

Artificial Sphincter

The innovation

Understanding the Challenge

Incontinence has a growing incidence in both men and women. The current treatment for the most severe cases implies implanting a manually operated prosthesis. These solutions show a fairly high rate of surgical complications. The necessary manual handling also contributes to patient discomfort, in a condition that still is one of the modern time taboos and has a strong impact on the quality of life of all patients affected.

Presenting our Solution

Our novel and highly integrated Artificial Sphincter prosthesis offers a completely implantable technical solution which for the first time reduces the surgical impact. An electrical unit containing a liquid reservoir and a bidirectional, piezoelectric high-performance micro-pump operates the multi-chamber occluding sphincter cuff at pressures avoiding ischemic tissue injury. Our remote-controlled neo-sphincter enables an electronically controlled micturition or defecation with the additional advantage of adjusting the cuff pressure according to the patients' needs.

The Artificial Sphincter is recharged in a contact-free inductive manner.

Development Plan and Status

The aim is to present a solution with a reduced mid-term need for additional surgery. This goal is reached by a cooperation between surgeons, academics and industrial engineering partners.

The goal according to our development plan is to pass animal testing including CE and FDA conform documentation.

The Commercial Opportunity

We offer a prototype responding to an important market need with the opportunity for a cooperation to engage into a tailor-made development process. Bearing in mind that an increasing number of patients suffer from incontinence, the Artificial Sphincter is an attractive commercial opportunity providing a solution with a clearly reduced surgical impact and an improved ease of use supported by a strong quality of life argument.



Advantages at a glance

- Comfortable use
- Minimised surgical impact
- Wireless energy and data transfer
- Controlled urination or defecation
- Reduced risk of secondary surgical interventions

Keywords

- Urinary and Fecal Incontinence
- Recurrent Stress Urinary Incontinence (SUI) Type III
- Neurogenic Bladder Dysfunction (NBD)
- Congenital or Acquired Internal Sphincter Weakness
- Augmentation Ileocystoplasty
- Artificial Sphincter
- Sphincter Prosthesis
- Neo-sphincter
- Active Implant
- Reduced Surgical Impact
- Rechargeable Implanted Battery
- Remote-Controlled Device

Areas of application

- Urinary or Fecal Incontinence
- Possible further applications
- Reflux Esophagitis
- Erectile Dysfunctions
- Obesity (Bariatric Surgery)

Patent status

The invention is filed internationally and partially granted. The patent portfolio is owned by Dritte Patentportfolio Beteiligungsgesellschaft mbH & Co. KG. The application was filed in April 2004.

To acquire a licence for this new technology, please don't hesitate to contact us!



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