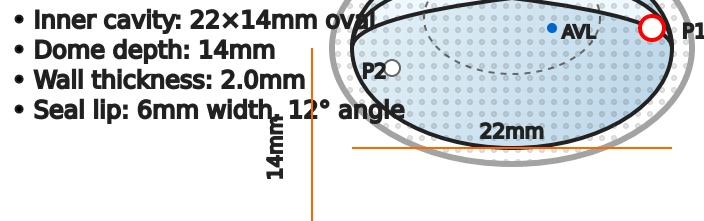


# VACUUM CUP DESIGN OVERVIEW

Medical Device Component for Vacuum Controller System

## KEY DIMENSIONS:



## MATERIALS & SPECIFICATIONS

### Shell:

- PC/Tritan (medical grade)
- Wall:  $2.0 \pm 0.2\text{mm}$  uniform

### Seal Lip:

- Platinum-cured silicone
- Shore A 10-15 (soft contact)

### Pressure Rating:

- -40 kPa continuous operation

## PORT IDENTIFICATION

- P1 - Primary Port  
Female Luer-lock (P/N 0-0-1)  
3.9mm ID, ISO 80369-7
- P2 - Auxiliary Port (Optional)  
Future expansion, not used
- AVL - Applied Vacuum Level

## VACUUM CONTROLLER INTEGRATION



### Anti-Detachment System:

- AVL sensor monitors applied vacuum
- Pressure rise indicates detachment
- Auto-compensation via SOL1
- Emergency release via SOL2

### Hardware:

- MCP3008 ADC
- MPX5010DP sensors
- Solenoid valves
- I<sup>b</sup>gplod control

**COMPLIANCE: ISO 10993 Biocompatibility | ISO 80369-7 Luer Connections | Medical Device Standards**

Designed for vulva stimulation with anti-detachment monitoring • Continuous operation: -40 kPa • Transient max: -60 kPa