-HTC-15R-GT	AV-1415-TC-15B-GT	AV2P-1415-T-15-GT	AV2P-1415-HT-15-GT	N.A.	14	15	150	■
AV-1420-HTC-15R-GT	AV-1420-TC-15B-GT	AV2P-1420-T-15-GT	AV2P-1420-HT-15-GT	SGN1420-HTC-15RB-GT	14	20	150	■
AV-1425-HTC-15R-GT	AV-1425-TC-15B-GT	AV2P-1425-T-15-GT	AV2P-1425-HT-15-GT	SGN1425-HTC-15RB-GT	14	25	150	■
AV-1432-HTC-15R-GT	AV-1432-TC-15B-GT	AV2P-1432-T-15-GT	AV2P-1432-HT-15-GT	SGN1432-HTC-15RB-GT	14	32	150	■
AV-1415-HTC-30R-GT	AV-1415-TC-30B-GT	AV2P-1415-T-30-GT	AV2P-1415-HT-30-GT	N.A.	14	15	300	■
AV-1420-HTC-30R-GT	AV-1420-TC-30B-GT	AV2P-1420-T-30-GT	AV2P-1420-HT-30-GT	SGN1420-HTC-30RB-GT	14	20	300	■
AV-1425-HTC-30R-GT	AV-1425-TC-30B-GT	AV2P-1425-T-30-GT	AV2P-1425-HT-30-GT	SGN1425-HTC-30RB-GT	14	25	300	■
AV-1432-HTC-30R-GT	AV-1432-TC-30B-GT	AV2P-1432-T-30-GT	AV2P-1432-HT-30-GT	SGN1432-HTC-30RB-GT	14	32	300	■
AV-1515-HTC-15R-GT	AV-1515-TC-15B-GT	AV2P-1515-T-15-GT	AV2P-1515-HT-15-GT	N.A.	15	15	150	■
AV-1520-HTC-15R-GT	AV-1520-TC-15B-GT	AV2P-1520-T-15-GT	AV2P-1520-HT-15-GT	SGN1520-HTC-15RB-GT	15	20	150	■
AV-1525-HTC-15R-GT	AV-1525-TC-15B-GT	AV2P-1525-T-15-GT	AV2P-1525-HT-15-GT	SGN1525-HTC-15RB-GT	15	25	150	■
AV-1532-HTC-15R-GT	AV-1532-TC-15B-GT	AV2P-1532-T-15-GT	AV2P-1532-HT-15-GT	SGN1532-HTC-15RB-GT	15	32	150	■
AV-1515-HTC-30R-GT	AV-1515-TC-30B-GT	AV2P-1515-T-30-GT	AV2P-1515-HT-30-GT	N.A.	15	15	300	■
AV-1520-HTC-30R-GT	AV-1520-TC-30B-GT	AV2P-1520-T-30-GT	AV2P-1520-HT-30-GT	SGN1520-HTC-30RB-GT	15	20	300	■
AV-1525-HTC-30R-GT	AV-1525-TC-30B-GT	AV2P-1525-T-30-GT	AV2P-1525-HT-30-GT	SGN1525-HTC-30RB-GT	15	25	300	■
AV-1532-HTC-30R-GT	AV-1532-TC-30B-GT	AV2P-1532-T-30-GT	AV2P-1532-HT-30-GT	SGN1532-HTC-30RB-GT	15	32	300	■
AV-1615-HTC-15R-GT	AV-1615-TC-15B-GT	AV2P-1615-T-15-GT	AV2P-1615-HT-15-GT	N.A.	16	15	150	■
AV-1620-HTC-15R-GT	AV-1620-TC-15B-GT	AV2P-1620-T-15-GT	AV2P-1620-HT-15-GT	SGN1620-HTC-15RB-GT	16	20	150	■
AV-1625-HTC-15R-GT	AV-1625-TC-15B-GT	AV2P-1625-T-15-GT	AV2P-1625-HT-15-GT	SGN1625-HTC-15RB-GT	16	25	150	■
AV-1632-HTC-15R-GT	AV-1632-TC-15B-GT	AV2P-1632-T-15-GT	AV2P-1632-HT-15-GT	SGN1632-HTC-15RB-GT	16	32	150	■
AV-1615-HTC-30R-GT	AV-1615-TC-30B-GT	AV2P-1615-T-30-GT	AV2P-1615-HT-30-GT	N.A.	16	15	300	■
AV-1620-HTC-30R-GT	AV-1620-TC-30B-GT	AV2P-1620-T-30-GT	AV2P-1620-HT-30-GT	SGN1620-HTC-30RB-GT	16	20	300	■
AV-1625-HTC-30R-GT	AV-1625-TC-30B-GT	AV2P-1625-T-30-GT	AV2P-1625-HT-30-GT	SGN1625-HTC-30RB-GT	16	25	300	■
AV-1632-HTC-30R-GT	AV-1632-TC-30B-GT	AV2P-1632-T-30-GT	AV2P-1632-HT-30-GT	SGN1632-HTC-30RB-GT	16	32	300	■
AV-1715-HTC-15R-GT	AV-1715-TC-15B-GT	AV2P-1715-T-15-GT	AV2P-1715-HT-15-GT	N.A.	17	15	150	■
AV-1720-HTC-15R-GT	AV-1720-TC-15B-GT	AV2P-1720-T-15-GT	AV2P-1720-HT-15-GT	SGN1720-HTC-15RB-GT	17	20	150	■
AV-1725-HTC-15R-GT	AV-1725-TC-15B-GT	AV2P-1725-T-15-GT	AV2P-1725-HT-15-GT	SGN1725-HTC-15RB-GT	17	25	150	■
AV-1732-HTC-15R-GT	AV-1732-TC-15B-GT	AV2P-1732-T-15-GT	AV2P-1732-HT-15-GT	SGN1732-HTC-15RB-GT	17	32	150	■
AV-1715-HTC-30R-GT	AV-1715-TC-30B-GT	AV2P-1715-T-30-GT	AV2P-1715-HT-30-GT	N.A.	17	15	300	■
AV-1720-HTC-30R-GT	AV-1720-TC-30B-GT	AV2P-1720-T-30-GT	AV2P-1720-HT-30-GT	SGN1720-HTC-30RB-GT	17	20	300	■
AV-1725-HTC-30R-GT	AV-1725-TC-30B-GT	AV2P-1725-T-30-GT	AV2P-1725-HT-30-GT	SGN1725-HTC-30RB-GT	17	25	300	■
AV-1732-HTC-30R-GT	AV-1732-TC-30B-GT	AV2P-1732-T-30-GT	AV2P-1732-HT-30-GT	SGN1732-HTC-30RB-GT	17	32	300	■

* Needles with turnable wings. Arterial and venous needles are also available with fixed wings instead of turnable wings. Please contact your local office for other specifications, order quantities, and availability.



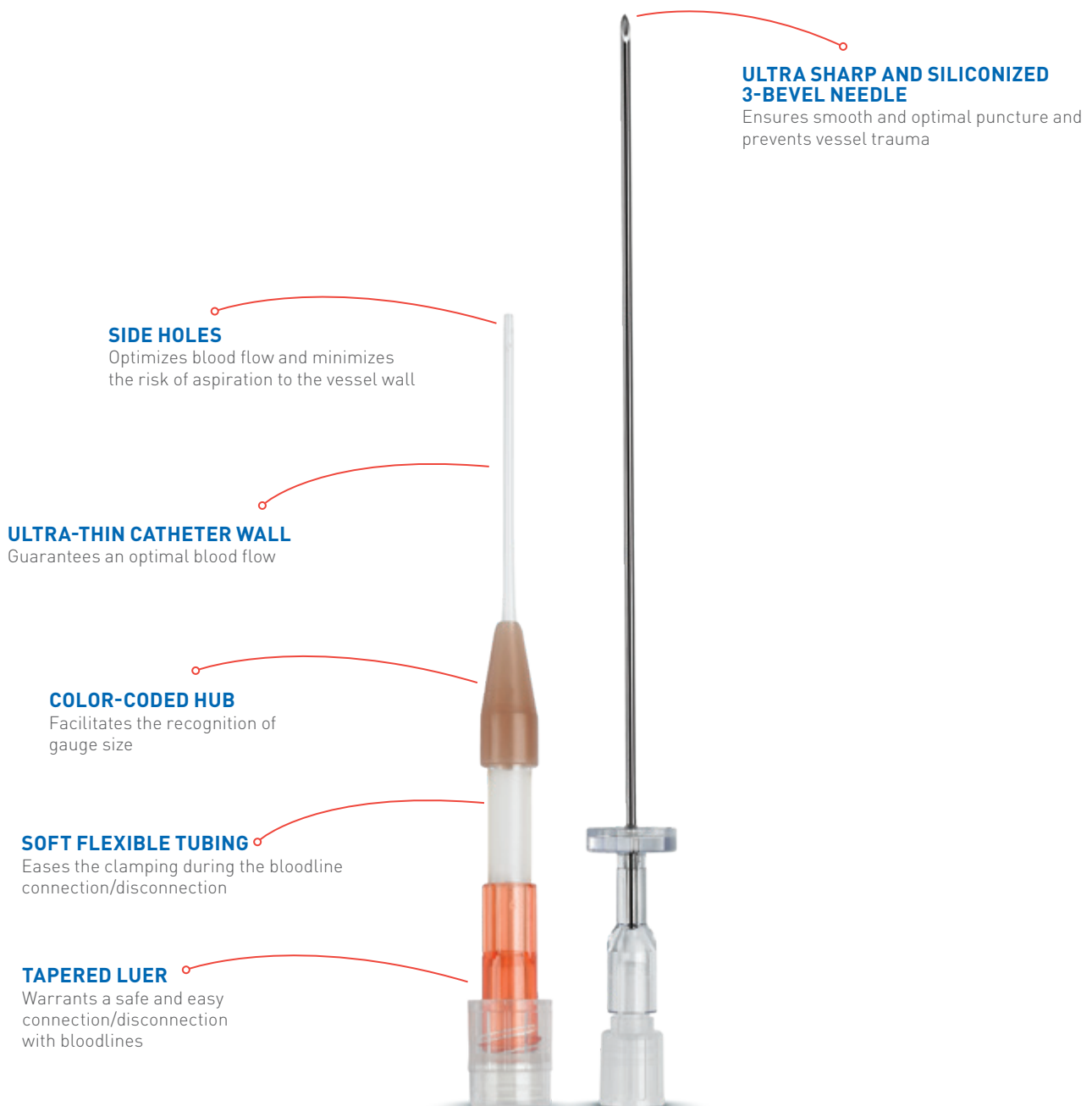
SINGLE NEEDLE

REGULAR NEEDLES

- NOT MADE WITH LATEX
- GAMMA STERILIZATION

CATHETER NEEDLE














FOR A COMFORTABLE AND FLEXIBLE TREATMENT



CATHETER NEEDLE ADVANTAGES

- Plastic fistula needles may prevent vascular access complications¹
- Safe cannulation during fistula maturation¹
- Decreased risk of perforation¹
- Greater patient mobility
- Better option for patients allergic to metal

SPECIFICATIONS

AVF Catheter Needle	Size (Gauge)	Catheter Length (mm)	Color
AV-CATH-1420-GJ	14	20	
AV-CATH-1425-GJ	14	25	
AV-CATH-1432-GJ	14	32	
AV-CATH-1438-GJ	14	38	
AV-CATH-1525-GJ	15	25	
AV-CATH-1532-GJ	15	32	
AV-CATH-1538-GJ	15	38	
AV-CATH-1625-GJ	16	25	
AV-CATH-1632-GJ	16	32	
AV-CATH-1638-GJ	16	38	
AV-CATH-1725-GJ	17	25	
AV-CATH-1732-GJ	17	32	
AV-CATH-1738-GJ	17	38	

Please contact your local office for other specifications, order quantities, and availability.



FUNDAMENTAL PROTECTION AGAINST NEEDLESTICK INJURIES (NSI)

Every year, healthcare professionals are affected by needlestick and sharps injuries. The World Health Organization estimates that 3 of the 35 million healthcare professionals worldwide are exposed to bloodborne pathogens each year as a result of these injuries.³

Almost 50% of injuries are not reported which leads to a significant under-estimation.⁴

Since 1 in 5 patients in dialysis centers globally are considered “at risk” for HIV and Hepatitis B and C, NSI are a major occupational hazard for both healthcare professionals and hospitals.⁵

EXTRA PRESSURE ON HEALTHCARE PROFESSIONALS

- After a NSI and before contamination is confirmed or denied:
 - Stress and decreased productivity
- For those who contract a disease as a result of their injury:
 - Lifelong consequences
 - Physical and emotional adjustment
 - Financial burdens
 - Inability to continue working in the healthcare profession in some cases

ADDITIONAL BURDENS FOR HOSPITALS

- Costs for testing viral contamination, compensation, and leave of absence
- Loss of professional knowledge and time spent training new persons

NSI may be prevented by the use of medical devices that incorporate “safety-engineered protection mechanisms” and the elimination of the unnecessary use of sharps devices. The recommendations of Clinical Guidelines for the prevention of contamination are as follows: ⁶

- The safety mechanism must be an integral part of the safety device, not a separate accessory
- The activation of the safety mechanism must be convenient and allow the caregiver to maintain appropriate control over the procedure
- A single-handed or automatic activation is preferable
- The activation of the safety mechanism must manifest itself by means of an audible, tactile, or visual sign to the health professional
- The safety mechanisms should not be easily reversible once activated

SAFETY NEEDLES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION



SAFETOUCH™ AVF NEEDLE

FOR A SAFE AND SUCCESSFUL TREATMENT

ULTRA SHARP AND SILICONIZED 3-BEVEL NEEDLE

Ensures smooth and optimal puncture and prevents vessel trauma

BLACK AND RED DOTS

Indicates the bevel position on the needle with turnable wings

TURNABLE OR FIXED COLOR-CODED WINGS

Facilitates the recognition of gauge size

SAFETOUCH SAFETY MECHANISM

Prevents NSI

SOFT FLEXIBLE TUBING

Eases clamping during the bloodline connection/disconnection while absorbing shocks and reducing needle movement in patient

TAPERED LUER

Warrants a safe and easy connection/disconnection with bloodlines

OVAL-SHAPED BACK-EYE

Optimizes blood flow and minimizes the risk of aspiration to the vessel wall on the arterial needle

ULTRA-THIN NEEDLE WALL

Guarantees an optimal blood flow

TEXTURED WINGS

Provides secure grip during needle manipulation

COLOR-CODED OCCLUSION CLAMP AND LUER

Eases the distinction between arterial and venous needles

SAFETOUCH™ AVF NEEDLE FEATURES

- Reduced risk of needle stick injury
- Non-reversible mechanism
- Active safety feature using a one-handed technique
- Secured locking confirmed by an audible and tactile click
- Unique locking mechanism

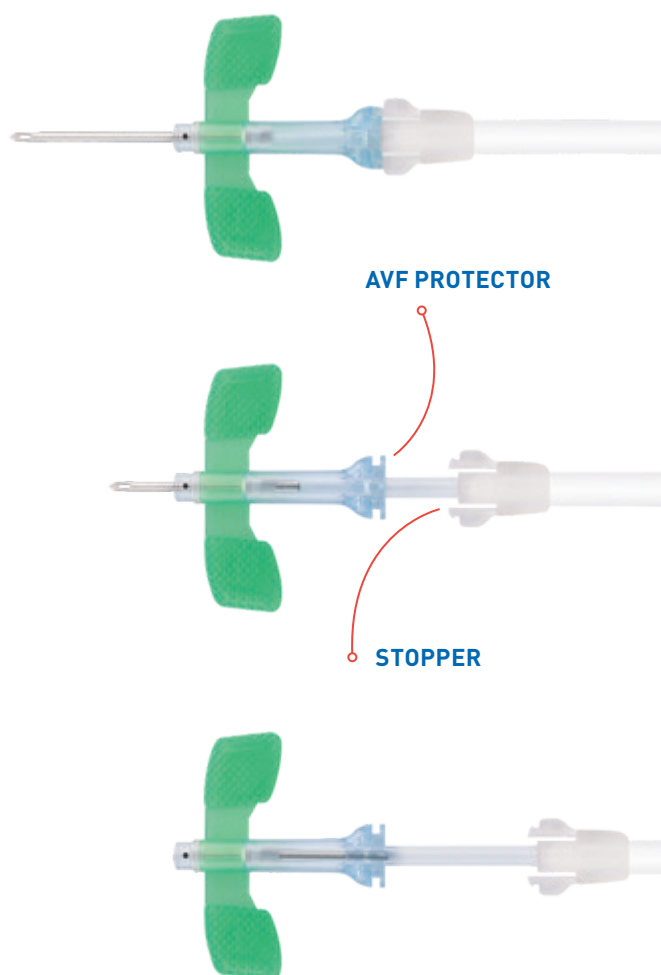
SAFETOUCH™ AVF NEEDLE SAFETY MECHANISM

- Hold down the wing protector and/or the wings with one hand
- With the other hand, release the lock by pressing in both sides of the stopper
- Slide the stopper forward until it becomes completely locked with an audible or tactile click

SPECIFICATIONS

Arterial Needle*	Venous Needle*	Size (Gauge)	Needle Length (mm)	Tube Length (mm)	Color
AVSF1420-HTC-15RGT	AVSF1420-TC-15B-GT	14	20	150	■
AVSF1425-HTC-15RGT	AVSF1425-TC-15B-GT	14	25	150	■
AVSF1432-HTC-15RGT	AVSF1432-TC-15B-GT	14	32	150	■
AVSF1420-HTC-30RGT	AVSF1420-TC-30B-GT	14	20	300	■
AVSF1425-HTC-30RGT	AVSF1425-TC-30B-GT	14	25	300	■
AVSF1432-HTC-30RGT	AVSF1432-TC-30B-GT	14	32	300	■
AVSF1520-HTC-15RGT	AVSF1520-TC-15B-GT	15	20	150	■
AVSF1525-HTC-15RGT	AVSF1525-TC-15B-GT	15	25	150	■
AVSF1532-HTC-15RGT	AVSF1532-TC-15B-GT	15	32	150	■
AVSF1520-HTC-30RGT	AVSF1520-TC-30B-GT	15	20	300	■
AVSF1525-HTC-30RGT	AVSF1525-TC-30B-GT	15	25	300	■
AVSF1532-HTC-30RGT	AVSF1532-TC-30B-GT	15	32	300	■
AVSF1620-HTC-15RGT	AVSF1620-TC-15B-GT	16	20	150	■
AVSF1625-HTC-15RGT	AVSF1625-TC-15B-GT	16	25	150	■
AVSF1632-HTC-15RGT	AVSF1632-TC-15B-GT	16	32	150	■
AVSF1620-HTC-30RGT	AVSF1620-TC-30B-GT	16	20	300	■
AVSF1625-HTC-30RGT	AVSF1625-TC-30B-GT	16	25	300	■
AVSF1632-HTC-30RGT	AVSF1632-TC-30B-GT	16	32	300	■
AVSF1720-HTC-15RGT	AVSF1720-TC-15B-GT	17	20	150	■
AVSF1725-HTC-15RGT	AVSF1725-TC-15B-GT	17	25	150	■
AVSF1732-HTC-15RGT	AVSF1732-TC-15B-GT	17	32	150	■
AVSF1720-HTC-30RGT	AVSF1720-TC-30B-GT	17	20	300	■
AVSF1725-HTC-30RGT	AVSF1725-TC-30B-GT	17	25	300	■
AVSF1732-HTC-30RGT	AVSF1732-TC-30B-GT	17	32	300	■

* Needles with turnable wings. Arterial and venous needles are also available with fixed wings instead of turnable wings. Please contact your local office for other specifications, order quantities, and availability.

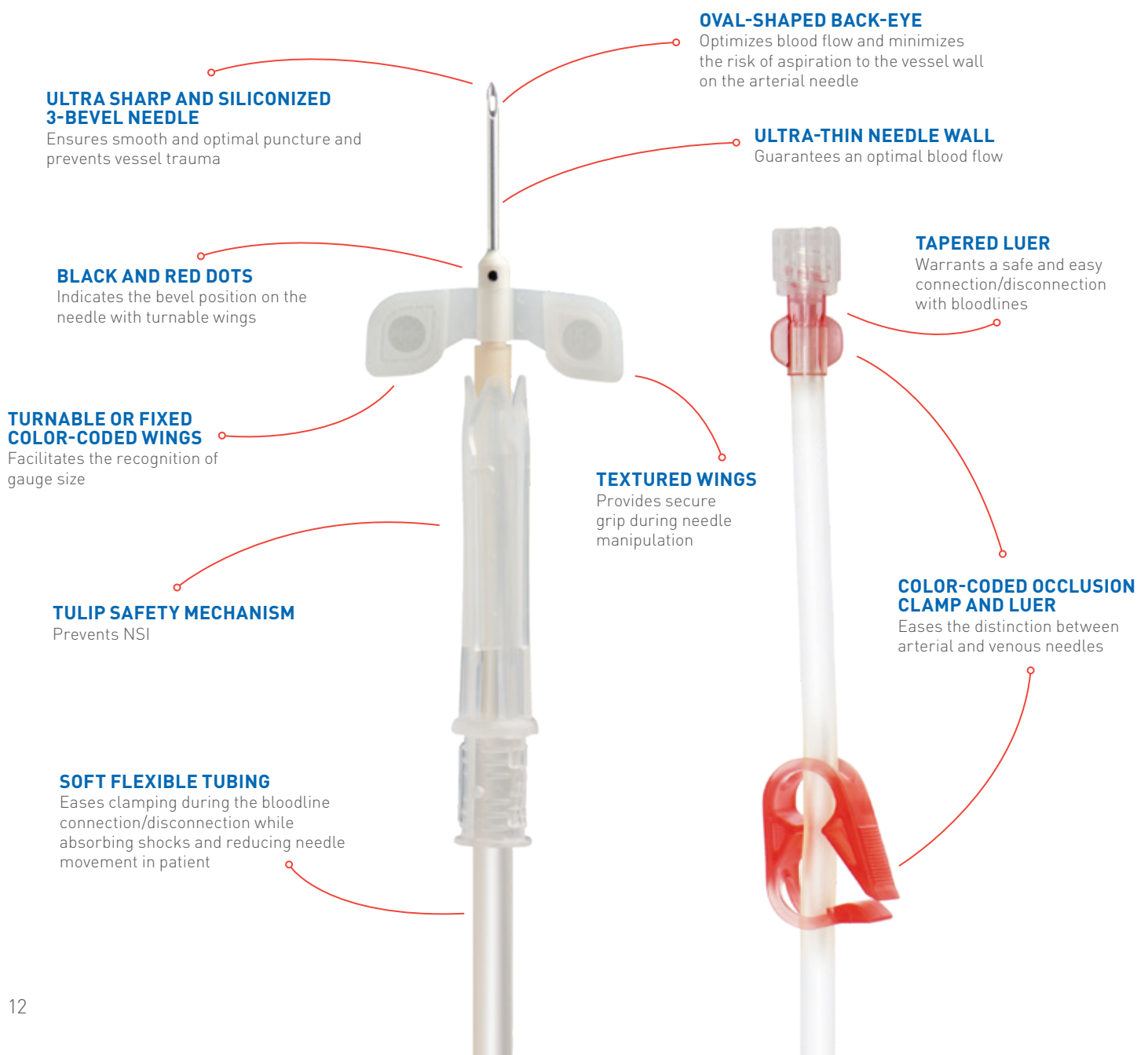


SAFETY NEEDLES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION

SAFETOUCH TULIP™

ERGONOMIC PROTECTION



SAFETOUCH TULIP™ FEATURES

- Reduced risk of needle stick injury
- Non-reversible mechanism
- Active safety feature using a one-handed technique
- Secured locking confirmed by a tactile click
- Unique patented locking mechanism*

SAFETOUCH TULIP™ SAFETY MECHANISM

- Hold down the wing protector and/or the wings with one hand
- With the other hand, slide the Tulip needle protector forward until two petals of the Tulip needle protector tip are positioned over the flattened wings
- Grasp the tubing at the base of the Tulip needle protector
- Pull on the tubing while pushing the Tulip needle protector forward, completely covering the needle until wings are secured in the Tulip needle protector with a tactile click

SPECIFICATIONS

Arterial Needle**	Venous Needle*	Size (Gauge)	Needle Length (mm)	Tube Length (mm)	Color
AVT1420-HTC-30R-GT	AVT1420-TC-30B-GT	14	20	300	Blue
AVT1425-HTC-30R-GT	AVT1425-TC-30B-GT	14	25	300	Blue
AVT1432-HTC-30R-GT	AVT1432-TC-30B-GT	14	32	300	Blue
AVT1520-HTC-30R-GT	AVT1520-TC-30B-GT	15	20	300	Yellow
AVT1525-HTC-30R-GT	AVT1525-TC-30B-GT	15	25	300	Yellow
AVT1532-HTC-30R-GT	AVT1532-TC-30B-GT	15	32	300	Yellow
AVT1620-HTC-30R-GT	AVT1620-TC-30B-GT	16	20	300	Green
AVT1625-HTC-30R-GT	AVT1625-TC-30B-GT	16	25	300	Green
AVT1632-HTC-30R-GT	AVT1632-TC-30B-GT	16	32	300	Green
AVT1720-HTC-30R-GT	AVT1720-TC-30B-GT	17	20	300	Orange
AVT1725-HTC-30R-GT	AVT1725-TC-30B-GT	17	25	300	Orange
AVT1732-HTC-30R-GT	AVT1732-TC-30B-GT	17	32	300	Orange

** Needles with turnable wings. Arterial and venous needles are also available with fixed wings instead of turnable wings. Please contact your local office for other specifications, order quantities, and availability.



* Patent active in Germany, France, United Kingdom, Italy, and Spain

SAFETY NEEDLES

- NOT MADE WITH LATEX
- GAMMA STERILIZATION

AVF SAFETOUCH™ CATHETER NEEDLE, AVF SAFETOUCH™ SINGLE NEEDLE CATHETER NEEDLE

SAFE AND EASY MANIPULATION TO INCREASE PATIENT COMFORT

ULTRA SHARP AND SILICONIZED 3-BEVEL NEEDLE

Ensures smooth and optimal puncture and prevents vessel trauma

SIDE HOLES ON PLASTIC TUBE

Optimizes blood flow and minimizes the risk of aspiration to the vessel wall

ULTRA-THIN CATHETER WALL

Guarantees an optimal blood flow

COLOR-CODED HUB

Facilitates the recognition of gauge size

SOFT FLEXIBLE TUBING

Eases the clamping during the bloodline connection

TAPERED LUER

Warrants a safe and easy connection/disconnection with bloodlines

SAFETOUCH SAFETY MECHANISM

Prevents NSI

VISIBLE AND TACTILE MARK

Indicates the bevel position

SAFETOUCH CATHETER NEEDLE ADVANTAGES

- Plastic fistula needles may prevent vascular access complications¹
- Reduced risk of needle stick injury
- Safe cannulation during fistula maturation¹
- Decreased risk of perforation¹
- Greater patient mobility
- Better option for patients allergic to metal

SAFETOUCH CATHETER NEEDLE, SAFETOUCH SINGLE NEEDLE CATHETER NEEDLE FEATURES

- Passive safety device
- Pre-removal activation: immediate shielding of needle upon withdrawal from catheter
- Non-reversible mechanism
- Unique patented locking mechanism

SPECIFICATIONS

AVF SAFETOUCH CATHETER NEEDLE

Catheter	Size (Gauge)	Catheter Length (mm)	Color
AV-SF-CATH -1420-GJ	14	20	Blue
AV-SF-CATH-1425-GJ	14	25	Blue
AV-SF-CATH-1432-GJ	14	32	Blue
AV-SF-CATH-1438-GJ	14	38	Blue
AV- SF-CATH-1525-GJ	15	25	Yellow
AV- SF-CATH-1532-GJ	15	32	Yellow
AV- SF-CATH-1538-GJ	15	38	Yellow
AV- SF-CATH-1625-GJ	16	25	Green
AV- SF-CATH-1632-GJ	16	32	Green
AV- SF-CATH-1638-GJ	16	38	Green
AV- SF-CATH-1725-GJ	17	25	Orange
AV- SF-CATH-1732-GJ	17	32	Orange
AV- SF-CATH-1738-GJ	17	38	Orange

Please contact your local office for other specifications, order quantities, and availability.

AVF SAFETOUCH AVF SINGLE NEEDLE CATHETER NEEDLE

Catheter	Size (Gauge)	Catheter Length (mm)	Color
SGNSF-CATH-1425-GJ	14	25	Blue
SGNSF-CATH-1432-GJ	14	32	Blue
SGNSF-CATH-1525-GJ	15	25	Yellow
SGNSF-CATH-1532-GJ	15	32	Yellow
SGNSF-CATH-1625-GJ	16	25	Green
SGNSF-CATH-1632-GJ	16	32	Green

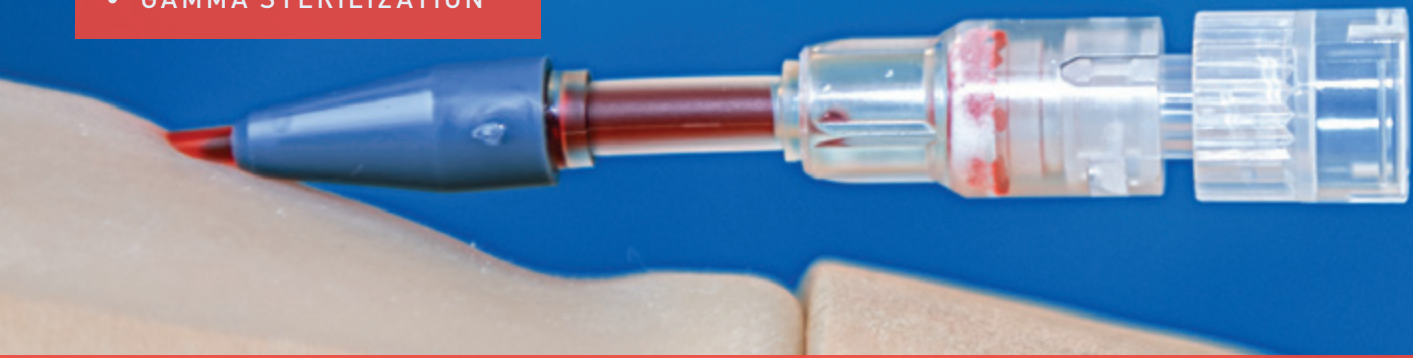
Please contact your local office for other specifications, order quantities, and availability.



AVF SAFETOUCH™ SINGLE NEEDLE CATHETER NEEDLE

SAFETY NEEDLES

- NOT MADE WITH LATEX
- GAMMA STERILIZATION



SAFETOUCH DIALYSIS CATH PLUS™

SIMPLIFY, SPEED UP, AND SECURE THE CONNECTION AND DISCONNECTION

ULTRA SHARP AND SILICONIZED 3-BEVEL NEEDLE

Ensures smooth and optimal puncture and prevents vessel trauma

SIDE HOLES ON PLASTIC TUBE

Optimizes blood flow and minimizes the risk of aspiration to the vessel wall

ULTRA-THIN CATHETER WALL

Guarantees an optimal blood flow

COLOR-CODED HUB

Facilitates the recognition of gauge size

AUTO PRIMING VALVE

Prevents blood spreading, reduces manipulations for the nurse, and facilitates connection/disconnection of the bloodlines

TAPERED LUER

Warrants a safe and easy connection/disconnection with bloodlines

PASSIVE, NON- REVERSIBLE SAFETY MECHANISM

Prevents NSI

VISIBLE AND TACTILE MARK

Indicates the bevel position

BLOOD FLASHBACK

Confirms the right position of the catheter in the vascular access

GREEN NEEDLE HUB

Designates the section of the catheter which has to be held during the puncture



SAFETOUCH DIALYSIS CATH PLUS

SAFETOUCH DIALYSIS CATH PLUS ADVANTAGES

Auto priming hemostatic valve with safety mechanism

- Prevents blood spreading
- Reduces manipulations for the nurse
- Improves flexibility of the nurse as clamping the tube is no longer necessary
- Facilitates connection/disconnection of the bloodlines
- Reduced risk of needle stick injury
- Plastic fistula needles may prevent vascular access complications¹
- Safe cannulation during fistula maturation¹
- Decreased risk of perforation¹
- Greater patient mobility
- Better option for patients allergic to metal

SAFETOUCH DIALYSIS CATH PLUS FEATURES

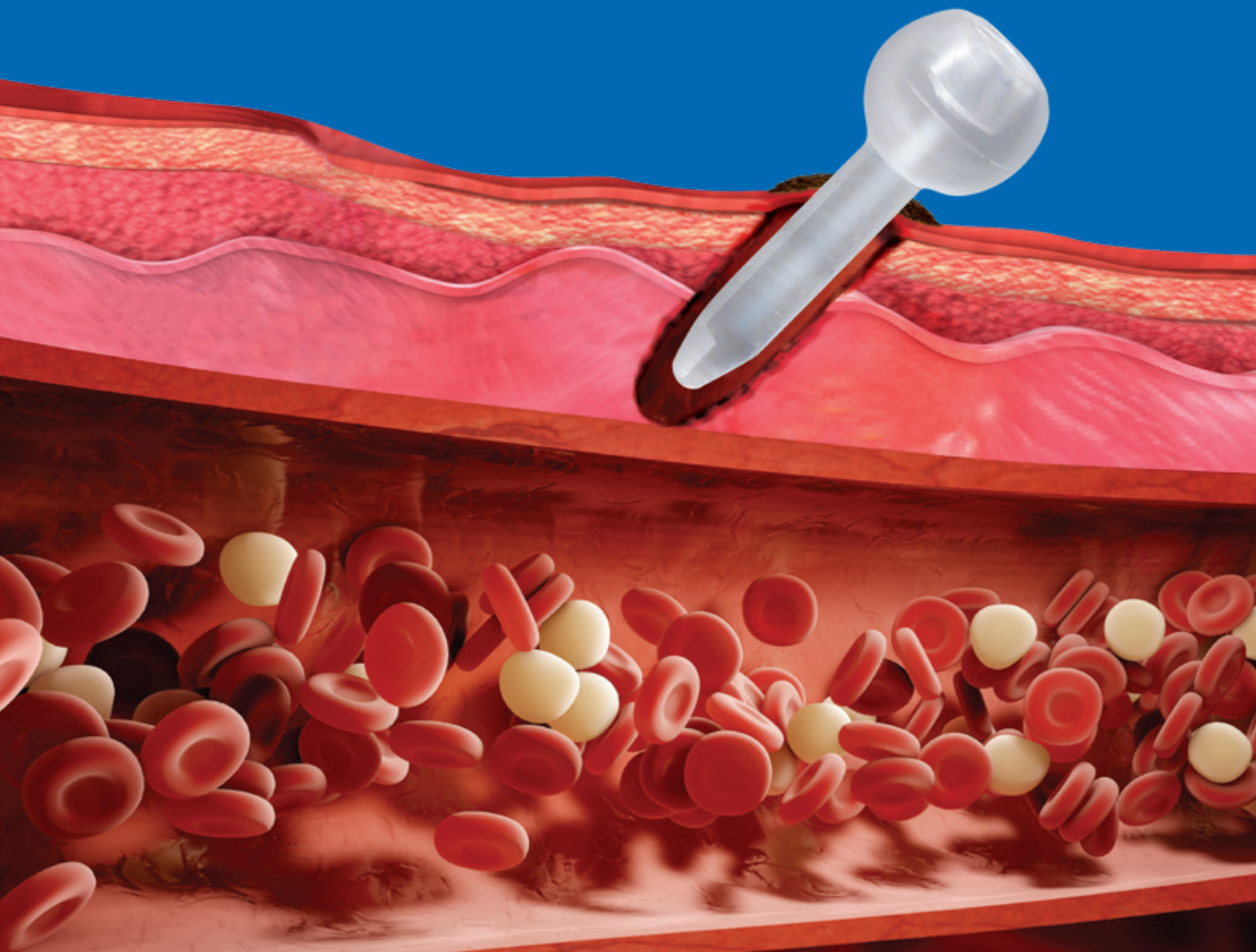
- Valve automatically activated upon withdrawal of the needle
- Passive safety device
- Pre-removal activation: immediate shielding of needle upon withdrawal from catheter
- Non-reversible safety mechanism
- Unique locking mechanism

SPECIFICATIONS

Safetouch DialysisCath Plus	Size (Gauge)	Catheter Length (mm)	Color
AVSF-CATHP-1525-GJ	15	25	■
AVSF-CATHP-1532-GJ	15	32	■
AVSF-CATHP-1538-GJ	15	38	■
AVSF-CATHP-1625-GJ	16	25	□
AVSF-CATHP-1632-GJ	16	32	□
AVSF-CATHP-1638-GJ	16	38	□
AVSF-CATHP-1725-GJ	17	25	■
AVSF-CATHP-1732-GJ	17	32	■
AVSF-CATHP-1738-GJ	17	38	■

Please contact your local office for other specifications, order quantities, and availability.





BUTTONHOLE TECHNIQUE: THE ULTIMATE COMBINATION OF SAFETY AND COMFORT

Experience how the buttonhole technique can help you maximize patient comfort, provide a better experience for your medical staff, and improve your center's efficiency.

Clinical Practice Guidelines recommend different procedures for the prevention of vascular access complications, including the use of the buttonhole technique:^{2,7}

- Reduces pain
- Reduces aneurysms
- Lowers vascular access failure
- Facilitates access for self-cannulation
- Improves appearance of the fistula

OPTIMIZED PATIENT COMFORT

- Reduces pain compared to rope-ladder technique ⁸⁻¹²
- Minimizes potential needling error and hematoma formation ^{11, 13, 14}
- Increases freedom for home dialysis patients, as they can self-cannulate
- Esthetical aspect: reduces aneurysma formation and only 2 puncture sites ¹¹
- Decreases bleeding time ^{5, 15, 16}
- Diminishes tunnel track deformation
- Reduces penetration force

IMPROVED OPERATIONAL EFFICIENCY

- Extends life of the vascular access ⁸
- Decreases amount of needle attempts ^{9, 17}
- Reduces workload: shorter bleeding time, prevents rebleeding, avoids hematoma and linked complications ^{5, 10, 15, 16}



SHARP NEEDLE

For standard cannulation techniques and first cannulation(s) for the buttonhole technique



DULL NEEDLE

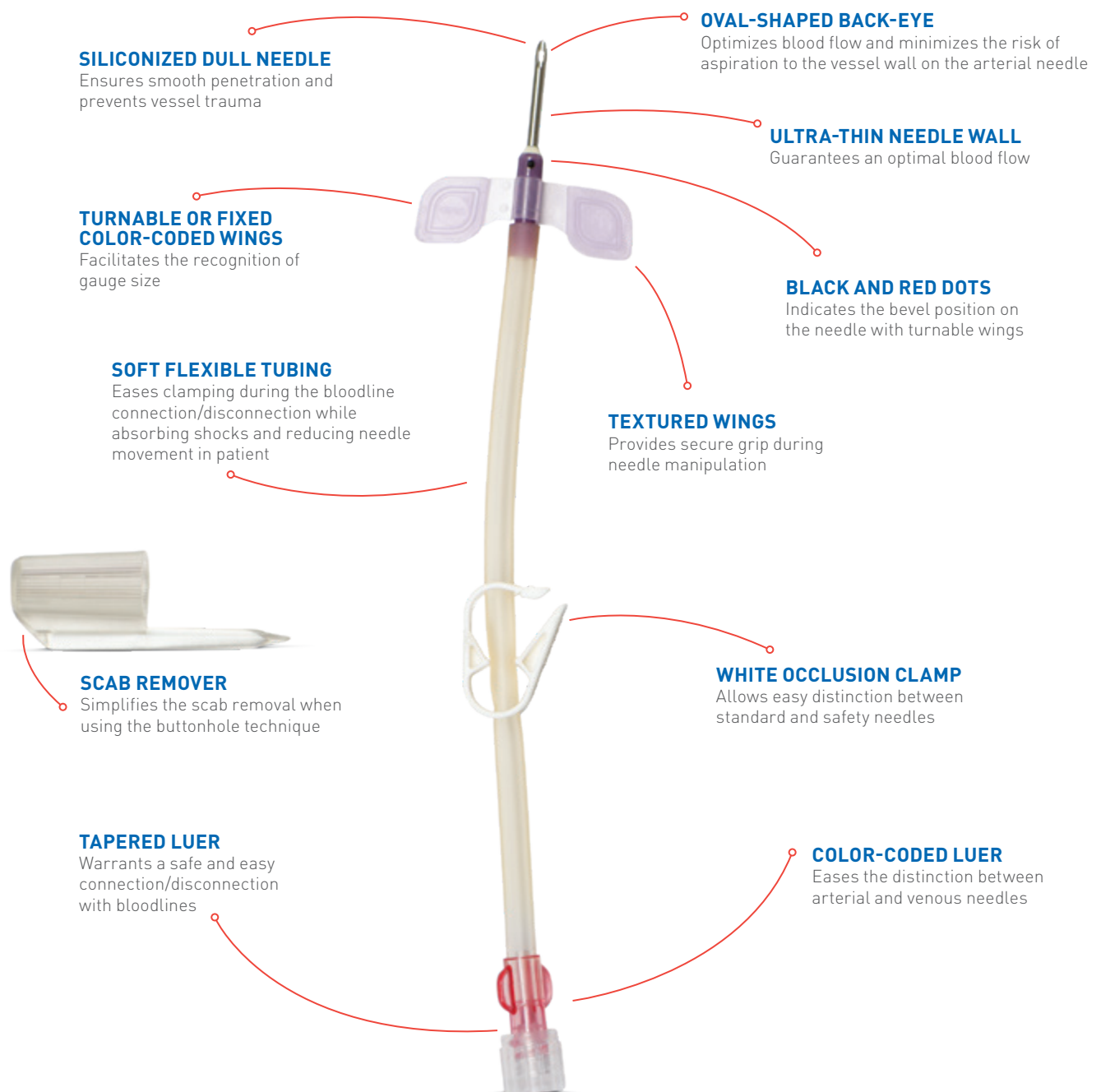
For the buttonhole technique

BIOHOLE NEEDLES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION

BIOHOLE™ NEEDLE, BIOHOLE™ SINGLE NEEDLE

REDUCED PAIN DURING ARTERIOVENOUS INSERTION



BIOHOLE™ NEEDLE

BIOHOLE AND BIOHOLE SINGLE NEEDLE ADVANTAGES

- Specially designed to be used with the buttonhole technique
- Easy to handle BioHole needle
- Optimal blood flow

SPECIFICATIONS

Arterial Needle*	Venous Needle*	Single Needle*	Size (Gauge)	Needle Length (mm)	Tube Length (mm)	Color
AVD1420-HTC-15R-GT	AVD1420-TC-15B-GT	SGD1420-HTC-15RBGT	14	20	150	■
AVD1425-HTC-15R-GT	AVD1425-TC-15B-GT	SGD1425-HTC-15RBGT	14	25	150	■
AVD1432-HTC-15R-GT	AVD1432-TC-15B-GT	SGD1432-HTC-15RBGT	14	32	150	■
AVD1420-HTC-30R-GT	AVD1420-TC-30B-GT	SGD1420-HTC-30RBGT	14	20	300	■
AVD1425-HTC-30R-GT	AVD1425-TC-30B-GT	SGD1425-HTC-30RBGT	14	25	300	■
AVD1432-HTC-30R-GT	AVD1432-TC-30B-GT	SGD1432-HTC-30RBGT	14	32	300	■
AVD1520-HTC-15R-GT	AVD1520-TC-15B-GT	SGD1520-HTC-15RBGT	15	20	150	■
AVD1525-HTC-15R-GT	AVD1525-TC-15B-GT	SGD1525-HTC-15RBGT	15	25	150	■
AVD1532-HTC-15R-GT	AVD1532-TC-15B-GT	SGD1532-HTC-15RBGT	15	32	150	■
AVD1520-HTC-30R-GT	AVD1520-TC-30B-GT	SGD1520-HTC-30RBGT	15	20	300	■
AVD1525-HTC-30R-GT	AVD1525-TC-30B-GT	SGD1525-HTC-30RBGT	15	25	300	■
AVD1532-HTC-30R-GT	AVD1532-TC-30B-GT	SGD1532-HTC-30RBGT	15	32	300	■
AVD1620-HTC-15R-GT	AVD1620-TC-15B-GT	SGD1620-HTC-15RBGT	16	20	150	■
AVD1625-HTC-15R-GT	AVD1625-TC-15B-GT	SGD1625-HTC-15RBGT	16	25	150	■
AVD1632-HTC-15R-GT	AVD1632-TC-15B-GT	SGD1632-HTC-15RBGT	16	32	150	■
AVD1620-HTC-30R-GT	AVD1620-TC-30B-GT	SGD1620-HTC-30RBGT	16	20	300	■
AVD1625-HTC-30R-GT	AVD1625-TC-30B-GT	SGD1625-HTC-30RBGT	16	25	300	■
AVD1632-HTC-30R-GT	AVD1632-TC-30B-GT	SGD1632-HTC-30RBGT	16	32	300	■
AVD1720-HTC-15R-GT	AVD1720-TC-15B-GT	SGD1720-HTC-15RBGT	17	20	150	■
AVD1725-HTC-15R-GT	AVD1725-TC-15B-GT	SGD1725-HTC-15RBGT	17	25	150	■
AVD1732-HTC-15R-GT	AVD1732-TC-15B-GT	SGD1732-HTC-15RBGT	17	32	150	■
AVD1720-HTC-30R-GT	AVD1720-TC-30B-GT	SGD1720-HTC-30RBGT	17	20	300	■
AVD1725-HTC-30R-GT	AVD1725-TC-30B-GT	SGD1725-HTC-30RBGT	17	25	300	■
AVD1732-HTC-30R-GT	AVD1732-TC-30B-GT	SGD1732-HTC-30RBGT	17	32	300	■

* Needles with turnable wings. Arterial and venous needles are also available with fixed wings instead of turnable wings. Please contact your local office for other specifications, order quantities, and availability.

BIOHOLE NEEDLES

form the perfect combination with the BioHole Buttonhole Device



BIOHOLE™ SINGLE NEEDLE

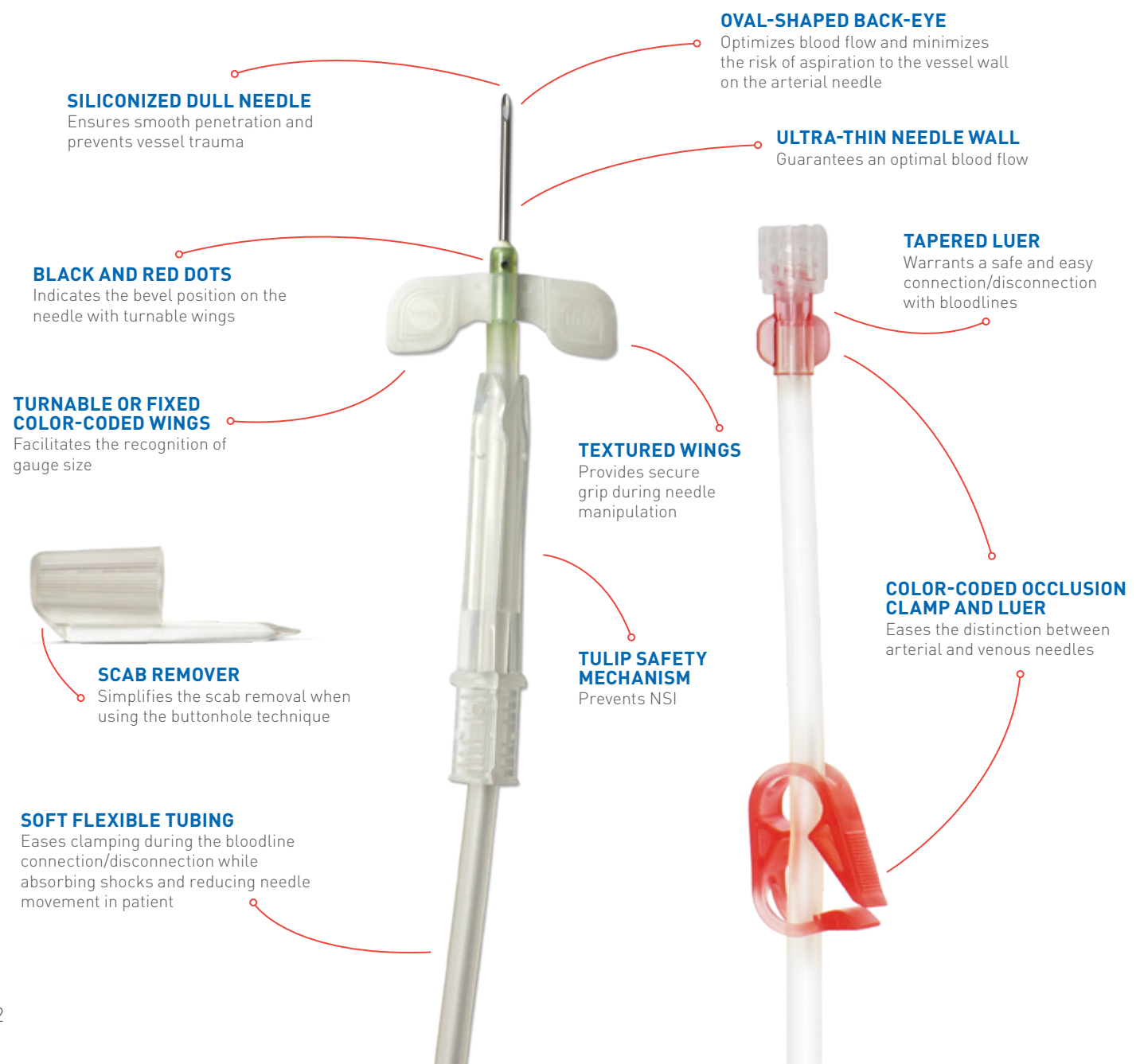
BIOHOLE NEEDLES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION



BIOHOLE™ SAFETOUCH TULIP™

REDUCED PAIN DURING ARTERIOVENOUS INSERTION WHILE ENSURING SAFETY FOR ALL



BIOHOLE SAFETOUCH TULIP NEEDLE FEATURES

- Specially designed to be used with the buttonhole technique
- Easy to handle
- Optimal blood flow
- Reduced risk of needle stick injury
- Non-reversible mechanism
- Active safety feature using a one-handed technique
- Secured locking confirmed by a tactile click*

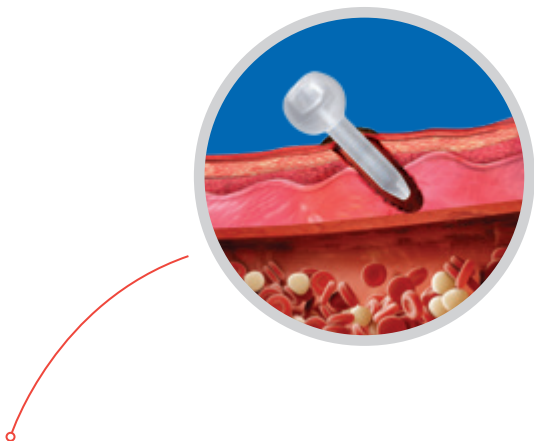
BIOHOLE SAFETOUCH TULIP SAFETY MECHANISM

- Hold down the wing protector and/or the wings with one hand
- With the other hand, slide the Tulip needle protector forward until two petals of the TULIP needle protector are positioned over the flattened wings
- Grasp the tubing at the base of the Tulip needle protector
- Pull on the tubing while pushing the Tulip needle protector forward, completely covering the needle until wings are secured in the Tulip needle protector with a tactile click

SPECIFICATIONS

Arterial Needle**	Venous Needle**	Size (Gauge)	Needle Length (mm)	Tube Length (mm)	Color
AVDT1425-HTC-30RGT	AVDT1425-TC-30BGT	14	25	300	Blue
AVDT1432-HTC-30RGT	AVDT1432-TC-30BGT	14	32	300	Blue
AVDT1525-HTC-30RGT	AVDT1525-TC-30BGT	15	25	300	Yellow
AVDT1532-HTC-30RGT	AVDT1532-TC-30BGT	15	32	300	Yellow
AVDT1625-HTC-30RGT	AVDT1625-TC-30BGT	16	25	300	Green
AVDT1632-HTC-30RGT	AVDT1632-TC-30BGT	16	32	300	Green
AVDT1725-HTC-30RGT	AVDT1725-TC-30BGT	17	25	300	Orange
AVDT1732-HTC-30RGT	AVDT1732-TC-30BGT	17	32	300	Orange

** Needles with turnable wings. Arterial and venous needles are also available with fixed wings instead of turnable wings. Please contact your local office for other specifications, order quantities, and availability.



BIOHOLE NEEDLES
form the perfect combination with
the BioHole Buttonhole Device



* Patent active in Germany, France, United Kingdom, Italy, and Spain

BIOHOLE NEEDLES

- NOT MADE WITH LATEX
- GAMMA STERILIZATION



BIOHOLE™ CATHETER NEEDLE

REDUCED PAIN AND INCREASED COMFORT DURING ARTERIOVENOUS INSERTION

SIDE HOLES

Optimizes blood flow and minimizes the risk of aspiration to the vessel wall

ULTRA-THIN CATHETER WALL

Guarantees a nearly painless catheter insertion and optimal blood flow

COLOR-CODED HUB

Facilitates the recognition of gauge size

SOFT FLEXIBLE TUBING

Eases the clamping during the bloodline connection/disconnection

TAPERED LUER

Warrants a safe and easy connection/disconnection with bloodlines

SILICONIZED DULL NEEDLE

Ensures smooth penetration and prevents vessel trauma



BIOHOLE CATHETER NEEDLE ADVANTAGES

- Plastic fistula needles may prevent vascular access complications ¹
- Safe cannulation during fistula maturation ¹
- Decreased risk of perforation ¹
- Greater patient mobility
- Better option for patients allergic to metal

SPECIFICATIONS

Catheter Needle	Size (Gauge)	Catheter Length (mm)	Color
AV-D-CATH-1425-GJ	14	25	■
AV-D-CATH-1432-GJ	14	32	■
AV-D-CATH-1438-GJ	14	38	■
AV-D-CATH-1525-GJ	15	25	■
AV-D-CATH-1532-GJ	15	32	■
AV-D-CATH-1538-GJ	15	38	■
AV-D-CATH-1625-GJ	16	25	■
AV-D-CATH-1632-GJ	16	32	■
AV-D-CATH-1638-GJ	16	38	■
AV-D-CATH-1725-GJ	17	25	■
AV-D-CATH-1732-GJ	17	32	■
AV-D-CATH-1738-GJ	17	38	■

Please contact your local office for other specifications, order quantities, and availability.

BIOHOLE CATHETER NEEDLES
form the perfect combination with the BioHole
Buttonhole Device and the individual BioHole
scab remover



ACCESSORIES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION

BIOHOLE™ BUTTONHOLE DEVICE

FASTER TUNNEL TRACK CREATION FOR THE BUTTONHOLE TECHNIQUE

The BioHole buttonhole device is effective in the creation of tunnel tracks for the buttonhole technique. The BioHole stick is inserted into the needle track toward the access vessel, along the same path as the puncture needle that was just previously removed.

BIOHOLE STICK IS COMFORTABLE FOR PATIENTS

- Reduced number of cannulations with a sharp needle leads to less tunnel deformation and fewer complications^{8, 18}
- Minimized pain by using the BioHole stick to establish the tunnel
- Reduced tunnel formation time from 2-3 months to 14 days^{8, 18}
- Extended range of BioHole stick lengths

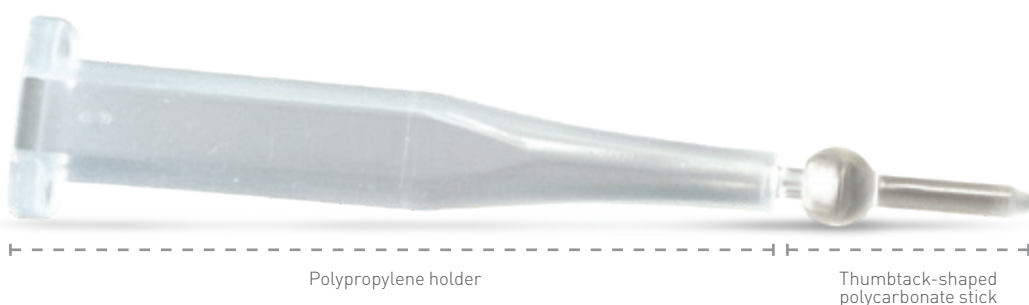
BIOHOLE STICK PROVIDES BENEFITS TO MEDICAL STAFF

- Simplified access creation, as early as the second session
- Limited use of sharp needles
- Accelerated method to create a buttonhole tunnel track^{8, 18}
- 3 stick lengths to better meet patient needs

SPECIFICATIONS

Article Code	Length (mm)
BIOHOLE-KIT3	3
BIOHOLE-KIT	5
BIOHOLE-KIT8	8

Please contact your local office for order quantities and availability.



Polypropylene holder

Thumbtack-shaped polycarbonate stick



Three different stick lengths:
3 mm, 5 mm, and 8 mm

ACCESSORIES

- NOT MADE WITH DEHP
- NOT MADE WITH LATEX
- GAMMA STERILIZATION

BIOHOLE™ SCAB REMOVER

SAFE AND EASY TOOL TO REMOVE THE SCAB FOR THE BUTTONHOLE TECHNIQUE

The BioHole scab remover is intended to be used with the buttonhole technique to remove the scab formed at the entrance of the tunnel tracks.

BIOHOLE SCAB REMOVER FEATURES

- Excellent grip
- Included with the BioHole needles or available as a separate unit in an individual sterile package

SPECIFICATIONS

Article Code

SCAB-REMOVER-GT

Please contact your local office for order quantities and availability.



ON-OFF KITS

STERILE KITS FOR HEMODIALYSIS CONNECTION AND DISCONNECTION

The safety of your patients, and yourself, should be simple and standardized, never compromised.

Ready-to-use, sterile ON-OFF kits are designed to aseptically connect and disconnect hemodialysis patients in a professional, hygienic, and efficient manner.

Advantages of Nipro ON-OFF kits:

- Aseptic connection and disconnection of the vascular access
- All components are available in one sterile package at the point of use
- Minimize handling and preparation time
- Reduce waste of components
- Facilitate the standardization and streamlining of procedures, helping to ensure that the same protocol is followed by every nurse
- Simplify stock management
- For arteriovenous fistula, graft, and catheter treatments

Various ON-OFF kit configurations are available to better suit your needs, procedures, preferences, and treatment types.

MIXED KITS FOR AV FISTULAS, GRAFTS, AND CATHETERS

ON

Item code	Quantity	Contents	Size / type
SSKT-101-3	2	Face mask with ear loops	
	4	Nitrile glove	Medium
	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	15	Non-woven gauze - 4-ply	10x10 cm
	8	Adhesive strip	2,5x15 cm
	1	Syringe - centric, 3-part, luer slip	5 ml
	1	Prefilled syringe NaCl (0,9%)	10 ml
	1	Hypodermic needle	22 G; 38 mm
	1	Tourniquet	

SSKT-058-6	1	Face mask with ear loops	
	2	Nitrile glove	Medium
	1	Hydrophilic/Hydrophobic medical sheet	40 x 50 cm
	10	Non-woven gauze - 4-ply	10x10 cm
	6	Adhesive strip	2,5x15 cm
	2	Syringe - centric, 3-part, luer lock	10 ml
	1	Tourniquet	

SSKT-050-4	2	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	3	Cotton gauze - 8-ply	10x10 cm
	5	Cotton gauze - 8-ply	5x5 cm
	3	Absorbent pad	10x20 cm
	2	Syringe - centric, 3-part, luer slip	20 ml
	2	Syringe - centric, 3-part, luer slip	10 ml

SSKT-101-4	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	10	Non-woven gauze - 4-ply	10x10 cm
	1	Towel	40x40 cm
	1	Tray - 2 compartments	
	1	Gallipot	60 ml
	1	Sterile medical sheet	40x50 cm



OFF

Quantity	Contents	Size / type
1	Face mask with ear loops	
4	Nitrile glove	Medium
1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
10	Non-woven gauze - 4-ply	10x10 cm
2	Hemostatic bandage - extra large	3,8x7,2 cm
2	Syringe - centric, 3-part, luer slip	10 ml
2	Hypodermic needle	22 G; 38 mm

1	Face mask with ear loops	
2	Nitrile glove	Medium
1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
6	Non-woven gauze - 4-ply	10x10 cm
2	Hemostatic bandage - extra large	3,8x7,2 cm

KITS FOR AV FISTULAS AND GRAFTS

ON

Item code	Quantity	Contents	Size / type
SSKT-116-1	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	6	Non-woven gauze - 4-ply	5x5 cm
	8	Adhesive strip	2,5x15 cm

SSKT-027-6	2	Nitrile glove	Medium
	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	4	Cotton gauze - 8-ply	5x5 cm
	6	Adhesive strip	2,5x15 cm
	2	Alcoholic Chlorhexidine gauze (70% Isopropyl alcohol + 2% Chlorhexidine glukonate)	6x6 cm

SSKT-050-5	2	Nitrile glove	Medium
	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	4	Cotton gauze - 8-ply	5x5 cm
	2	Cotton gauze - 8-ply	10x10 cm
	2	Adhesive strip	2,5x15 cm

SSKT-033-6	8	Medical bandage	2,5x15 cm
	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	2	Alcoholic Chlorhexidine gauze (70% Isopropyl alcohol + 2% Chlorhexidine glukonate)	6x6 cm

SSKT-025-1	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	6	Non-woven gauze - 4-ply	7,5x7,5 cm
	8	Adhesive strip	1,25x15 cm

OFF

Quantity	Contents	Size / type
2	Self-adhesive absorbent dressing	5x7,5 cm
4	Non-woven swab ball	Ø 3,5 cm

2	Nitrile glove	Medium
2	Hemostatic bandage - extra large	3,8x7,2 cm
4	Cotton gauze - 8-ply	5x5 cm

2	Nitrile glove	Medium
1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
4	Cotton gauze - 8-ply	5x5 cm
2	Self-adhesive absorbent dressing	5x7,5 cm

4	Non-woven gauze - 4-ply	7,5x7,5 cm
2	Hemostatic bandage - extra large	3,8x7,2 cm

2	Hemostatic bandage - extra large	3,8x7,2 cm
6	Non-woven gauze - 4-ply	7,5 x 7,5 cm

KITS FOR AV CATHETERS

ON

Item code	Quantity	Contents	Size / type
SSKT-018-8	2	Face mask with ear loop	
	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	4	Non-woven gauze - 8-ply	5x5 cm
	2	Syringe - centric, 3-part, luer slip	5 ml

SSKT-124-4	2	Face mask with ear loops	
	4	Nitrile glove	Medium
	1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
	5	Non-woven gauze - 8-ply	5x5 cm
	1	Non-woven gauze - 4-ply	10x10 cm
	2	Adhesive strip	1,25x15 cm
	1	IV cannula dressing	7x8,8 cm
	2	Syringe - centric, 3-part, luer lock	5 ml
	2	Syringe - centric, 3-part, luer slip	10 ml
	3	Alcoholic Chlorhexidine gauze (70% Isopropyl alcohol + 2% Chlorhexidine glukonate)	6x6 cm
	2	Prefilled syringe NaCl (0,9%)	10 ml

OFF

Quantity	Contents	Size / type
2	Face mask with ear loop	
1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
2	Non-woven gauze - 8-ply	5x5 cm
1	Non-woven gauze - 4-ply	10x10 cm
1	Elastic tubular stockinette - size 2	15 cm
2	Heparin cap	

2	Face mask with ear loops	
4	Nitrile glove	Medium
1	Hydrophilic/Hydrophobic medical sheet	40x50 cm
4	Non-woven gauze - 8-ply	5x5 cm
2	Syringe - centric, 3-part, luer slip	5 ml
2	Prefilled syringe NaCl (0,9%)	10 ml
2	Hypodermic needle	18 G; 38 mm
2	Heparin cap	
1	Catheter pouch	6x20 cm
2	Alcoholic Chlorhexidine gauze (70% Isopropyl alcohol + 2% Chlorhexidine glukonate)	6x6 cm

ACCESSORIES

- NOT MADE WITH BPA
- NOT MADE WITH LATEX
- NOT MADE WITH DEHP
- NOT MADE WITH PVC
- ETO STERILIZATION

MINIMOZ™

STERILE SINGLE-USE COMPRESSION DRESSING



Your solution to reduce compression time and risk of rebleeding, enabling you to spend more time on patient care.

MiniMOZ is a sterile single-use product intended for use as a compression dressing on arteriovenous or arterial puncture sites. The MINIMOZ product is intended particularly for vascular approaches in arteriovenous fistulas for hemodialysis. This is because it uses a unique and innovative microperforated adhesive that works on the rheological mechanisms to rapidly stop bleeding and form a solid clot, thus preventing the risks of prolonged bleeding.

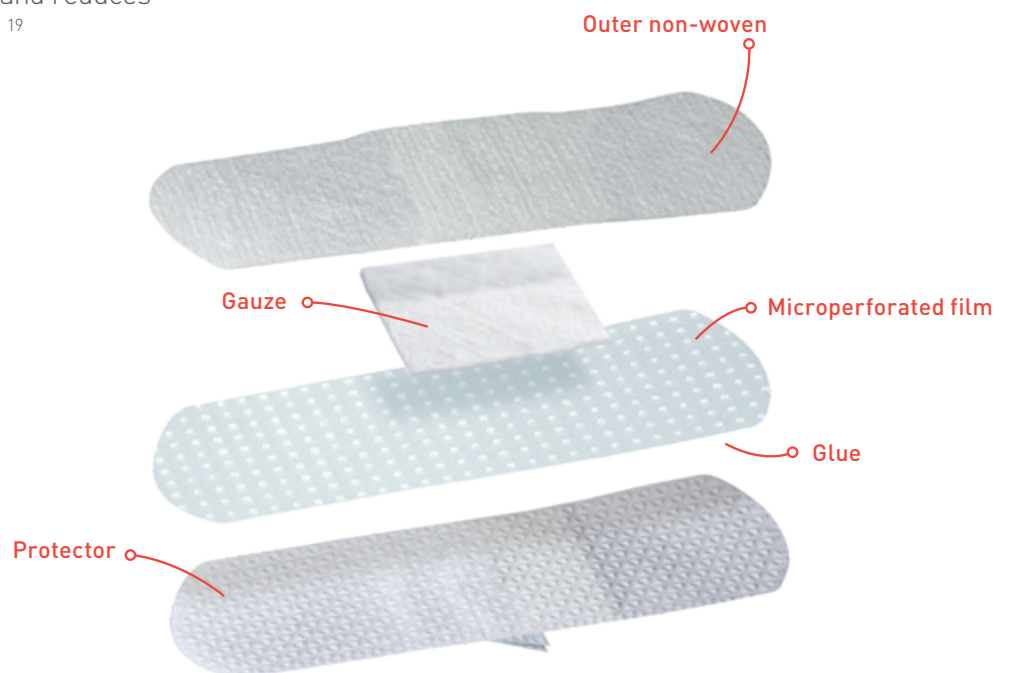
MINIMOZ FEATURES

- Shortens compression time and reduces post-puncture bleeding time ¹⁹
- Reduces risk of rebleeding
- Reduces blood spatters
- Does not contain chemicals
- Clots the entire path
- Biocompatible
- Suitable for AVF and AVG

SPECIFICATIONS

Reference Code	SIZE
MINIMOZ-EFR	25x72 mm

Please contact your local office for order quantities and availability





D.MED NEPHROFLOW™

RECIRCULATION AND ACCESS FLOW MEASURING DEVICE

Improved life expectancy of the vascular access

Vascular access is considered the Achilles heel of hemodialysis. Following the advice of the NKF KDOQI™, a surveillance to prevent and detect the progression of stenosis or thrombosis is recommended at least once a month.²

D.med NephroFlow permits the needed surveillance by using ultrasound dilution technology, a non-invasive access flow monitoring. Safe, quick, and accurate, the device indicates the actual blood flow, the access recirculation, and the shunt flow of patients during hemodialysis.

Thanks to innovative engineering, the annual functional inspection of D.med NephroFlow can be done easily on-site, without the need to remove the device from its operating environment. Furthermore, our tubing database is constantly updated and can be downloaded effortlessly when needed.



LARGE AREA TOUCHSCREEN

The high-sensitivity screen optimizes usability during treatment. Intuitive interfaces guide the user through step-by-step instructions and advice for taking measurements.



QUICK MEASUREMENT MODE

The Quick mode allows the user to take measurements without entering patient data. D.med NephroFlow is ready to measure within seconds.



BUILT-IN FAST START

It takes only a few seconds to begin taking measurements once the device is switched on. No loss of time. Immediate effectiveness.



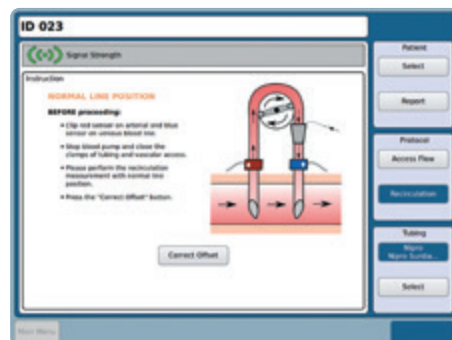
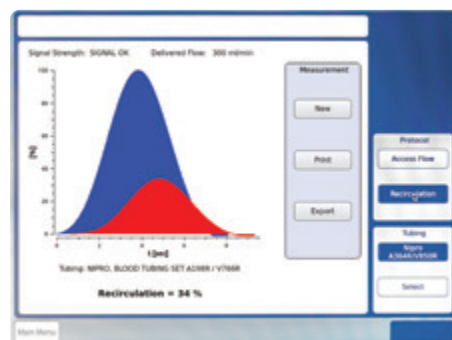
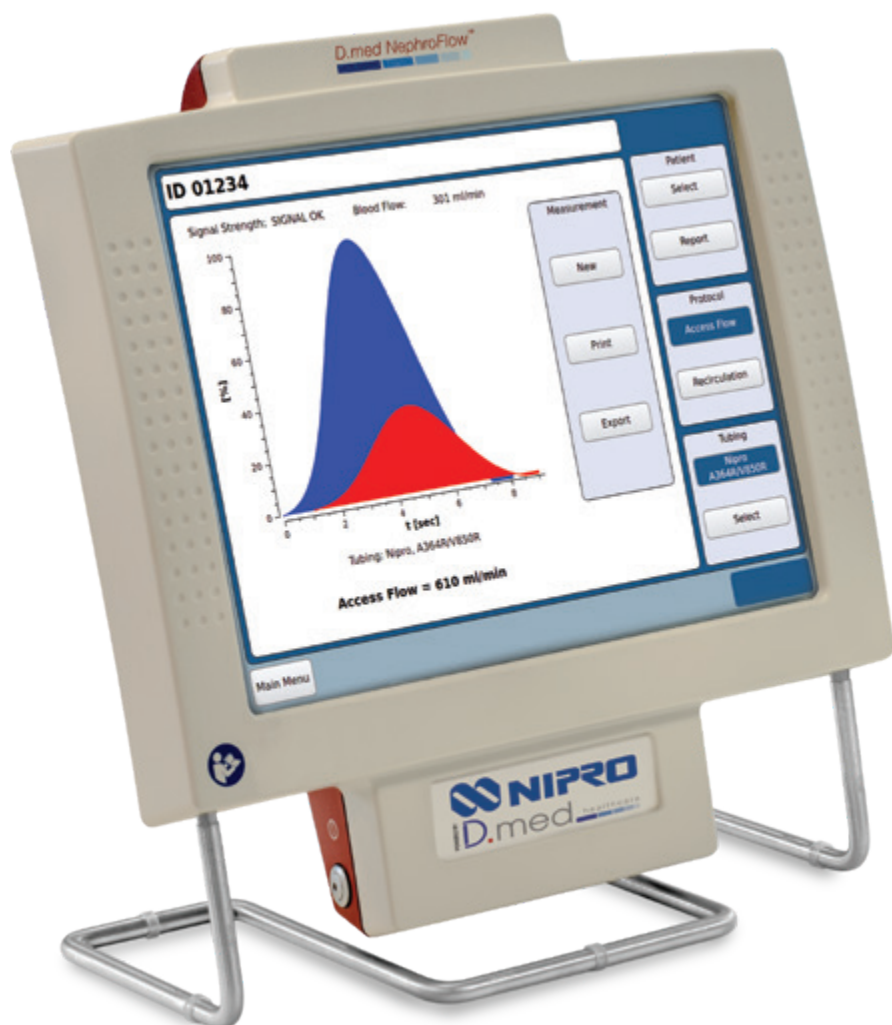
6-MONTH TREND VIEWER

Graphical documentation of previous measurements, up to 6 months, allows for the supervision of the vascular access of the patient and encourages proactive intervention with minimal effort.



PRINT & SAVE VIA USB

In Normal mode, all data is immediately stored in the patient record. A simple USB connection allows you to export and/or print data without requiring an external PC.



Conversion table needle gauge

Gauge (G)	Millimeter (mm)	Inch (")
14	2,108	0,083
15	1,829	0,072
16	1,651	0,065
17	1,473	0,058

Conversion table needle length

Inch (")	Millimeter (mm)
3/5	15
4/5	20
1	25
1 1/4	32
1 1/2	38

1. Needles and cannulas for arteriovenous fistula access: More options promote better Outcomes. National Kidney Foundation.2016
2. NKF KDOQI Guidelines. 2006
3. World Health World Health Organisation (WHO) The world health report, 'Chapter 4 – Selected occupational risks' <http://www.who.int/whr/2002/chapter4/en/index8.html>
4. National institute for occupational safety and health: preventing needlestick injuries in health care settings. DHHS (NIOSH) Publication No. 2000-108
5. Infectious complications in dialysis – epidemiology and outcomes. Nature Reviews Nephrology, 8, Feb 2012
6. Guidance for Industry and FDA Staff: Medical Devices with Sharps Injury Prevention Features. August 2015. FDA
7. CANNT-VA Guidelines-2016Jan4-NP Recommendation Nr 8
8. Toma S. A timesaving method to create a fixed puncture route for the buttonhole technique; Nephrology dialysis and transplantation. 2003
9. Sukthinthai N. Buttonhole technique better than area puncture technique on hemostasis and pain associated with needle cannulation; J. Med. Assoc. Thai. 2012
10. Kim MK. Clinical effects of buttonhole cannulation method on hemodialysis patients, Hemodial. Int. 2013
11. Twardowski Z. Different sites versus constant sites of needle insertion into arteriovenous fistula for treatment by repeated dialysis. Dial Transplant. 1979
12. de Castro MC. Arteriovenous fistula cannulation by buttonhole technique using dull needle; J. Bras. Nefrol. 2010
13. Verhallen AM. Cannulating in hemodialysis: rope-ladder or buttonhole technique?; nephrology dialysis transplantation. 2007
14. van Loon MM. Buttonhole needling of haemodialysis arteriovenous fistulae result in less complications and interventions compared to the rope-ladder technique; Nephro Dial Transplant. 2010
15. Parisotto MT, et al. Cannulation technique influences arteriovenous fistula and graft survival. Kidney Int. 2014
16. Council Directive 2010/32/EU – Prevention from sharp injuries in the hospital and healthcare sector.
17. Healthcare-associated infections: prevention and control in primary and community care. Clinical guideline. Last updated: February 2017
18. Marticorena RM. Use of the BioHole device for the creation of tunnel tracks for buttonhole cannulation of fistula for hemodialysis; Hemodial Int. 2011
19. Evaluation of post-puncture bleeding time of arteriovenous fistulas with IRIS® bandage Henri Boulanger¹, Salima Ahriz-Saksi, Martin Flamant, Philippe Vigeral J Vasc Access 2013; 00 (00): 000-000

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Nipro Renal Care is part of Nipro Corporation Japan, a leading global healthcare company established in 1954. With over 35.000 employees worldwide, Nipro serves the Medical Device, Pharmaceutical, and Pharmaceutical Packaging industries.

Nipro Renal Care is a global market leader with over 6 decades providing renal solutions for dialysis and dialysis-related treatment. We specialize in developing dialysis machines, water treatment systems, and a comprehensive portfolio of disposable medical equipment.

In order to address the needs of patients, healthcare professionals, and procurement managers alike, Nipro Renal Care is driven by innovation and patient safety to offer the highest quality products that optimize time, effort, and costs.

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE



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