



ACHIEVE YOUR VISION.

**Pulsar<sup>2</sup>** *Minimal Stress*

## Pulsar<sup>2</sup> *Minimal Stress*

MODULAR WORKSTATION FOR ANTERIOR AND POSTERIOR SEGMENT SURGERY.

- Double Pump Venturi-Peristaltic.
- Double Infusion: I.V. Pole/Forced Minimal IOP (patented).
- Continuous micrometrical stroke length control & adjustment by Minimal Stress System (patented).
- Programmable Emission Mode
- Co-m.i.c.s.; m.i.c.s. (incision size range 3.2 mm - 1.0 mm).
- High Speed Vitrectomy: up to 4000 cuts/min.
- 20/23/25G Vitrectomy.
- HID Xenon Light (Vit Module).
- Simultaneous Double Linear Footpedal.
- LCD Touch Screen.
- User-friendly Control Software.

DOUBLE INFUSION: I.V. POLE/  
FORCED MINIMAL IOP

VENTURI AND PERISTALTIC PUMPS



SIMULTANEOUS DOUBLE  
LINEAR FOOT PEDAL



## Technical specifications *Pulsar<sup>2</sup> Minimal Stress*

| PARAMETER                 | SPECIFICATION   |
|---------------------------|---|
| Model                     | Pulsar <sup>2</sup> Minimal Stress  |
| <b>PROGRAMMABILITY</b>    |   |
| Programs                  | over 1000 user programs, each including 3 U/S, 2 DIATH, 2 I/A, 2 VIT modes.   |
| <b>EQUIPMENT CONTROL</b>  |   |
| User Interface            | Graphic User Interface, 12.1" LCD with touch screen   |
| Remote control            | cable wired, controls all functions   |
| Footpedal                 | dual linear programmable footpedal controls all equipment functions   |
| Automatic cart for bottle | programmable and controlled by pedal and console  |
| <b>IRRIGATION</b>         |   |
| Fluid delivery            | gravity fed - eye pressure determined by the height of I.V. pole<br>patented forced irrigation - eye pressure determined by programmable air pressure (range 14-80 mmHg)                    |
| Valving element           | solenoid driven pinch valve   |
| Control                   | system footpedal/console  |
| <b>ASPIRATION</b>         |   |
| Aspiration pump types     | Venturi and Peristaltic   |
| Actuating medium          | pressurized air from external source<br>pressure: from 500 to 800 KPa (72 to 116 PSI)<br>flow: at least 30 Normal litre/minute @500 mmHg  |
| Default vacuum level      | user programmable   |
| Available vacuum range    | 5 to 500 mmHg   |
| Default flow rate         | user programmable   |
| Flow rate range           | 2 to 50 cc/min (peristaltic only)   |
| Aspiration rise time      | three levels: SLOW, MEDIUM, FAST  |
| Surgeon mode              | Panel or Linear vacuum level control by the footpedal from zero to preset (peristaltic and Venturi)<br>Panel or Linear flow control by the footpedal from zero to preset (peristaltic only) |
| Safety system             | ACS3 (Anterior Chamber Surge Suppression System)  |
| Control                   | system footpedal  |
| <b>VITRECTOMY</b>         |   |
| Handpiece type            | 20/23/25G pneumatically powered guillotine cutter (VIT)   |
| Cutting mode              | reciprocating motion  |
| Default cut rate          | user programmable   |
| Cutting rate              | from 60 up to 4000 cuts per minute (VIT)  |
| Port size                 | adjustable from 0.2 to 0.7 mm (reusable cutters only)   |
| Actuating medium          | pressurized air from external source  |
| Operating pressure        | 230 KPa (33,4 PSI)  |
| Surgeon mode              | linear cut rate from 0 to preset controlled via system footpedal  |
| Control                   | system footpedal  |

111004 Pulsar<sup>2</sup> Minimal Stress

### DIATHERMY

|                       |  |
|-----------------------|--|
| Type                  | Bipolar generator. Generator stops when RF power is not needed               |
| Operating frequency   | 2 MHz  |
| Nominal power         | 7 W (450 Ohm)  |
| No load max. voltage  | 100 V  |
| Default bipolar power | user programmable  |
| Bipolar power         | 5 to 100%  |
| Surgeon mode          | allows linear control of the diathermy power via system footpedal depression |
| Handpiece type        | Bipolar microforceps, slim stat pencil eraser, intraocular diathermy pencils |
| Control               | system footpedal   |

### PHACOEMULSIFIER

|                |   |
|----------------|---|
| Handpiece type | piezoelectric   |
| Frequency      | approx. 40 KHz  |
| Tip stroke     | from 0 to 100 µm  |
| Power          | panel or linear control of the U/S power via system footpedal depression  |
| U/S Mode       | linear or panel; Continuous, Short Pulse, Single Burst, Multi Burst, Continuous Burst, Programmable Emission Mode |
| U/S Timer      | from 0.00 minutes to 9.59 minutes - equivalent Phaco time display   |
| Control        | system footpedal  |

### ELECTRICAL SPECIFICATIONS

|                    |                                     |
|--------------------|-------------------------------------|
| Dimensions         | 330 x 410 x 450 mm                  |
| Weight             | 15 Kg                               |
| Input voltage      | 100/120/220/230-240 V A.C. SELECT.  |
| Frequency          | 50/60 Hz                            |
| Power consumption  | 145 W                               |
| Input air pressure | from 500 to 800 KPa (72 to 116 PSI) |

### REGULATORY

|            |   |
|------------|---|
| CE marking | European directive 93/42/EEC                              |
| Safety     | Conforms to IEC 60601-1<br>IEC 60601-1-2<br>IEC 60601-2-2 |

L x W x H:  
450 x 410 x 330 mm



## Technical specifications **Vit Module**



121010 Vit module

| PARAMETER                   | SPECIFICATION  |
|-----------------------------|--|
| Model                       | Pulsar <sup>2</sup> Minimal Stress                                     |
| <b>ILLUMINATION</b>         |  |
| Source                      | 5100 °K HID xenon lamp   |
| Light intensity             | adjustable in 4 steps by motorized diaphragm                           |
| Filters                     | green filter   |
| <b>STERILE AIR INFUSION</b> |  |
| Pressure range              | from 5 to 80 mmHg (steps of 5 mmHg)                                    |
| Sterility                   | achieved by 0.22 microns sterile single use filter                     |
| Safety systems              | activation warning tone  |
| <b>SILICONE INFUSION</b>    |  |
| Pressure range              | from 40 KPa (5,8 PSI) to 500 Kpa (72,5 PSI)<br>step of 20 KPa (29 PSI) |
| Control                     | linear injection control   |
| Injection System            | pre-filled 1000 and 5000 cSt disposable syringes                       |
| Removal                     | single use dedicated kit   |
| Safety systems              | activation warning tone  |
| <b>SCISSORS</b>             |  |
| Microscissors type          | Semi-disposable pneumatically powered - progressive cut                |
| Cutting range               | from 60 to 320 cuts/min ~ single cut                                   |
| Actuating system            | pressurized air  |
| <b>ELECTRICAL SPECS</b>     |  |
| Mains Volts                 | 100/120 V 50-60 Hz - 220/240 V 50 Hz                                   |
| Power consumption           | 75 W   |



L x W x H:  
395 x 400 x 105 mm



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Man and Technology

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