

**Instructions for Use****VersaCross™ Steerable Sheath**

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Baylis Medical Company Inc.  
5959 Trans-Canada Highway  
Montreal, Quebec, Canada, H4T 1A1  
Tel: (514) 488-9801/ (800) 850-9801  
Fax: (514) 488-7209  
www.baylismedical.com

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**English**

Carefully read all instructions prior to use. Observe all warnings and precautions noted in these instructions. Failure to do so may result in patient complications. Baylis Medical Company relies on the physician to determine, assess and communicate to each individual patient all foreseeable risks of the procedure. CAUTION: FEDERAL (USA) LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN

**DEVICE DESCRIPTION**

The VersaCross Steerable Sheath includes the sheath and guidewire components of the VersaCross Steerable Sheath kit. The VersaCross Steerable Sheath kit consists of three components: a VersaCross Steerable Sheath, a VersaCross Transseptal Dilator, and a 0.035" J-tipped guidewire.

The VersaCross Steerable Sheath is designed for safe and easy catheterization and angiography of specific heart chambers and locations. The sheath provides superior torque control and is flexible. The VersaCross Transseptal Dilator provides support for the sheath, features a tapered tip and a shaft that can be reshaped manually. Radiopaque tips maximize visualization of the sheath and dilator during manipulation.

**INDICATIONS FOR USE**

The VersaCross Steerable Sheath is indicated for introducing various cardiovascular catheters to the heart, including the left side of the heart through the interatrial septum.

**WARNINGS**

- Laboratory staff and patients can undergo significant x-ray exposure during interventional procedures due to the continuous usage of fluoroscopic imaging. This exposure can result in acute radiation injury as well as increased risk for somatic and genetic effects. Therefore, adequate measures must be taken to minimize this exposure.
- The VersaCross Steerable Sheath kit is intended for single patient use only. Do not attempt to sterilize and reuse the VersaCross Steerable Sheath kit. Reuse can cause the patient injury and/or the communication of infectious disease(s) from one patient to another. Failure to follow this instruction may result in patient complications
- Care should be taken to ensure that all air is removed from the sheath before infusing through the side port.
- Care should be taken when removing the dilator and catheters from the sheath.
- Do not attempt direct percutaneous insertion of the sheath without the dilator as this may cause vessel injury.
- Damage to guidewire may result if withdrawn through a metal needle cannula.
- Maintain continuous hemodynamic monitoring throughout procedure
- Provide continuous heparinized saline infusion while the introducer remains in vessel.
- To minimize vacuum effects during withdrawal, remove components/aspirate slowly. Refrain from aspiration if a wire is directly through the valve.
- Avoid contact with liquids other than blood, isopropyl alcohol, contrast solution or saline.
- Prior to steerable sheath's delivery and removal, ensure distal section is as straight as possible.
- Do not kink, stretch or severely bend steerable sheath.
- Do not use surgical instruments to handle sheath.

**PRECAUTIONS**

- Do not attempt to use the VersaCross Steerable Sheath kit before thoroughly reading the accompanying Instructions for Use.
- Careful manipulation must be performed to avoid cardiac damage, or tamponade. Sheath, dilator and guidewire advancement should be done under fluoroscopic guidance. If resistance is encountered, DO NOT use excessive force to advance or withdraw the device.
- The VersaCross Steerable Sheath kit is supplied STERILE using an ethylene oxide process.
- The sterile packaging and all components should be visually inspected prior to use. Do not use the device if it has been compromised or damaged.
- Only physicians thoroughly trained in the techniques of the approach to be used should perform interventional procedures.
- Do not use device after its "Use By" date.
- Avoid deflecting distal end of sheath during delivery and removal, otherwise damage to vessels may occur.
- The VersaCross Steerable Sheath kit is not compatible with transseptal needles such as the "NRG® Transseptal Needle".

**ADVERSE EVENTS**

Adverse events that may occur while using the VersaCross Sheath include:

Infection	Air embolus
Local nerve damage	Vasovagal reaction
Dissection	Vessel spasm
AV fistula formation	Atrial septal defect
Pseudoaneurysm	Aortic puncture
Arrhythmias	Perforation and/or tamponade
Hematoma	Hemorrhage
Catheter entrapment	Thromboembolic events
Stroke	Valve damage
Myocardial infarction	Pacemaker/defibrillator lead displacement
Pulmonary edema	Coronary artery spasm and/or damage
Vessel trauma	Pericardial/pleural effusion

**INSPECTION PRIOR TO USE**

Prior to use of the VersaCross Steerable Sheath kit, the individual components should be carefully examined for damage or defects, as should all equipment used in the procedure. Do not use defective equipment. Do not reuse the device.

**EQUIPMENT REQUIRED**

Intracardiac puncture procedures should be performed in a sterile environment in a specialized clinical setting equipped with a fluoroscopy unit, radiographic table, echocardiographic imaging, physiologic recorder, emergency equipment and instrumentation for gaining vascular access.

**SUGGESTED DIRECTIONS FOR USE**

- Carefully read all instructions prior to use. Failure to do so may result in complications.

**1. Preparing for Insertion**

- Remove sterilized equipment from kit in sterile environment
- Verify proper deflection of steerable sheath by using knob.
- Insert steerable sheath only when distal end is completely straight.
- Thoroughly flush the sheath, guidewire and dilator with heparinized saline solution prior to use.

**2. Inserting Sheath and Dilator**

- Perform a standard vein puncture using an access needle (not supplied).
- Introduce the guidewire and advance to required depth. If resistance is encountered, DO NOT use excessive force to advance or withdraw the guidewire. Determine the cause of resistance before proceeding.
- Leaving the guidewire in place, withdraw the needle.
- Enlarge the cutaneous puncture site as necessary.
- Assemble the dilator and sheath until the dilator hub locks into the sheath hub. The sideport of the sheath and curve indicator of the dilator should be in the same orientation.
- The distal curvature of the dilator may be adjusted manually if desired. Manually adjust dilator curvature when assembled in the sheath. Do not use excessive force when reshaping.
- Thread the dilator/sheath assembly over the guidewire using a slight twisting motion under fluoroscopic guidance. If resistance is encountered, DO NOT use excessive force to advance or withdraw the dilator/sheath assembly over the guidewire. Determine the cause of resistance before proceeding.

**3. Guiding Sheath/Dilator Assembly**

- Use standard technique to position the sheath/dilator assembly into the desired heart chamber.
- Turn steerable sheath knob in direction of desired distal deflection. Sheath stays in desired position until sheath handle is turned again.
- If resistance is encountered, DO NOT use excessive force to deflect the sheath.
- If transseptal puncture is required, refer to the Instructions for Use of the transseptal puncture device. Echocardiographic guidance is also recommended.
- Ensure the sheath is clear of air. To aspirate blood, use the sheath side port.
- Monitor the location of the radiopaque tip frequently under fluoroscopy.
- Deliver a continuous heparinized solution infusion or aspirate periodically. This may help reduce the risk of thromboembolic complications due to thrombus formation, as there may be a possibility of thrombus development at the distal sheath tip or inside the sheath lumen. Also aspirate when removing the transseptal device or dilator.

**4. Removing Steerable Sheath**

- Straighten distal end of sheath as much as possible prior to removal.

- After removal of the sheath, use standard technique to achieve hemostasis.
- Discard all kit equipment after removal from body.

**CLEANING AND STERILIZATION INSTRUCTIONS**

Do not clean or re-sterilize the VersaCross Steerable Sheath kit. The VersaCross Steerable Sheath kit is intended for single use only.

**CUSTOMER SERVICE AND PRODUCT RETURN INFORMATION**

If you have any problems with or questions about Baylis Medical Equipment contact our technical support personnel.

**Baylis Medical Company Inc.**  
 5959 Trans-Canada Highway  
 Montreal, Quebec, Canada, H4T 1A1  
 Phone: (514) 488-9801 or (800) 850-9801  
 Fax: (514) 488-7209  
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**NOTES:**

1. In order to return products you must have a return authorization number before shipping the products back to Baylis Medical Company. Product Return Instructions will be provided to you at this time.
2. Ensure that any product being returned to Baylis Medical has been cleaned, decontaminated and/or sterilized as indicated in the Product Return Instruction before returning it for warranted service. Baylis Medical will not accept any piece of used equipment that has not been properly cleaned or decontaminated as per the Product Return Instructions.

**LABELING AND SYMBOLS**

	Manufacturer	<b>Rx ONLY</b>	Caution: Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.
	Sterile using ethylene oxide		Single Use -- Do not reuse
	Use By		Lot Number
	Caution		Do Not Use if Packaging is Damaged
	Consult Instructions for Use		Keep Away from Sunlight
	Model number		Keep Dry
	Non-Pyrogenic	<b>Max Guidewire O.D.</b>	Maximum guidewire outside diameter that can be used with this device
	Do Not Resterilize		

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This warranty is valid only to the original purchaser of Baylis Medical products directly from a Baylis Medical authorized agent. The original purchaser cannot transfer the warranty.

Use of any BMC product shall be deemed acceptance of the terms and conditions herein.

The warranty periods for Baylis Medical products are as follows:

Disposable Products	The shelf life of the product
Accessory Products	90 days from the shipment date

**LIMITED WARRANTIES – Disposables and Accessories**

Baylis Medical Company (BMC) warrants that its products are free from defects in original workmanship and materials. BMC warrants that sterile products will remain sterile for a period of time as shown on the label as long as the original package remains intact. The VersaCross Steerable Sheath kit is designed for single use only. The VersaCross Steerable Sheath kit is not designed for reuse. If any BMC product is proved to be defective in original workmanship or original materials, BMC, in its absolute and sole discretion, will replace or repair any such product, less charges for transportation and labour costs incidental to inspection, removal or restocking of product.

This limited warranty applies only to original factory delivered products that have been used for their normal and intended uses. BMC's limited warranty shall NOT apply to BMC products which have been resterilized, repaired, altered, or modified in any way and shall NOT apply to BMC products which have been improperly stored or improperly installed, operated or maintained contrary to BMC's instructions.

**DISCLAIMER AND EXCLUSION OF OTHER WARRANTIES**

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**XIV. LIMITATION OF LIABILITY FOR DAMAGES**

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This limited warranty applies only to new original factory delivered products that have been used for their normal and intended uses. BMC's Limited Warranty shall not apply to BMC products which have been resterilized, repaired, altered, or modified in any way and shall not apply to BMC products which have been improperly stored or improperly cleaned, installed, operated or maintained contrary to BMC's instructions.

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