Vascular Intervention // Peripheral
Self-Expanding Stent System/0.018”/OTW

Pulsar®-18 T3
A unique combination of 3 technologies
140 μm thin struts - thinner than leading brands¹

Thinner struts for lower Chronic Outward Force (COF)²

<table>
<thead>
<tr>
<th>Stent Name</th>
<th>Manufacturer</th>
<th>Strut Thickness (μm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zilver Flex</td>
<td>Cook Medical</td>
<td>193 μm</td>
</tr>
<tr>
<td>Innova</td>
<td>Boston Scientific</td>
<td>192 μm</td>
</tr>
<tr>
<td>EverFlex Entrust</td>
<td>Medtronic</td>
<td>213 μm</td>
</tr>
<tr>
<td>Lifestent XL</td>
<td>BARD</td>
<td>228 μm</td>
</tr>
<tr>
<td>Pulsar-18 T3</td>
<td>BIOTRONIK</td>
<td>178 μm</td>
</tr>
</tbody>
</table>

140 μm thin struts - thinner than leading brands¹

0.25 N/mm low Chronic Outward Force²

<table>
<thead>
<tr>
<th>Stent Name</th>
<th>Manufacturer</th>
<th>Strut Thickness (μm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zilver Flex</td>
<td>Cook Medical</td>
<td>178 μm</td>
</tr>
<tr>
<td>Innova</td>
<td>Boston Scientific</td>
<td>192 μm</td>
</tr>
<tr>
<td>EverFlex Entrust</td>
<td>Medtronic</td>
<td>213 μm</td>
</tr>
<tr>
<td>Lifestent XL</td>
<td>BARD</td>
<td>228 μm</td>
</tr>
<tr>
<td>Pulsar-18 T3</td>
<td>BIOTRONIK</td>
<td>178 μm</td>
</tr>
</tbody>
</table>

0.25 N/mm low Chronic Outward Force²

Thinner struts and lower COF make a difference:*  
- Lower risk of restenosis³  
- Reduced vessel injury and inflammation³  
- Faster endothelialization⁴,⁵

Vessel response on SE stent 1 mm oversizing showing neointimal hyperplasia at 90 days⁶*

*As demonstrated in pre-clinical studies
Unique tri-axial shaft design on 4F low profile

**Tri-axial system with braided retractable shaft**

**Accurate stent deployment**

The outer stabilizing shaft isolates the retractable shaft from friction caused by the introducer valve to ensure accurate stent deployment.

---

**4F low profile - improved acute outcomes* vs. 6F**

Potential for safer, faster and simpler procedures than 6F

- Clinically proven lower access site complication rates
- Shorter compression time
- 45% smaller puncture site than 6F
- No need for a closure device
- Potential for ambulatory treatment

*Less access site complications
Clinically proven

Safety and efficacy at 12 months

**FTLR - Freedom from Target Lesion Revascularization; †PP - Primary Patency; ††A.L.L. - Average Lesion Length**

Sufficient radial force for long term vessel support, even in calcified lesions

With a constant low chronic outward force applied to the vessel, patency can be achieved and maintained over a long term follow up even in calcified lesions.

24-month outcomes of Pulsar stent, highlighting the long term safety and efficacy

<table>
<thead>
<tr>
<th>Study, Product</th>
<th>Manufacturer</th>
<th>A.L.L.</th>
<th>PP</th>
<th>FTLR</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOFLEX PEACE10</td>
<td>BIOTRONIK</td>
<td>8.2 cm</td>
<td>78.4%</td>
<td>FTLR** 89.3%</td>
</tr>
<tr>
<td>SUPERB5</td>
<td>Abbott</td>
<td>7.8 cm</td>
<td>N/A</td>
<td>FTLR 83.3%</td>
</tr>
<tr>
<td>4EVER7</td>
<td>BIOTRONIK</td>
<td>7.1 cm</td>
<td>72.3%</td>
<td>FTLR 82.7%</td>
</tr>
<tr>
<td>STROLL12</td>
<td>Cardinal Health/Cordis</td>
<td>7.7 cm</td>
<td>74.9%</td>
<td>FTLR 80.3%</td>
</tr>
<tr>
<td>RESILIENT14</td>
<td>BD/Bard</td>
<td>7.0 cm</td>
<td>N/A</td>
<td>FTLR 77.8%</td>
</tr>
<tr>
<td>ZILVER PTX15</td>
<td>Cook Medical</td>
<td>6.3 cm</td>
<td>65.8%</td>
<td>FTLR 76.7%</td>
</tr>
<tr>
<td>DURABILITY II16</td>
<td>Medtronic</td>
<td>10.9 cm</td>
<td>66.1%</td>
<td>FTLR 75.3%</td>
</tr>
</tbody>
</table>

Results from different trials are not directly comparable. Differences in outcomes may be the result of differences in protocol design, patient populations or other factors. Astron Pulsar, Pulsar-18, Pulsar-18 T3 and Pulsar-3S have equivalent stent platforms, therefore the clinical results are valid for the Pulsar range.
Pulsar-18 T3
A unique combination of 3 technologies

**Braided retractable shaft**
Controlled deployment

**Tri-axial shaft**
Accurate stent deployment

4F low profile
45% smaller puncture site vs. 6F

Wheel operated handle
Easy to use, ergonomically designed handle.

**proBIO® coating**
Reduces ion release

**140 μm thin struts**
Thinner than leading brands

**Additional radiopaque marker**
Improved visibility

Stents up to 200mm

**Designed for the SFA**
Multi-directional flexibility to conform to vessel movement

**Low chronic outward force**
For lower risk of restenosis

*Superficial Femoral Artery*
Pulsar-18 T3

Indicated for use in patients with atherosclerotic disease of the superficial femoral, proximal popliteal and infrapopliteal arteries and for the treatment of insufficient results after Percutaneous Transluminal Angioplasty (PTA), e.g. residual stenosis and dissection.*

Technical Data

<table>
<thead>
<tr>
<th>Spec</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catheter type</td>
<td>OTW</td>
</tr>
<tr>
<td>Recommended guide wire</td>
<td>0.018”</td>
</tr>
<tr>
<td>Stent material</td>
<td>Nitinol</td>
</tr>
<tr>
<td>Strut thickness</td>
<td>140 μm</td>
</tr>
<tr>
<td>Strut width</td>
<td>85 μm</td>
</tr>
<tr>
<td>Stent coating</td>
<td>proBIO® (Amorphous Silicon Carbide)</td>
</tr>
<tr>
<td>Stent Markers</td>
<td>6 gold markers each end</td>
</tr>
<tr>
<td>Sizes (ø mm)</td>
<td>4.0 - 7.0 mm: L: 20 - 200 mm</td>
</tr>
<tr>
<td>Shaft</td>
<td>4F, hydrophobic coating, tri-axial</td>
</tr>
<tr>
<td>Usable length</td>
<td>90 cm and 135 cm</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Stent ø (mm)</th>
<th>Catheter length 90 cm (Stent length mm)</th>
<th>20** 30 40 60 80 100 120 150 170 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>430437 430438 430439 430440 430441 430442 430443 430444 430445 430446</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>430447 430448 430449 430450 430451 430452 430453 430454 430455 430456</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>430457 430458 430459 430460 430461 430462 430463 430464 430465 430466</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>430467 430468 430469 430470 430471 430472 430473 430474 430475 430476</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stent ø (mm)</th>
<th>Catheter length 135 cm (Stent length mm)</th>
<th>20** 30 40 60 80 100 120 150 170 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>430477 430478 430479 430480 430481 430482 430483 430484 430485 430486</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>430487 430488 430489 430490 430491 430492 430493 430494 430495 430496</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>430497 430498 430499 430500 430501 430502 430503 430504 430505 430506</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>430507 430508 430509 430510 430511 430512 430513 430514 430515 430516</td>
<td></td>
</tr>
</tbody>
</table>

*8 weeks pre-order only


Leading competitors have been selected based on the PV Stent Revenue Market Shares EU, 2017 and PV Revenue Market Shares APAC 2015; Source: Millennium Research Group Inc.). Latest SFA self expanding stents for each manufacturer; Zilver and Zilver Flex are trademarks or registered trademarks of Cook Medical Technologies or its affiliates. Innova is a trademark or registered trademark of Boston Scientific or its affiliates. Everflex and Entrust are trademarks or registered trademarks of Medtronic or its affiliates. Lifestent is a trademark or registered trademark of C. R. Bard or its affiliates. Supera is a trademark or registered trademark of the Abbott Group of Companies. S.M.A.R.T. Control is a trademark or registered trademark of Cardinal Health or its affiliates.

*Indication as per IFU.

Pulsar and proBIO are trademarks or registered trademarks of the BIOTRONIK Group of Companies.

BIOTRONIK AG
Ackerstrasse 6
8160 Bülach, Switzerland
Tel. +41 (0) 44 864 5111
Fax +41 (0) 44 864 5005
info.vi@biotronik.com
www.biotronik.com

© 2019 BIOTRONIK AG – All rights reserved. Specifications are subject to modification, revision and improvement.