MAHURKAR™
Family of Acute Care Catheters

Exceptional Performance

- **Maximum Flows, Minimal Pressures**
  Double-D™ lumen design maximizes internal diameter to provide consistent and equal flow rates with lower arterial pressure.

- **Ease of Insertion**
  Thermosensitive material provides optimal stiffness during insertion, and softens up to 50% post-insertion for vessel conformity and patient comfort. The conical tip facilitates smooth transition through tissue.

- **Dependable Adapters and Extensions**
  Durable Ultem™ adapters and silicone extensions withstand repeated use and cleaning, while providing improved kink resistance.

Reduced Patient Complications

- **Maintain Patency by Decreasing the Likelihood of Clot Formation**
  Laser-cut side slots with smooth edges decrease the likelihood of debris attachment and clot formation.

- **Reduce Vessel Wall Occlusion**
  Larger slot shape reduces the likelihood of vessel wall occlusion, while the orientation maximizes the open passageway for fluid flow.

A full spectrum of acute care catheters for use in hemodialysis, apheresis, infusion and renal replacement therapy
The first acute care triple lumen catheter indicated for hemodialysis, infusion and apheresis

- Third lumen (19G) facilitates infusion of fluid, blood products, medication or blood sampling
- Preserves patient vascular access. Avoids the need for PICC line placements in CKD patients in accordance with NKF-KDOQI guidelines
- Soft, green, atraumatic tip to reduce likelihood of vessel trauma in situ
- Reinforced hub minimizes kinking in difficult vasculature — ideal for femoral and left-sided placements
- Modified Double-D™ design maximizes area for high flow rates in dialysis lumens
- Radiopaque allows for quick visualization

Proven Safety and Efficacy
Multi-centered, randomized clinical study comparing the MAHURKAR™ double lumen and triple lumen catheters demonstrated:

1. No increase in incidence of CRBSI (catheter-related bloodstream infection)
2. No significant difference in incidence of exit-site infections
3. Desired flow rates achieved 100% of the time

Catheter-Related Blood Stream Infection Comparison

<table>
<thead>
<tr>
<th>Lumen Type</th>
<th>% Infection</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Lumen</td>
<td>8.3%</td>
<td>0.77</td>
</tr>
<tr>
<td>Triple Lumen</td>
<td>7.5%</td>
<td></td>
</tr>
</tbody>
</table>

Exit Site Infection Comparison

<table>
<thead>
<tr>
<th>Lumen Type</th>
<th>% Infection</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Lumen</td>
<td>0.9%</td>
<td>0.11</td>
</tr>
<tr>
<td>Triple Lumen</td>
<td>3.4%</td>
<td></td>
</tr>
</tbody>
</table>

MAHURKAR™ 13.5Fr
High-flow Catheter
Optimal high-flow catheter – consistently achieves flow rates up to 450mL/min

- Soft, green, atraumatic tip reduces likelihood of vessel trauma in situ
- Larger Double-D™ lumen design optimizes flows with lower arterial pressure
- Less force required to insert the MAHURKAR™ 13.5Fr catheter versus other competitive high flow catheters
- Facilitates continuous renal therapies in the ICU
- Reinforced hub minimizes kinking in difficult vasculature — ideal for femoral and left-sided placements
- Radiopaque allows for quick visualization

MAHURKAR™ 11.5Fr
The Original Short-term Catheter

Trusted for over 30 years

- Minimum French size (11.5Fr) coupled with Double-D™ lumen design achieves consistent flow rates up to 350 mL/min
- Conical tip for smooth insertion
- Radiopaque allows for quick visualization
**MAHURKAR™** catheters feature:

- Rotatable Suture Wings
- Durable Adapters
- Adjustable Clamps

### MAHURKAR™ 8, 10 or 11.5Fr Dual Lumen Catheter

<table>
<thead>
<tr>
<th>Straight Extensions</th>
<th>Curved Extensions</th>
<th>Descriptions</th>
<th>Qty/Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>8817140005</td>
<td></td>
<td>10 Fr x 12 cm</td>
<td>S</td>
</tr>
<tr>
<td>8817140505</td>
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<td>10 Fr x 15 cm</td>
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<tr>
<td>8813816005</td>
<td>8813816009</td>
<td>11.5 Fr x 13.5 cm</td>
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</tr>
<tr>
<td>8830414000</td>
<td>8830414002</td>
<td>11.5 Fr x 16 cm</td>
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</tr>
<tr>
<td>8813794005</td>
<td>8813794009</td>
<td>11.5 Fr x 19.5 cm</td>
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<tr>
<td>8831662001</td>
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<td>11.5 Fr x 24 cm</td>
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<tr>
<td>8832539001</td>
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<td>8 Fr x 9 cm</td>
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<td>8832539003</td>
<td>8832539007</td>
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<td>8817141005</td>
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<tr>
<td>8831661001</td>
<td></td>
<td>11.5 Fr x 24 cm</td>
<td>S</td>
</tr>
</tbody>
</table>

Kits contain all catheter components in addition to:
- [1] 18G Introducer Needle
- [1] J Straight 70 cm guidewire (0.032” – 8Fr, 0.035” – 10Fr, 0.038” – 11.5Fr)
- [2] Telfa™ Island Dressings
- [2] Tissue Dilators – 8Fr or 10Fr
- [1] Tissue Dilator – 12Fr (11.5Fr Catheters Only)

### MAHURKAR™ 12Fr Triple Lumen Catheter

<table>
<thead>
<tr>
<th>Straight Extensions</th>
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<th>Descriptions</th>
<th>Qty/Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>8888345603</td>
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<td>12 Fr x 13 cm</td>
<td>S</td>
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<tr>
<td>8888345611</td>
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<td>12 Fr x 16 cm</td>
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<tr>
<td>8888346029</td>
<td>8888346029</td>
<td>12 Fr x 20 cm</td>
<td>S</td>
</tr>
<tr>
<td>8888346037</td>
<td></td>
<td>12 Fr x 24 cm</td>
<td>S</td>
</tr>
</tbody>
</table>

Kits contain:
- [1] 12Fr Catheter
- [1] 18G Introducer Needle
- [1] J Straight 0.035” x 70 cm Guidewire
- [2] Tissue Dilators (10Fr, 12Fr)
- [2] Telfa™ Island Dressings
- [3] Sealing Caps

Orders for all Catheter Products should be placed through the Covidien Customer Service Department, 1-800-962-9888.

A variety of catheter configurations and sizes to accommodate various insertion sites and patient sizes.
Clinical References:


MAHURKAR 12 Fr Triple Lumen Catheters covered by one or more of the following U.S. Pat. Nos. 5221256; 5348536; 5403291; 5451206; 5489278 and foreign counterparts.

MAHURKAR 13.5 Fr Curved and Straight Extension Catheters are covered by U.S. Pat. Nos. 5403291; 5489278 and foreign counterparts.

MAHURKAR 11.5 Fr Dual Lumen Catheters are covered by one or more of the following patents: U.S. Pat. Nos. 5403291; 5489278 and foreign counterparts.

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