Penumbra System

ORDERING INFORMATION

Penumbra System Catheters

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Tip Diameter</th>
<th>Working Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>9NS0450RR</td>
<td>45° Select Catheter, RR</td>
<td>0.045 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>9NS0500MM</td>
<td>50° Select Catheter, MM</td>
<td>0.050 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>9NS0500MR</td>
<td>50° Select Catheter, MR</td>
<td>0.050 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>9NS0500FR</td>
<td>50° Select Catheter, FR</td>
<td>0.050 in.</td>
<td>120 cm</td>
</tr>
</tbody>
</table>

Penumbra Reperfusion Catheters

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<tr>
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<th>Description</th>
<th>Tip Diameter</th>
<th>Working Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>3MAXC</td>
<td>3MAX Reperfusion Catheter</td>
<td>0.043 in.</td>
<td>160 cm</td>
</tr>
<tr>
<td>5MAXACE068</td>
<td>ACE™ 68 Reperfusion Catheter + Penumbra Hi-Flow Tubing</td>
<td>0.068 in.</td>
<td>132 cm</td>
</tr>
<tr>
<td>5MAXACE132</td>
<td>ACE™ 132 Reperfusion Catheter + Penumbra Hi-Flow Tubing</td>
<td>0.068 in.</td>
<td>132 cm</td>
</tr>
<tr>
<td>5MAXACE068K</td>
<td>ACE™ 68 Reperfusion Catheter + Penumbra Hi-Flow Tubing</td>
<td>0.068 in.</td>
<td>132 cm</td>
</tr>
</tbody>
</table>

Penumbra Delivery Microcatheters

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<tr>
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<th>Tip Diameter</th>
<th>Working Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS064</td>
<td>Penumbra ENGINE™ Microcatheter</td>
<td>0.64 mm</td>
<td>132 cm</td>
</tr>
<tr>
<td>PS068</td>
<td>Penumbra ENGINE™ Microcatheter</td>
<td>0.68 mm</td>
<td>132 cm</td>
</tr>
<tr>
<td>PS070</td>
<td>Penumbra ENGINE™ Microcatheter</td>
<td>0.70 mm</td>
<td>132 cm</td>
</tr>
</tbody>
</table>

Penumbra Reperfusion Tubing

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Tip Diameter</th>
<th>Working Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMX060</td>
<td>Penumbra Hi-Flow Tubing</td>
<td>0.060 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>PMX080</td>
<td>Penumbra Hi-Flow Tubing</td>
<td>0.080 in.</td>
<td>120 cm</td>
</tr>
</tbody>
</table>

Penumbra Delivery Microcatheters - Indication for Use

- Use Penumbra Delivery Microcatheters and Separators for the delivery of Penumbra Reperfusion Catheters and Separators.
- Use the Penumbra Delivery Microcatheters in conjunction with the Penumbra Reperfusion Catheters and Separators.
- Use the Penumbra Delivery Microcatheters in conjunction with the Penumbra Hi-Flow Tubing.

Penumbra Reperfusion Catheters to the Penumbra Aspiration Pump.

- Penumbra Reperfusion Catheters are indicated to connect the Penumbra Reperfusion Tubing to the Penumbra Aspiration Pump.
- Use the Penumbra Reperfusion Catheters to deliver Penumbra Reperfusion Tubing to the Penumbra Aspiration Pump.
- Use the Penumbra Reperfusion Catheters to deliver Penumbra Reperfusion Tubing to the Penumbra Aspiration Pump.

Potential Adverse Events

- The Penumbra Delivery Microcatheters should be used by physicians who have received appropriate training in the use of Penumbra Delivery Microcatheters.
- The devices are intended for single use only. Do not reuse or resterilize these devices.
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<tbody>
<tr>
<td>SMAX500</td>
<td>50° Maxima Select Catheter</td>
<td>0.050 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>SMAX600</td>
<td>60° Maxima Select Catheter</td>
<td>0.060 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>SMAX700</td>
<td>70° Maxima Select Catheter</td>
<td>0.070 in.</td>
<td>120 cm</td>
</tr>
</tbody>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>3MAX2040</td>
<td>20° Select Catheter, 2000</td>
<td>0.204 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>3MAX2540</td>
<td>25° Select Catheter, 2500</td>
<td>0.254 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>3MAX3040</td>
<td>30° Select Catheter, 3000</td>
<td>0.304 in.</td>
<td>120 cm</td>
</tr>
</tbody>
</table>

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<tr>
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<th>Working Length</th>
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</thead>
<tbody>
<tr>
<td>PS045</td>
<td>Penumbra ENGINE™ Microcatheter</td>
<td>0.45 mm</td>
<td>132 cm</td>
</tr>
<tr>
<td>PS050</td>
<td>Penumbra ENGINE™ Microcatheter</td>
<td>0.50 mm</td>
<td>132 cm</td>
</tr>
<tr>
<td>PS055</td>
<td>Penumbra ENGINE™ Microcatheter</td>
<td>0.55 mm</td>
<td>132 cm</td>
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</tbody>
</table>

Penumbra Reperfusion Tubing

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<tr>
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<th>Working Length</th>
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<tbody>
<tr>
<td>PMX040</td>
<td>Penumbra Hi-Flow Tubing</td>
<td>0.040 in.</td>
<td>120 cm</td>
</tr>
<tr>
<td>PMX060</td>
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</tr>
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</table>

Penumbra Delivery Microcatheters - Indication for Use

- Use Penumbra Delivery Microcatheters and Separators for the delivery of Penumbra Reperfusion Catheters and Separators.
- Use the Penumbra Delivery Microcatheters in conjunction with the Penumbra Reperfusion Catheters and Separators.
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Potential Adverse Events

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HIGHEST TRF
WITH PENUMBRA JET 7
POWERED BY PENUMBRA ENGINE

Thrombus removal force (TRF) equates to catheter tip force and drives clot capture.

TRF = Catheter Tip Area \times Vacuum Level

- Penumbra JET 7
  - TRF: 26.5

- Original Red Pump
  - TRF: 7.4
  - Year: 2008

- Pump MAX™
  - TRF: 14.5
  - Year: 2008

- SMAX™
  - TRF: 12.8
  - Year: 2008

- SMAX ACE™
  - TRF: 17.9
  - Year: 2008

- ACE64
  - TRF: 20.4
  - Year: 2013

- ACE68
  - TRF: 23.1
  - Year: 2013

- Penumbra ENGINE™
  - TRF: 29.2
  - Year: 2013

Now!

Note: Tests performed and data on file at Penumbra, Inc. Bench test results may not be indicative of clinical performance.
The Penumbra Aspiration Pump is indicated as a vacuum source for Penumbra Aspiration Systems.

The Penumbra Aspiration Pump is intended for use in the revascularization procedure to aspirate debris, dislodged thrombi, and clot in the treatment of intracranial large vessel occlusive disease (within the internal carotid, middle cerebral – M1 and M2 segments, basilar, and vertebral arteries) within 8 hours of symptom onset.

The Penumbra Aspiration Pump is not intended for use with a pump other than the Penumbra Aspiration Pump, in a pneumatically driven system, or with any other device.

The Penumbra Aspiration Pump is intended for single use only. Do not resterilize or reuse. Resterilization and/or reuse may result in ineffective or damaged devices.

There are no known contraindications.

Ineligible for intravenous tissue plasminogen activator (IV t-PA) therapy are candidates for treatment.

The Penumbra Aspiration Pump should only be used by physicians who have received appropriate training in the peripheral, coronary, and neurovascular systems.

Penumbra Delivery Microcatheter Indication for Use

The Penumbra Delivery Microcatheters are intended for use in the delivery of diagnostic agents, such as contrast, and therapeutic agents, such as catheter-based neurovasculature.

Possible complications include, but are not limited to, the inability to access the target neurovasculature and the inability to access the target neurovasculature due to resistance.

Contraindications

There are no contraindications.

Special Precautions

The Penumbra Delivery Microcatheter should not be used by physicians who have not received appropriate training in the neurovasculature.

The Penumbra Delivery Microcatheter should not be used when the patient is not eligible for intravenous t-PA therapy.

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