SJM Regent®
Heart Valve

Redefining Hemodynamic Performance™

The newest member of the St. Jude Medical Mechanical Heart Valves family.
The SJM Regent® heart valve represents a significant step forward in prosthetic valve design. It provides outstanding hemodynamics while maintaining the traditional quality and proven features that have established St. Jude Medical® mechanical valves as the gold standard.

**Evolutionary improvement**

Development of the St. Jude Medical® mechanical heart valve has led to a progressively greater geometric orifice area within a given tissue annulus dimension.

**SJM® Masters Series mechanical heart valve**
- Intraannular cuff.
- Intraannular carbon rim.

**SJM® Masters Series Hemodynamic Plus valve**
- Supraannular cuff.
- Carbon rim remains intraannular.

**SJM Regent® heart valve**
- Supraannular cuff.
- Carbon rim shifts to supraannular position.
- New rotation mechanism is completely housed within the carbon rim.

**Orifice to annulus ratio — 19mm valve**

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>Orifice to Annulus Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regent™ Valve</td>
<td>84%</td>
</tr>
<tr>
<td>HP Series Valve</td>
<td>72%</td>
</tr>
<tr>
<td>Standard Valve</td>
<td>56%</td>
</tr>
</tbody>
</table>

“The energy loss results show an approximate one-size increment improvement of the SJM Regent™ heart valve over the St. Jude Medical® HP Series valve, which is equivalent to a two-size increment improvement over the standard valve.”

(Walker et al, 1999)
**Traditional reliability**

The SJM Regent® heart valve retains the same design features that have made St. Jude Medical® mechanical heart valves the standard for reliability and proven performance for more than 25 years.

- All blood-contact surfaces remain unchanged.
- In seven broad categories of structural integrity and durability tests, the SJM Regent® heart valve met all the demanding standards set by previous St. Jude Medical® mechanical heart valves.
- The SJM Regent® heart valve is made of the same pyrolytic carbon used in more than one million St. Jude Medical® mechanical heart valve implants.

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**Unprecedented hemodynamics**

The SJM Regent® heart valve delivers exceptional hemodynamics and performance while maintaining the design features that have set the standard for low complication rates, structural integrity, and durability in a mechanical valve. The SJM Regent® heart valve provides:

- Single digit in vivo pressure gradients—even in valve sizes as small as 19mm.
- Significantly larger EOAs.
- Excellent patient-prosthesis match—even in small sizes.
- Significant reduction of LV Mass. Numerous studies have shown a direct correlation between LV hypertrophy and morbidity and mortality. Even moderate LV hypertrophy can result in: congestive heart failure, arrhythmias, myocardial infarction, and sudden death.

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The technique for implanting the SJM Regent® heart valve remains the same as for other St. Jude Medical® mechanical heart valves. For added convenience, it’s available in two cuff configurations to suit your implant preferences.

**FlexCuff™ sewing ring**
- Provides enhanced conformability and maximum suture target area while offering lateral flange to accommodate the tissue annulus.

**Standard cuff sewing ring**
- Rounded cuff designed for excellent conformability and sutureability.

### Product Specifications*

<table>
<thead>
<tr>
<th>Valve Size (mm)</th>
<th>Tissue Annulus Diameter (mm)</th>
<th>Overall Height Open (mm)</th>
<th>Implant Height (mm)</th>
<th>Geometric Orifice Area (cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>17.0</td>
<td>10.6</td>
<td>5.3</td>
<td>1.87</td>
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<tr>
<td>19</td>
<td>19.0</td>
<td>11.5</td>
<td>5.9</td>
<td>2.39</td>
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<td>12.5</td>
<td>6.7</td>
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<td>13.9</td>
<td>7.6</td>
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<td>29</td>
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<td>16.1</td>
<td>9.1</td>
<td>5.44</td>
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</table>

Sizes 17 mm and 29 mm are not currently approved in the United States.

*From manufacturer’s data

### References:

2. Product and Design Evaluation Center, St. Jude Medical, Inc.

Visit our website: www.sjm.com