**Arterial Cannulae**

**EndoReturn Arterial Cannula**  
Product Codes: ER21 (21 Fr) and ER23 (23 Fr)  
- Approach through the femoral artery  
- Black line on introducer indicates safe to clamp on cannula - 3/8” connector  
- Used with the 100 cm EndoClamp aortic catheter (EC1001)

**Arterial Cannula**  
Product Code: AC19

**Introducer Sheath**  
Product Code: IS19  
- Approach for cannula and introducer through the femoral (both groins needed)  
- Used with 100 cm EndoClamp aortic catheter (EC1001)

**Direct Arterial Cannula**  
Product Codes: SS23S (straight) and SS23A (angled)  
- Direct approach through the ascending aorta  
- Standard arterial cannula  
- AutoIncisor introducer provides nearly bloodless insertion of cannula
Description - ER21/ER23
The EndoReturn arterial cannula kit includes a wire-wound cannula (with or without hemostasis valve), and introducer, a guidewire and a connector hub. The PORT ACCESS catheter introducer sheath kit includes a wire-wound cannula with hemostasis valve, introducer and guidewire.

The cannulae have a wire-wound section to provide kink resistance and flexibility. The cannulae have an external lubricious coating to aid in insertion into femoral artery, and an internal lubricious coating to aid in advancement of catheters and introducers. The cannulae and introducers have tapered tips to aid in insertion and advancement into the femoral artery. The soft, clear tubing near the back end of the cannulae allows visualization of air and blood and provides a non-reinforced clamp site.

The cannula connector is a 3/8" barbed connector. The hemostasis valve (available on some versions) allows passage of catheters such as the EndoClamp aortic catheter. The introducers accept a .038" guide wire for assistance in cannula insertion. The connector hub (available on ER21 and ER23) secures and immobilizes the introducer within the cannula for easier, one-person insertion of the cannula/introducer assembly.

Description - SS23S/SS23A
The direct arterial cannula has the following features: a 23 Fr tip, a stabilizer ring with suture slots and tourniquet tubing posts and a mark indicating tip orientation (available on angled tip version). Additional features are as follows: a wire-wound shaft for flexibility and kink resistance, a non-reinforced clamp site and a barbed connection site for attachment to 3/8" ID tubing.

Warnings: Appropriate anticoagulant therapy must be provided to the patient prior to insertion of the direct arterial cannula. The direct arterial cannula is not recommended if the patient has a small diameter aorta. If resistance is met during advancement or withdrawal of any cannula or incisor, stop, re-evaluate and proceed according to Instructions For Use. Failure to remove tissue debris from cannula and introducer tip may result in embolization.

Description - AutoIncisor Introducer
The AutoIncisor introducer aids in inserting the direct arterial cannula into an aorta. A spring-loaded blade within the tip of the AutoIncisor introducer is used to make an incision in the aorta, and the tapered tip allows for easy introduction of the direct arterial cannula into the vessel lumen. A connector hub provides a hemostatic seal between the arterial cannula and the AutoIncisor introducer and ensures appropriate introducer tip/cannula tip alignment. The handle contains a plunger that advances the blade. An audible “click” indicates the automatic retraction of the blade after complete plunger advancement. The tapered tip is covered by a removable tip protector.

Intended Use
Use of PORT ACCESS arterial cannulae is indicated for patients undergoing cardiopulmonary bypass. The arterial cannulae are intended to deliver oxygenated blood for cardiopulmonary bypass during surgery.

Use of the arterial cannulae for procedures other than those indicated in the Instructions For Use is not recommended.

Contraindications
Do not use the direct arterial cannula, catheter introducer sheath or AutoIncisor introducer if the patient has severe peripheral atherosclerosis or is otherwise contraindicated for cardiopulmonary bypass.