



**NEUROVASCULAR  
PRODUCT CATALOG**

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For more information about  
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## Neurovascular Product Catalog INDEX

- **King** Vascular Revascularization Device
- **Libro** Embolization Agent
- **NeuroFILL** Embolization Agent
- **MicroCATH** Neurovascular Detachable Tip Catheter
- **Pars** Neurovascular Embolization Catheter Flow Directed
- **AnkaCATH** Intracranial Support Catheter For Distal Access

- **Extender** Neuro Balloon
- **InWIRE** Neurovascular Guidewire
- **EmboGUARD** Neuro Emboli Protection Lysis System
- **Dovi** Aspiration Device And Catheter
- **Invaducer** Introducer Sheath

Revascularization Device is designed to restore blood flow in patients experiencing ischemic stroke due to large intracranial vessel occlusion. The device is designed for use in the neurovasculature such as the internal carotid artery, M1 and M2 segments of the middle cerebral artery, basilar, and the vertebral arteries.

# INNOVATIVE TECHNOLOGY FOR EFFICIENT TREATMENT

**%54 MORE FLEXIBILITY** UNIQUE PARAMETRIC DESIGN for DYNAMIC CLOT INTEGRATION

## King Revascularization Device

Designed with an optimized delivery system - produces lower delivery force for improved procedural efficiency and smooth navigation through even the complex anatomy.

The treatment approaches using thrombectomy devices in recanalization, and efficient emergency stroke workflow processes have opened new frontiers in managing patients with an acute ischemic stroke.

### WHAT ARE ISCHEMIC STROKE & CAROTID ARTERY DISEASE?

An ischemic stroke is a type of stroke caused by a blockage of blood flow within a blood vessel in the brain. The brain cells downstream of the blockage are deprived of oxygen and nutrients and will quickly die if left untreated. The death of enough brain cells can result in permanent disability or death.

Carotid artery disease is a narrowing of the carotid arteries. The disease decreases the amount of blood flow to the brain and increases the risk of stroke.

### ISCHEMIC STROKE

Ischemic Stroke (IS) occurs as a result of a clot in the artery blocking the flow of blood to the brain leading to dysfunction or death of the brain tissue.

### CAROTID ARTERY DISEASE

Carotid artery disease is caused by a buildup of plaque in carotid arteries that deliver blood to the brain. Plaque is the deposit of cholesterol, fatty substances, cellular waste products, calcium and fibrin (a clotting material in the blood) along the wall of a vessel.

## THROMBECTOMY for ACUTE ISCHEMIC STROKE

**King**  
VASCULAR  
REVASCULARIZATION  
DEVICE

DESIGNED TO RESTORE BLOOD FLOW IN PATIENTS WITH ISCHEMIC STROKE

The King is consist of a expandable design made of nitinol and a pusher wire attached to the nitinol scaffolding. Supplied preloaded to the introducer sheath. The device is designed to be delivered via a microcatheter placed on the clot and removed with the clot to ensure revascularization of the occluded intracranial vessel. The revascularization procedure uses a widely accepted mode of administration where the arterial system is accessed through the femoral artery in the groin. The device is then directed to the brain using standard endovascular techniques.

King 4-20 and 6-30 for large thrombus load in carotid "T" and proximal MCA occlusions

- King 4-20 for treatment of distal MCA occlusions
- Proven safety and efficacy with excellent long-term outcome
- Unique proximal "ring" design and helical slit provide balanced radial force distribution

Close apposition to the vessel wall during the entire retrieval process



Distal Markers

Platinum markers at the proximal and distal ends of the basket are visualized under fluoroscopy.

Proximal Maker

Fully visible and designed specifically for removing a thrombus in patients experiencing an ischemic stroke.

# Libro

NON-ADHESIVE

**Libro** is a non adhesive liquid embolic agent for embolization of brain Arteriovenous Malformations (AVM). It is composed of **EVOH (ethylene vinyl alcohol copolymer)** with suspended micronized Tantalum powder for radiopacity and DMSO (dimethyl sulfoxide) solvent.

**Libro** must be injected through a DMSO compatible microcatheter.

DMSO solvent dissipates into the blood, causing the EVOH copolymer and suspended tantalum to precipitate in situ into a spongy, coherent embolus.

**Libro** immediately forms a skin as the polymeric embolus solidifies from the outside to the inside, while traveling more distally in the lesion.



- Neuro Aneurysms and AVM's
- Intracranial aneurysms, endoleaks
- Short procedure time.
- High power visibility
- Micronized grain size of tantalum powder



- **Libro** is available in three product formulations, Libro (6% EVOH),
- **Libro** (6.5% EVOH) and Libro (8% EVOH):
- **Libro** (6% EVOH), Libro (6.5% EVOH) Recommended when feeding pedicle injections will be conducted close to the nidus.
- **Libro**(8% EVOH): Recommended for embolizing higher flow and larger fistulous components.

# NeuroFILL

NON-ADHESIVE

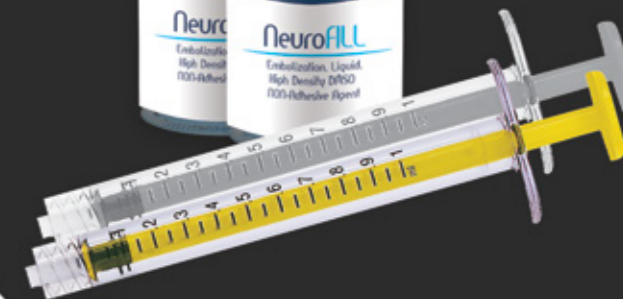
**NeuroFILL** is non-adhesive liquid embolic agent comprised of **n butyl polymer** dissolved in DMSO. Embolization of lesions in the intracranial neurovasculature, including aneurysms.

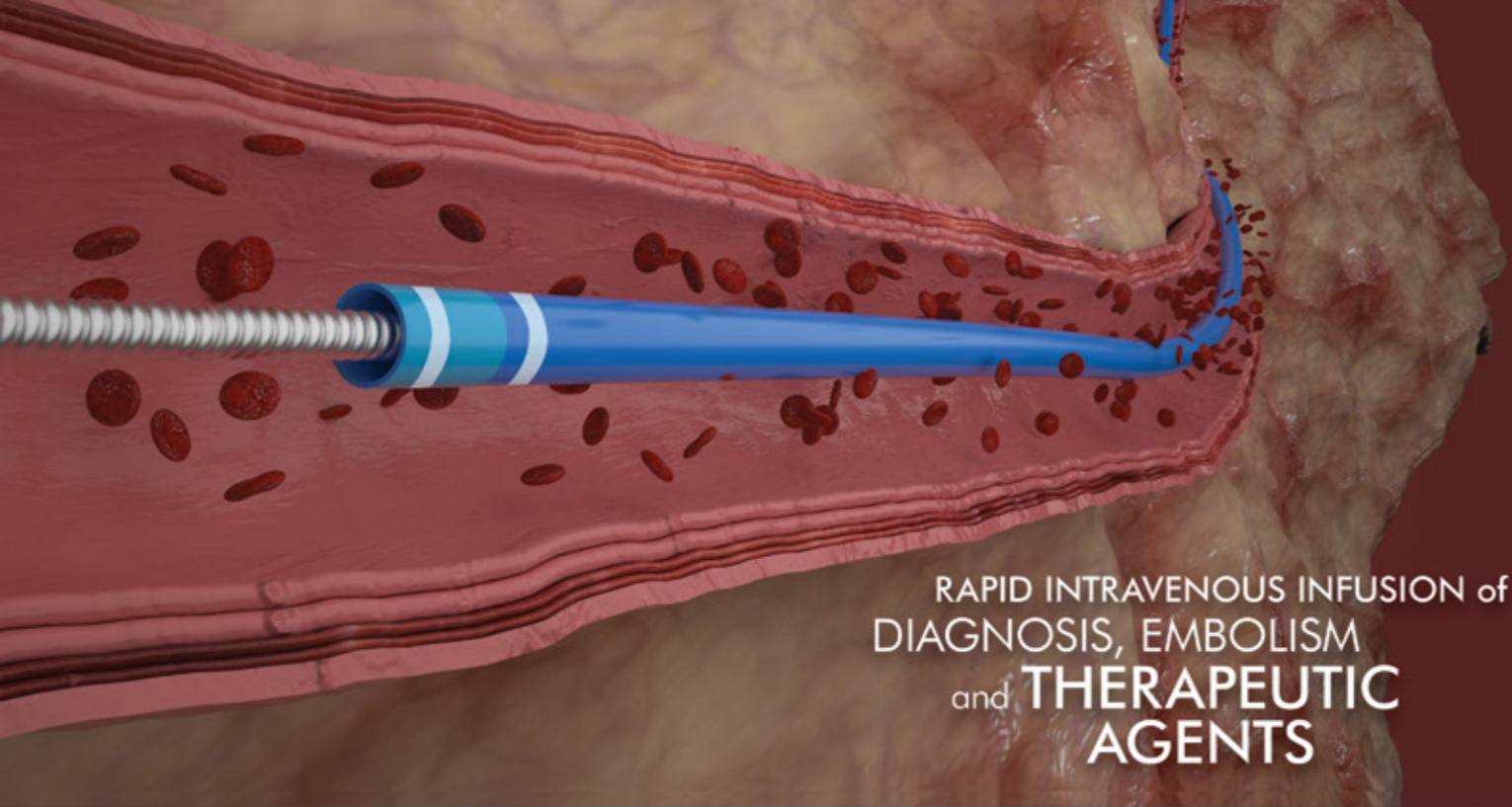
**NeuroFILL** is non-adhesive, the micro catheter can be left in place while slow, controlled injections are performed. Post embolization angiography can be conducted with the delivery micro catheter in place, enabling the physician to make additional injections through the same micro catheter, if necessary.

**NeuroFILL** is delivered through a micro catheter into the aneurysms under fluoroscopic control. The DMSO solvent dissipates into the blood and interstitial fluids, Neurofill immediately forms a skin as the polymeric embolus solidifies from the outside to the inside, while traveling more distally in the vessel.

**NeuroFILL** works by causing inflammatory reaction over the endothelium of the target vein upon the injection of the polymer and simultaneous pressure application.

**NeuroFILL** developed for treatment of peripheral and neurovasculature, including arteriovenous malformations and hypervascular tumors by a simple polymerization method. Small amounts of polymer delivered endovenously and pressure up to 2-3 minutes applied for total closure.





RAPID INTRAVENOUS INFUSION of  
DIAGNOSIS, EMBOLISM  
and THERAPEUTIC  
AGENTS

**Advantages**

- ✓ Hydrophilic coating
- ✓ Excellent kink resistance and pushability
- ✓ Dedicated tip design with radiopaque marker
- ✓ Excellent crossability
- ✓ Ensures reliable fluoroscopic visibility
- ✓ Choice of different catheter sizes (2.1 Fr and 2.7 Fr, guide catheter compatibility)
- ✓ Optimized tip design
- ✓ High compressive strength
- ✓ Low profile
- ✓ DMSO compatibility
- ✓ Embolizing agent compliance
- ✓ Detachable Tip structure
- ✓ Over the guidewire (0.012") system avoiding vessel wall damage

**MicroCATH** Catheter is the Neurovascular intervention that use of minimally-invasive endovascular techniques to treat vascular diseases of the brain. Physicians who perform these procedures receive highly specialized training in interventional neuroradiology and/or endovascular neurosurgery.

**We offer advanced solutions for the treatments of the following brain diseases:**

- Intracerebral AVMs and AV Fistulas
- Intracerebral aneurysms
- Intracranial stenosis
- Ischemic stroke and intracerebral thrombus
- Tumors

**MicroCATH**  
MECHANICALLY DETACHABLE TIP

NEUROVASCULAR INTERVENTION  
THAT USE FOR THE CONTROLLED  
SELECTIVE INFUSION

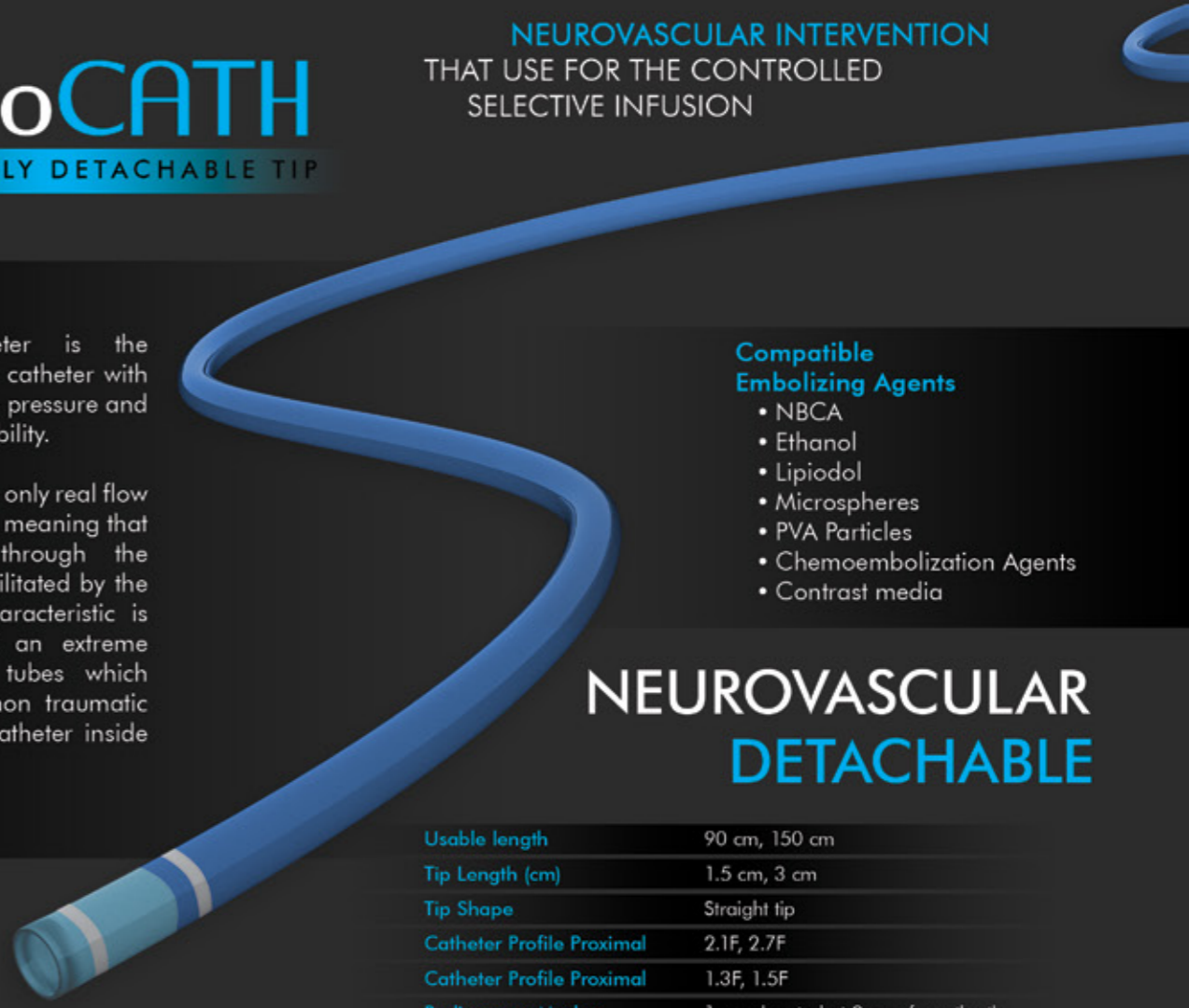
**MicroCATH** Catheter is the detachable tip micro catheter with a strong resistance to pressure and total **DMSO** compatibility.

The catheters are the only real flow dependant catheters, meaning that their progression through the arteries system is facilitated by the blood flow. This characteristic is achieved thanks to an extreme suppleness of the tubes which allows a fast and non traumatic progression of the catheter inside the blood vessels.

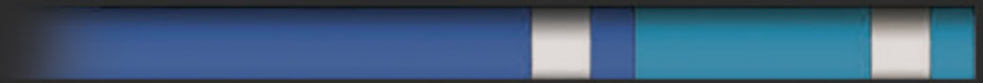
**Compatible Embolizing Agents**

- NBCA
- Ethanol
- Lipiodol
- Microspheres
- PVA Particles
- Chemoembolization Agents
- Contrast media

NEUROVASCULAR  
DETACHABLE

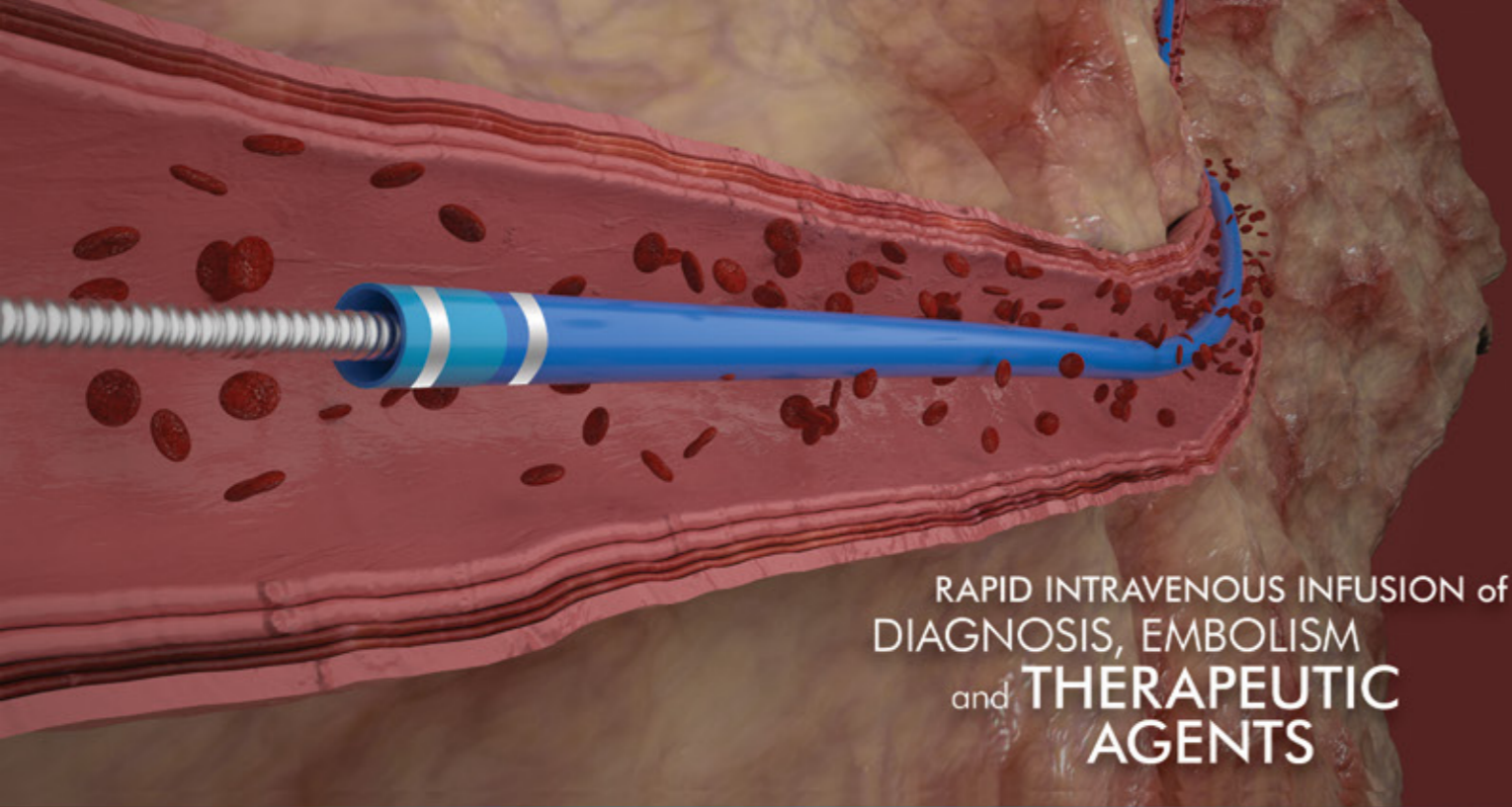


Usable length	90 cm, 150 cm
Tip Length (cm)	1.5 cm, 3 cm
Tip Shape	Straight tip
Catheter Profile Proximal	2.1F, 2.7F
Catheter Profile Proximal	1.3F, 1.5F
Radiopaque Marker	1 mm located at 2 mm from the tip
Guidewire Compatibility	Maximum diameter 0.012"
Coating	Hydrophilic
Minimum Dead Space	0.2 ml
Structure of the Catheter	PE/PEBAX



Detachable-part

The use of the **MicroCATH** detachable-tip microcatheter for embolization of AVMs and AVFs is associated with high rates of successful catheterization and obliteration and low rates of morbidity and mortality.



RAPID INTRAVENOUS INFUSION of  
DIAGNOSIS, EMBOLISM  
and THERAPEUTIC  
AGENTS

**Advantages**

- ✓ Hydrophilic and Soft flow-directable distal segment
- ✓ Excellent kink resistance and Proximal pushability with Stainless steel coil design shaft
- ✓ Dedicated tip design with radiopaque marker
- ✓ Excellent crossability
- ✓ Ensures reliable fluoroscopic visibility
- ✓ Optimized tip design
- ✓ High compressive strength
- ✓ Low profile
- ✓ DMSO compatibility
- ✓ Embolizing agent compliance
- ✓ Flow Directed
- ✓ Over the guidewire (0.012") system avoiding vessel wall damage

**Pars** offers the user the lowest available tip profile while providing unmatched burst and tensile strength, making it the ideal catheter for the treatment of Brain AVMs.

**Pars** Embolization Catheter is the Neurovascular intervention that use for the controlled selective infusion of physician-specified therapeutic agents such as embolization materials and of diagnostic materials such as contrast media to treat vascular diseases of the brain.

**Pars** Embolisation Catheter is a single-lumen, endhole catheter designed for the subselective infusion of physician-specified therapeutic agents such as embolization materials and diagnostic materials such as contrast media in tortuous, distal vessels.

**We offer advanced solutions for the treatments of the following brain diseases:**

- Intracerebral AVMs and AV Fistulas
- Intracerebral aneurysms
- Inntocranial stenosis
- Ischemic stroke and intracerebral thrombus
- Tumors

**Pars**

EMBOLIZATION CATHETER

The catheter has a semi-rigid proximal shaft and a highly flexible distal shaft to facilitate the advancement of the catheter in the anatomy.

The proximal end of the catheter incorporates a standard luer adapter which is compatible with **DMSO** to facilitate the attachment of accessories.

The catheter has a radiopaque marker at the distal end to facilitate fluoroscopic visualization.

The outer surfaces of the catheter are coated to increase lubricity.

NEUROVASCULAR INTERVENTION  
THAT USE FOR THE CONTROLLED  
SELECTIVE INFUSION

**Compatible Embolizing Agents**

- NBCA
- Ethanol
- Lipiodol
- Microspheres
- PVA Particles
- Chemoembolization Agents
- Contrast media

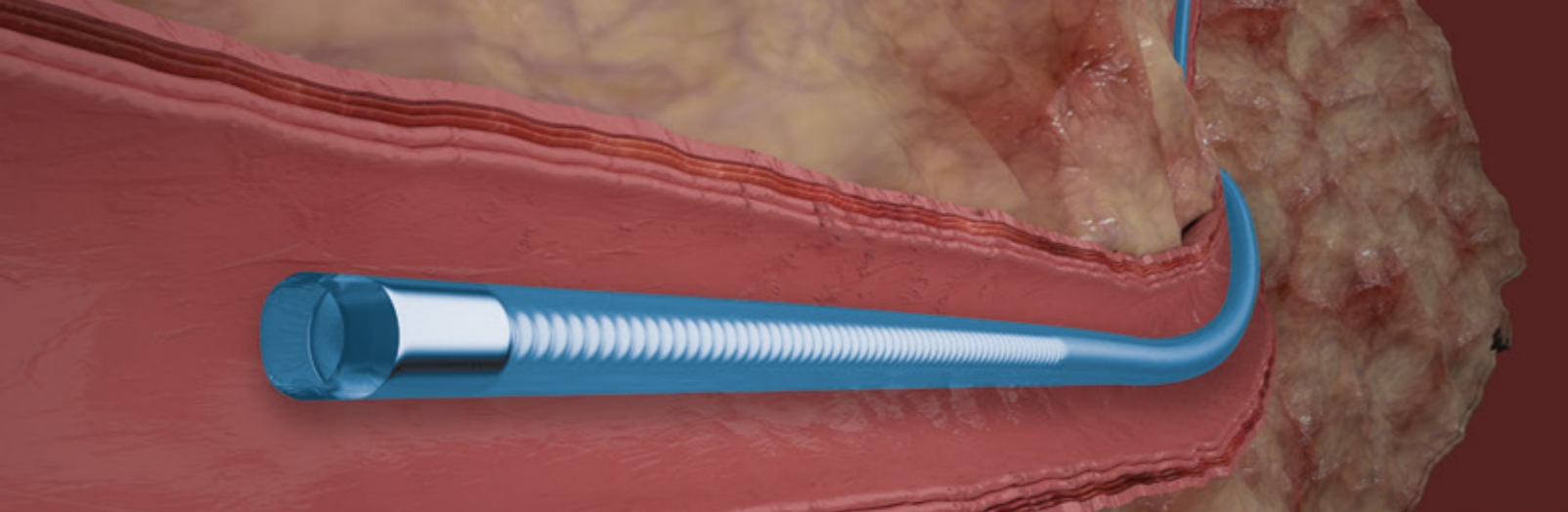
NEUROVASCULAR  
FLOW DIRECTED

Usable length	90 cm, 150 cm
Tip Length (cm)	25 cm
Tip Shape	Straight tip
Catheter Profile Proximal	2.7F
Catheter Profile Distal	1.5F
Radiopaque Marker	1 mm located at 2 mm from the tip
Guidewire Compatibility	Maximum diameter 0.012"
Coating	Hydrophilic
Minimum Dead Space	0.2 ml
Structure of the Catheter	PE/PEBAX
Use with DMSO	Yes

The catheter is used to increase the rigidity of the distal section during introduction into the guiding catheter.

**Pars** is the Flow directed micro catheter with a strong resistance to pressure and total DMSO compatibility.

The catheters are the only real flow dependant catheters, meaning that their progression through the system is facilitated by the blood flow. This characteristic is achieved thanks to an extreme suppleness of the tubes which allows a fast and non traumatic progression of the catheter inside the blood vessels.



**PROVIDES  
EASY NAVIGATION AND  
RELIABLE SUPPORT FOR  
DISTAL ACCESS CASES**

# AnkaCATH

**DISTAL ACCESS**

Usable length	90 cm, 150 cm
Tip Shape	Straight tip
Catheter Profile Proximal	3F, 4F, 5F, 6F
Catheter Inner Diameter	0.071" - 0.075"
Radiopaque marker	1mm located at 2mm from the tip
Guidewire compatibility	Maximum diameter 0.035"
Coating	Hydrophilic
Structure of the Catheter	PE/PEBAX

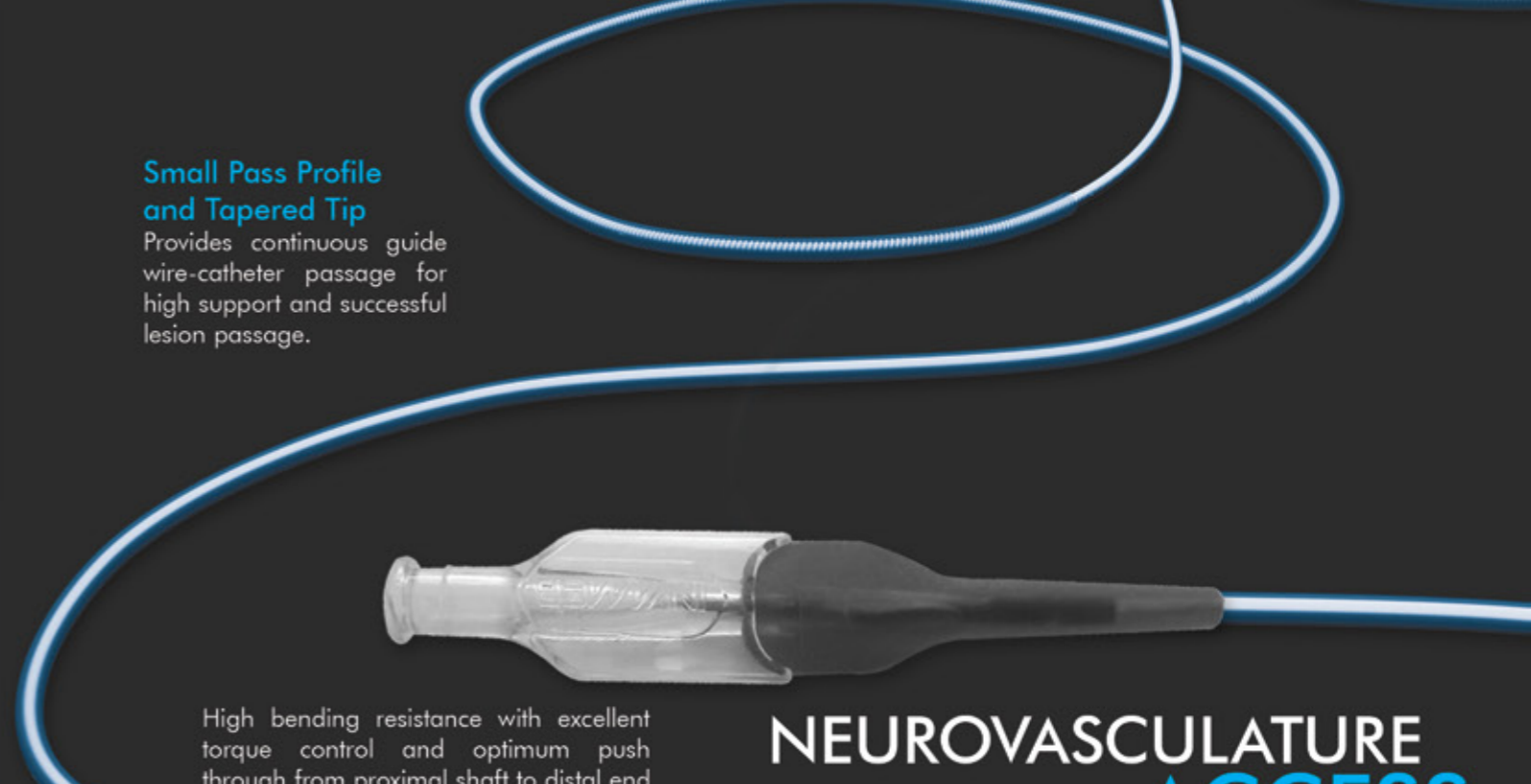
Intracranial Distal Access Catheter is designed for distal placement into the neurovasculature, providing intracranial support and a wide range of device compatibility.

### Advantages

- ✓ Proximal shaft engineered for support throughout aortic arch
- ✓ Excellent trackability
- ✓ The 15cm distal flexible zone combined with a highly supportive proximal shaft for pushability leads to the smooth tracking design.
- ✓ Gain stable distal support without sacrificing trackability
- ✓ Image of Atraumatic access
- ✓ Atraumatic access

### Small Pass Profile and Tapered Tip

Provides continuous guide wire-catheter passage for high support and successful lesion passage.



High bending resistance with excellent torque control and optimum push through from proximal shaft to distal end

## NEUROVASCULATURE ACCESS



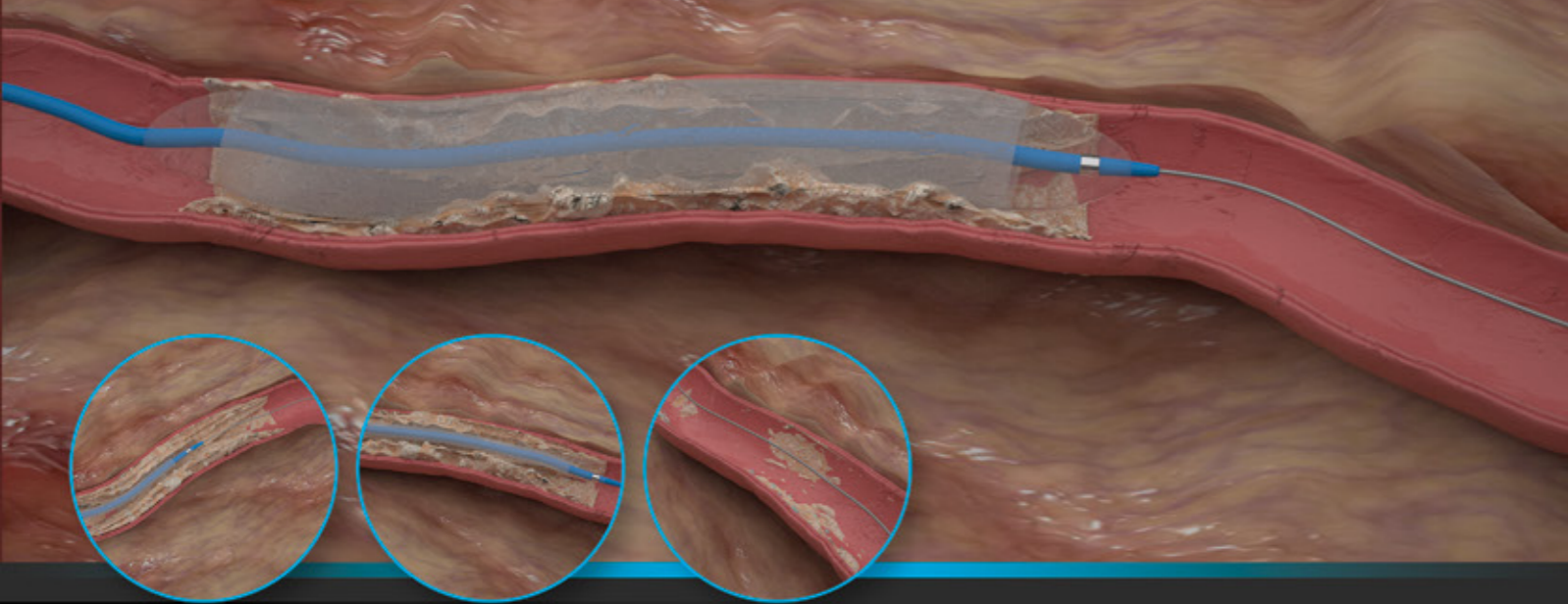
The rounded tip and flexible distal zone on the Distal Access Catheter is designed for confident advancement into fragile distal vessels.

The design of the Distal Access Catheter is designed for closer placement to the treatment site. Focus on the intervention, not access challenges.





Latest generation paclitaxel-eluting balloon catheter for neurovascular interventions



**OUTSTANDING  
CLINICAL  
PERFORMANCE  
and EXCELLENT  
LONG-TERM  
PATIENT RESULTS.**

Extender is a unique neuro drug-eluting balloon dilatation catheter and has been optimized for tortuous vessels.

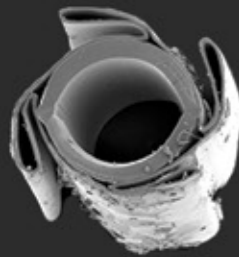
Rapid Exchange with elongated highly flexible distal part to reach tortuous distal lesions. Length from 1 cm to 3 cm, diameter from 1,5 to 4 mm Profile all sizes less than 1 mm, also after drug loading folding.

#### Advantages

- ✓ Homogenous coating
- ✓ Even and Consistent coating of inflated Balloons
- ✓ Balloon with 360 Degree coating coverage
- ✓ Minimal Drug lost during passage in the body
- ✓ Minimal Drug lost from the balloon surface during maneuver or inflation
- ✓ Reliable quantitative Drug deposition into the vessel wall
- ✓ Drug transfer only at 6 atm
- ✓ No additional substances
- ✓ No Cracks

#### Indicated for:

- Carotid a.
- Vertebral a.
- Basilar a.
- Middle cerebral a. (M1)



**Extender** neuro  
NEURO-ENDOVASCULAR

## CONSISTENT TREATMENT OF NEURO VASCULAR DISEASES

This paclitaxel-eluting balloon feature a proper coating technology which consistently delivers paclitaxel, an anti restenotic drug during very brief inflation times, while also minimizing washout of the drug during delivery and placement of the drug-eluting balloon.

Balloon catheter offer excellent pushability, trackability and crossability due to a low balloon profile, low tip entry profile and hydrophilic coating on the distal shaft of the catheter.

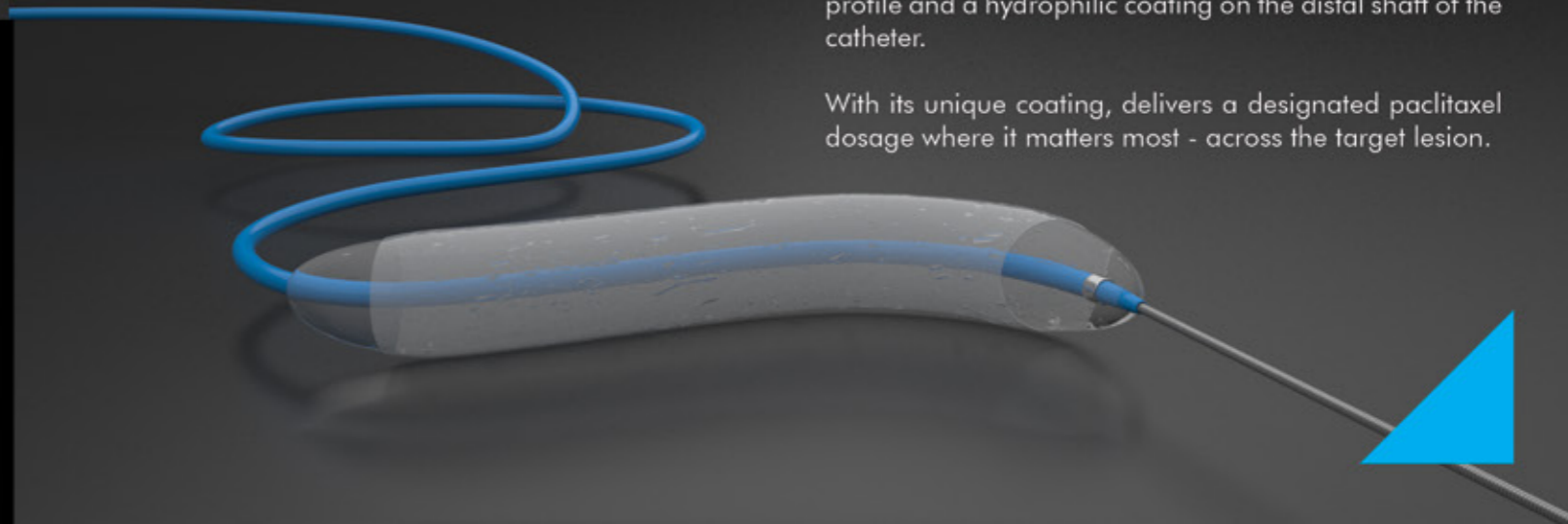
**Extender** is advanced to the lesion site.

Once the operator is satisfied with the position of Extender across the lesion, an inflation at 6 bar for at least 10 seconds will deliver the paclitaxel through the cracked plaque and onto the vessel wall.

Paclitaxel Drug Dose	3.0-3.5 µg/mm <sup>2</sup>
Tip	Flexible, soft, 0,017Ø
MAX Catheter Profile	Less than 1 mm
Usable Catheter Length	Minimum 135 cm
GW Length	Recommended 180-250 cm
Length of GuideWIRE lumen	40 cm
Balloon Length	10- 30 mm
Balloon Fold Configuration	3 folds
Radiopacity	Pt-Ir Ring marker
Guidewire Compatible	0,012", 0,014"
Catheter Design	Rapid Exchange
Introducer Sheath Compatibility	4F
Catheter Length	Min 135 cm
Guiding Catheter Compatibility	Minimum 5F – recommended 6F
Structure of the Catheter	Semi-compliant
Inflation Time Minimal	10 sec recommended: 15-30 sec
Nominal Pressure	6 atm
Rast Brust Pressure	14 atm

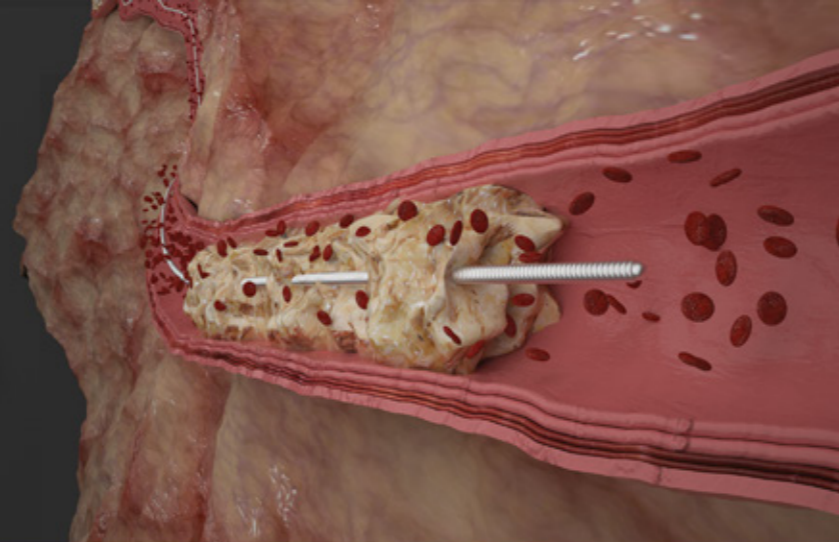
**Extender** Neuro offers excellent pushability, trackability and crossability due to a low balloon profile, low tip entry profile and a hydrophilic coating on the distal shaft of the catheter.

With its unique coating, delivers a designated paclitaxel dosage where it matters most - across the target lesion.





- Tip load
- Tip radioopacity
- Polymer jacket length



**InWire** is used for neurovascular treatment and consists of an elastic stainless steel core wire. **InWire** platinum / iridium alloy coil provides radiopacity under high-resolution fluoroscopy at the distal end. The distal surface has a hydrophilic polymer coating that forms a high lubricity. It has a non-damaging flexible tip and slippery body structure. The distal tip is radiopaque. Fine control over challenging tortuous vessels and highly stenosed lesions. Polymer jacket provides advanced slip performance with superior torque and support. Can be used to enter and insert a diagnostic or interventional device in the neurovascular vessels and is used to access and pass the lesion in a target lesion.

- More durable than regular stainless steel
- Retains shape
- Good flexibility
- Excellent steering and tracking
- Easy steerability
- Straight, floppy tip structure
- Hydrophilic polymer coating provide lubricity
- Radio-opaque tip
- Torque capability

**HIGH TENSILE STRENGTH  
STAINLESS STEEL  
CORE MATERIAL**

Radioopaque Tip      Stainless Steel Core



Super Elastic Platinum/Iridium Coil Structure

Guidewire Material	Stainless Steel
Guidewire Diameter	0,010", 0,012", 0,014", 0,018"
Guidewire Length	150 cm, 180 cm, 260cm, 300 cm
Core Material	Stainless Steel
Tip Style	Floppy
Tip Length	1.5 cm- 10 cm
Spring Coils	Pt-Ir Coil Shape
Covers	Polymer Cover
Coating	Hydrophilic
Tip Load (g)	1-2, 3-7

## EmboGUARD<sup>NEURO</sup> NEURO PROTECTION

### Advantages

- ✓ Utilizes highly compliant
- ✓ Provides excellent trackability
- ✓ Support and stability for ease of lesion crossing

### WORKING CHANNEL EXIT PORT DISTAL TO CCA BALLOON

- Provides lesion access and effective, efficient aspiration of debris.

### RADIOPAQUE MARKERS

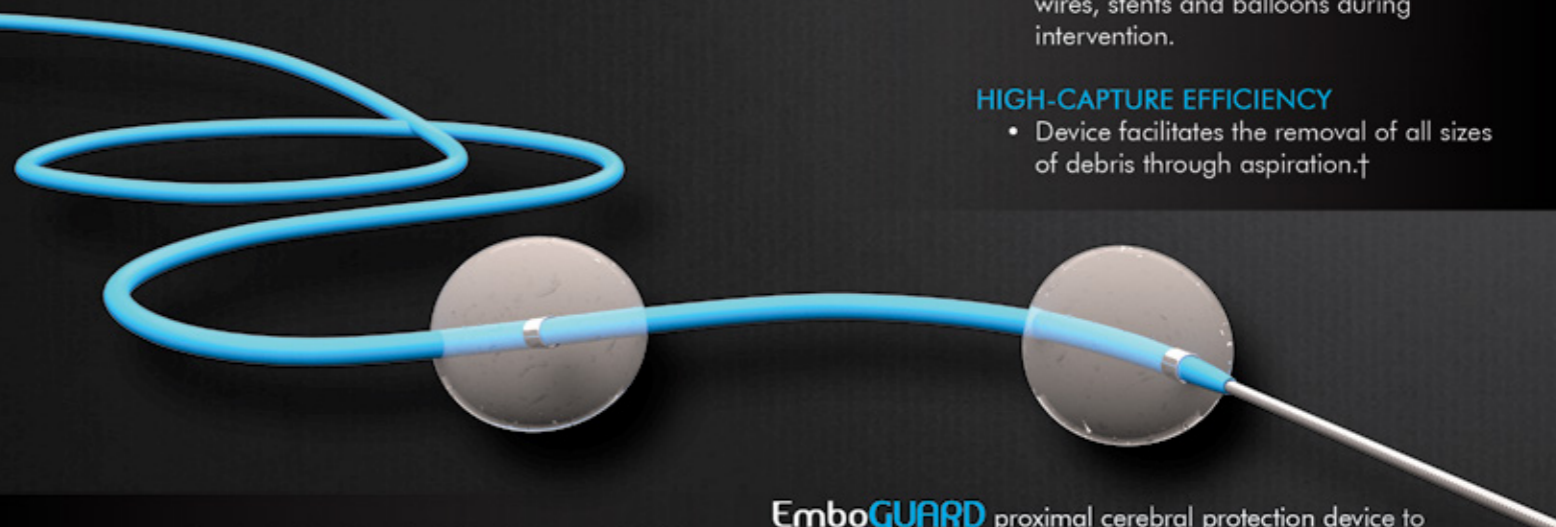
- Markers are centrally located in each balloon for precise positioning and orientation.

### OPTIMAL DEVICE SELECTION

- Device allows for selection of preferred wires, stents and balloons during intervention.

### HIGH-CAPTURE EFFICIENCY

- Device facilitates the removal of all sizes of debris through aspiration.†



## DEVELOPED FOR PROXIMAL CEREBRAL PROTECTION SYSTEM

**EmboGUARD** proximal cerebral protection device to contain and remove all sizes of thrombus performing angioplasty and stenting procedures involving lesions of the internal carotid artery and/or the carotid bifurcation.

Device include with double-occlusion balloon system allows for proximal embolic protection to be established prior to crossing a carotid lesion.

Diameter of the external carotid artery should be between 3-6 mm and the reference diameter of the common carotid artery should be between 5-13 mm.

Common carotid artery (CCA) and External common carotid artery (ECA) are temporarily suspended by dual inflation establishing proximal cerebral protection.

Double occlusion elastomeric balloons that provide atraumatic flow suspension and stability.

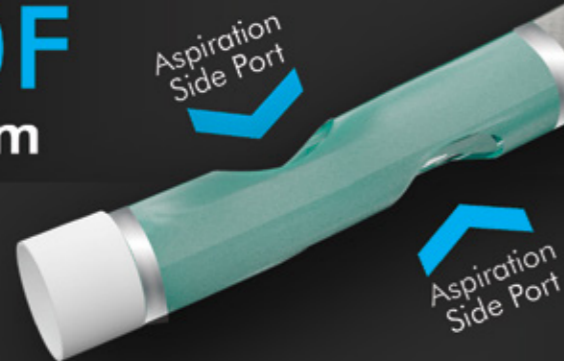
Balloon material	Compliant elastomeric rubber
Balloon marker distance	6 cm
Recommended guidewire	0.035" (0.89 mm)
Balloon occlusion range	5-13 mm diameter (CCA prox. balloon) 3-6 mm diameter (ECA dist. balloon)

# Dovi

## ASPIRATION SYSTEM

# ASPIRATION THROMBECTOMY SYSTEM

**4F-10F**  
90-150cm



Radioopaque

**Indicated Vessels**  
Peripheral Veins  
Pulmonary Artery  
Inferior Vena Cava  
Subclavian Vein  
Hepatic Vein

### Advantages

- ✓ Optimized tip design.
- ✓ Powerful aspiration and superior kink resistance.
- ✓ Large extraction lumen yielding better aspiration.
- ✓ Over the guidewire system avoiding vessel wall damage.
- ✓ Side aspiration window provides efficient aspiration of wall adherent thrombus.
- ✓ Hydrophilic coating.
- ✓ Excellent kink resistance and pushability.
- ✓ Easy navigation through tortuous anatomies.
- ✓ Dedicated tip design with radiopaque marker.
- ✓ Excellent crossability while providing atraumatic and effective aspiration.
- ✓ Ensures reliable fluoroscopic visibility.
- ✓ Large Extraction Area.
- ✓ Constant, high-performance aspiration throughout the procedure.
- ✓ Choice of different catheter sizes (5Fr, 6 Fr, 7 Fr and 8Fr guide catheter compatibility) for different coronary and peripheral applications

The catheter is designed for and proven to resolve small, fresh thrombus in peripheral veins.

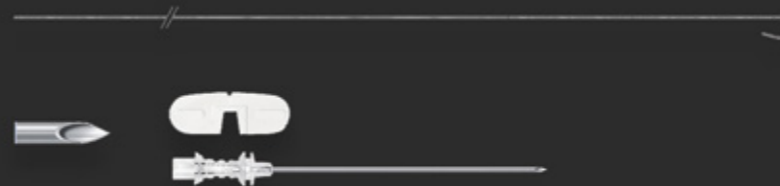
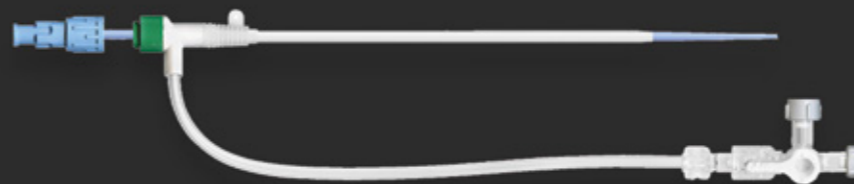
Dovi is an innovative aspiration catheter designed to offer a balance between crossing performance, kink resistance and thrombus-aspiration capability.

Usable length	90 cm, 120 cm, 135 cm
Distal tip hole length	4 mm for 2,3,4 and 5 Fr, 7 mm for 6,7 and 8 Fr
Catheter Profile	2F, 3F, 4F, 5F, 6F, 7F, 8F
Radiopaque marker	1 mm located at 3 mm from the tip
Guidewire compatibility	Maximum diameter 0.035" (0.87 mm)
Coating	Hydrophilic
Structure of the Catheter	PE/PEBAX



# Invaducer

## INTRADUCER SET



0.035" KIT  
0.035"  
J-tip guidewire

The **Invaducer** is intended to be inserted percutaneously into a vessel to facilitate the insertion of angiographic, electrode, balloon, or similar catheters.

### Designed for Easy Insertion and for Patient Comfort

A percutaneous introducer is used to facilitate placing a catheter through the skin into a vein or artery. Percutaneous introducers are recommended for initial percutaneous introduction or the exchange of intravascular devices.

Diameter (F=French)	Excluded Lengths (cm)
4	11, 16
5	11, 16
6	11, 16
7	11, 16, 45, 64
8	11, 16, 45, 64
9	11, 16, 45, 64
10	11, 16, 45
11	11, 16, 45





# Notes

A large white rectangular area with a blue border, containing 20 horizontal dotted lines for writing notes.

Notes

A large white rectangular area with a blue border, containing 25 horizontal dotted lines for writing.

Notes

A large white rectangular area with a blue border, containing 25 horizontal dotted lines for writing.

