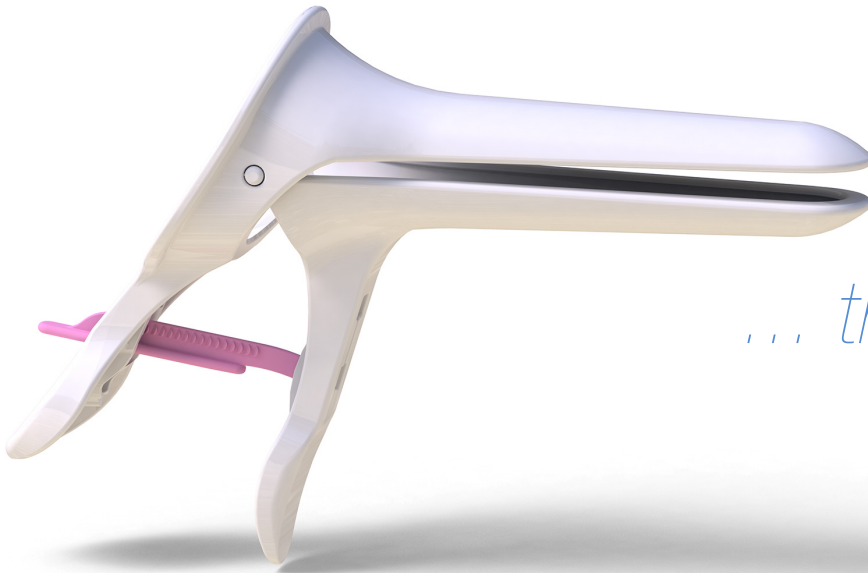


*Business Case:*

*Preferred by Women & Doctors...*



*... the Beauty of  
the Orchid.*

*90% of Dutch Hospitals use  
the Orchid Spec (June 2017)*



winner 2013 & 2016  
reddot design award

### **Why?**

- cost saving 1.000 Euro per Gynaecologist annually,
- optimal user-friendliness with single handed precision,
- patient friendly,
- Dutch design and manufacturing
- environmentally friendly,

### **History**

The gynaecological speculum is a typical example of a product that has been around for so many years without having undergone any substantial product innovation. The fact that speculums were designed to be reused and made out of metal has severely limited design options, thereby limiting user friendliness and patient comfort. For several years now, plastic specula have also been available. These however have mainly been design copying existing out-dated technology with only reduced production costs in mind. This has blocked innovation.

Whilst developing this speculum we believed it was time to completely abandon the status quo and designed this product optimizing it with the Gynaecologist, the patient, the Hospital and an environmentally responsible product life-cycle in mind.

## Why such a Market Success:

Orchid Spec was developed in close collaboration with leading Dutch Hospitals. This resulted in reaching the optimal balance between interests of specialist, patient, hospital, environment and production.

90% of Dutch hospitals now use the Orchid Spec (June 2017), five years after launch.

### **Orchid Spec justifiably realizes the following advantages:**

- **direct cost savings** up to 50% compared to use of metal reusables,
- **simplified & shortened procedure** for specialist and less hassle for clinic,
- **significantly improved patient comfort,**
- reduction in environmental impact both compared to metal and plastic speculums,
- reduced liability by reducing risk of cross contamination.

## Significant Cost Reduction:

**10.000 Euro saved annually for average Hospital**

*(1.000 Euro annually per Specialist)*

### **Instant and annually recurring**

Usage costs of a reusable speculum average around 2 Euro and range from 1.43 up to 3.50 Euro excluding depreciation. Including depreciation this would be significantly higher, but most hospitals already own speculums. The Orchid Spec costs less than 1 Euro for hospitals.

### **Cost calculation of use of metal speculum should include:**

- + daily collection and internal transport cost
- + rinsing cost
- + soaking cost
- + washing cost
- + sterilization cost
- + occasional repeated washing / sterilisation cost
- + general maintenance and checking cost
- + repair cost of missing / damaged parts
- + washing and sterilization cost of collection trays
- + extra cost when returned to Doctor damaged or with residual residue
- + depreciation cost
- + replacement cost
- + increased liability cost of cross contamination

**+**

**= Total cost of using reusable speculum (average above 2 Euro in NL)**

Manpower is only a limited part of the cost of sterilisation and reduction of manpower is not required to achieve these savings.

Usage of water, detergents, power and machines whilst ringing, soaking, washing and using the autoclave are reduced. At the same time the lifespan of these machines is extended and maintenance reduced.

Metal speculums require maintenance and spare "medical grade" parts and at time need to be replaced.

Often overlooked costs are those of cleaning and maintaining the collection and distribution trays and trolley cars which are also required to be sterilized after use and before new deployment.

Transportation costs increase, especially between distant outpatient facilities and centralized sterilization units.

A perceived drawback may be the creation of extra garbage. This however is negligible since all speculums can be disposed of with regular hospital waste, which is required by law to be incinerated. It will not add to landfill.

### **Depreciation of metal specula**

*"Even when metal speculums have just been purchased, leaving them unused will result in instant and recurring cost reduction."*

### **Reduced liability risk**

*"Due to use of single use specula, cross contamination is significantly reduced."*

## User Friendly Functionality, Reduces Procedure Time

During the design process, special attention was paid to the wishes of Doctors and the optimal fidget free functionality of the speculum. All common speculums require two hands for operation and locking.

### **reduced procedure time**

The Orchid Spec is more user friendly, leading to a reduced procedure time and less tense patients.

### **single handed operation**

The orchid Spec is operated with one hand. Locking & unlocking is achieved with one thumb movement.

### **fidget free operation**

The simplified Orchid Spec locking mechanism has been designed especially to avoid any jamming of lock.

### **simplified manipulation of Cervix**

Manipulating the cervix has become Child's play, even for assistants, due to inwardly folded edges with very large radii. These allow the Cervix to fall in between the opened blades more easily and the flattened inward edges position the Cervix facing outwards allowing for simplified inspection and manipulation.

### **no preheating needed**

The Orchid Spec, contrary to metal speculums does not feel cold reducing the need for preheating.

### **hands free after placement**

Due to the reduced weight of the Orchid Spec the inserted speculum does not need to be held in place.

### **discharge collection**

The inwardly forced edges collect and retain excess blood or discharge upon extraction.

### **no unneeded unpacking**

The Orchid Spec is not packaged individually, saving on handling time and waste. Packing 10 pieces per bag allows for easy restocking of cabinets.

## Patient Friendly, Reducing Trauma

We believe the patient should come first. The archaic metal speculum design is mainly tailored to easy cleaning. The common plastic specula are designed for optimal low-cost manufacturing and occasionally cause tissue trauma.

With the Orchid Spec we wanted to change the status quo. We have designed a speculum where the requirements of the Specialist, Patient, Hospital, Environment and Production are balanced equally.

### **completely smooth edges**

All inside and outside blade edges are free of sharp edges.

### **rounded blade edges**

The blade edges have a large radius, which allows vaginal tissue to flow naturally during manipulation.

### **Cervix support**

The inwardly extended surface edges gently support the Cervix, avoiding sharp pinching or scraping.

### **no undesirable pinching**

The blades in closed position still retain a gap allowing for protruding tissue to remain uncompressed.

### **optimal thermal integration**

Plastic does not conduct the cold and therefore avoids the thermal shock that occurs with metal specula.

### **size optimization**

We have extended the Orchid Spec range to 4 sizes.

### **simplified procedure**

The simplified and thereby shortened procedure reduces patient stress.

## Reduced Environmental Impact

The production and disposal of our Orchid Spec is less Environmentally impacting than the sterilization process. The Orchid Spec is manufactured locally in an **ISO 14001:2004 certified** Dutch factory, optimized for clean and efficient production and recourse management.

### **Cradle-to-Cradle design for Environmental Sustainability**

Hospital waste is required by Law to be incinerated at high temperature. This requires fuel in the form of gas, oil, coal or similar to sustain these sufficiently high temperatures. We effectively transform the natural recourse Oil into a useful plastic Speculum Product before using it to incinerate the other Hospital waste. Thereby our disposable speculum has an advantageous effect.

Modern waste treatment facilities use the excess heat created during the process to generate electricity and city heating completing the circle.

### **Safeguarding Our Natural Recourses**

In addition to the cradle-to-cradle environmental savings the use of our disposable speculum also provides a way to significantly save on natural recourses, which would otherwise go to waste during the sterilization process. As described in the "**Cost calculation of use of metal speculum should include**" in this Business Case there are multiple steps in this process that require considerable amounts of water, electricity and cleaning chemicals. This contaminated water in turn also needs to be treated. Switching to disposables resolves this.

### **Reduced Packaging**

The Orchid Spec is packaged 10 pieces per poli bag. This significantly reduces not only handling time for doctors but also reduces the amount of unnecessarily used packaging materials. This is similar to the transportation of the sterilized metal speculums.

### **Optimized Design**

The structural design of the Orchid Spec has been optimized to allow for a 10% to 20% weight reduction compared to other disposable specula on the market. This enabled us to further reduce environmental impact.

## Competitor Analysis

Plastic specula have been on the market for over 20 years without finding any significant traction. This is mainly due to three significant factors, which our competitors all have in common.

### **Risk of Breakage (inside patients)**

No other plastic speculum currently on the market can take any significant load without breaking. We have had our specula Certified by the Surgical Materials Testing Laboratory, of the NHS of Wales, United Kingdom. They have explained in astonishment that the Orchid Spec is the first speculum to ever pass with flying colours.

### **Risk of Tissue Trauma or Bleeding**

No other speculum on the market has found an adequate solution to sharp edges on the outside or inside of the blades of the speculum. Our patented speculum has removed all risk of tissue damage or bleeding from such sharp parting lines and product lines. Additionally the inwardly extended surfaces give increased support and allow for significantly increased large rounded edges.

### **Risk of Jamming or Fidgety Operation**

No other speculum has succeeded in designing a single-handed operation that included easy locking and unlocking with one hand. Our patented Orchid Spec has also resolved these issues.

### **Why White Plastic is Recommended**

Although all plastic specula on the market are transparent our research together with 8 renowned Dutch hospitals has shown that there is a strong preference for white plastic. We do provide the Orchid Spec in both transparent and white. White however is greatly preferred by all hospitals that now use our speculum.

- white plastic has significantly higher light reflection improving examination visibility
- misdiagnosis through transparent plastic frequent due to severe compression of tissue
- patients perceive white specula to be high quality instruments and transparent more toy like
- patients do not get confronted with blood or discharge during retraction of white specula
- transparency no longer required to locate cervix due to large rounded edges
- white specula only disclose properly diagnosable tissue area without distraction, reducing errors

# Orchid Spec

## Speculum advantages:

- Specialist: *Optimal user-friendliness, shortened procedure and single handed precision,*
- Patient: *Patient-friendly and increased comfort,*
- Hospital: *Up to 50% cost reduction and reduced liability,*
- Environment: *reduced environmental impact.*

## Available material colours:

- White *preferred by specialists for optimal light reflection,*
- Clear *limited edition for specific indications,*

## Orchid sizes:

- Virgo
- Medium / Medium SX SX has a smoke extraction nozzle for various air suction hose diameters.
- Wide / Wide SX SX has a smoke extraction nozzle for various air suction hose diameters.
- Long / Long SX SX has a smoke extraction nozzle for various air suction hose diameters.

## Orchid - Open sizes:

- Wide This speculum is Open-Sided to allow for side access during procedures.
- Wide SX SX has a smoke extraction nozzle for various air suction hose diameters.

## Distributed by

## // Manufactured by

Bridea Medical b.v.  
Amsterdam, The Netherlands  
ph: +31 20 8943 090  
fax: +31 20 2010 111  
info@brideamedical.com  
www.brideamedical.com

Bridea Medical b.v.  
Amsterdam, The Netherlands  
www.brideamedical.com

Orchid Spec  
the new speculum



winner 2013 & 2016  
reddot design award