



## Lilium: the new vaginal speculum

Lilium integrates the need of the medical sector, sustainability and patient comfort.

This new device offers patients two insertion options: self-insertion, similar to tampon applicators, or insertion by healthcare professionals. This option empowers patients, transforming them from 'passive patients' to 'active patients'.

Lilium is made of semi-flexible, medical-grade TPV rubber, which has the mechanical strength to withstand the pressure of vaginal walls and the flexibility to open the blades. The device is composed by only two components: a inner part and a exterior part, called petals. The reason behind is due to the similarity of the mechanism with a flower due to when the inner part push the exterior, this one unfolds in a way that resembles the petals of a flower. This design choice intended to promote patients' psychological comfort when viewing the device, using familiar shapes. Lilium is designed not only with patients in mind but also with the planet.

Its design emphasizes safe reuse and features a simple cleaning process, enabled by its minimal number of components. Lilium is compatible with both high-level disinfection and autoclaving, making it a versatile, sustainable, and hygienic option for gynaecological care.

Ariadna Izcara Gual  
Revolutionizing pelvic exams: A sustainable,  
patient-centered redesign of the Vaginal  
Speculum  
27.08.2024

**Committee**  
Prof.dr.ir. Jan-Carel Diehl (chair)  
Ir. Anna Ruiters (mentor)  
MSc. Tamara Hoveling (mentor)