



ACHIEVE YOUR VISION.

Pulsar² ESP *Minimal Stress*

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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 2500 cuts/min (upgradable to 4000 cuts/min).
 - 20/23/25G Vitrectomy.
 - HID Xenon Light (Vit Module).
 - Simultaneous Double Linear Footpedal.
 - LCD Touch Screen.
 - User-friendly Control Software.
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DOUBLE INFUSION: I.V. POLE/
FORCED MINIMAL IOP

VENTURI AND PERISTALTIC PUMPS



SIMULTANEOUS DOUBLE
LINEAR FOOT PEDAL

111007 Pulsar² ESP Minimal Stress

Technical specifications **Pulsar² ESP** *Minimal Stress*

PARAMETER	SPECIFICATION
Model	Pulsar ² ESP Minimal Stress
PROGRAMMABILITY	
Programs	over 1000 user programs, each including 3 U/S, 2 DIATH, 2 I/A, 2 VIT modes.
EQUIPMENT CONTROL	
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
IRRIGATION	
Fluid delivery	gravity fed - eye pressure determined by the height of I.V. pole patented forced irrigation - eye pressure determined by programmable air pressure (range 14-80 mmHg)
Valving element	solenoid driven pinch valve
Control	system footpedal/console
ASPIRATION	
Aspiration pump types	Venturi and Peristaltic
Actuating medium	pressurized air from external source pressure: from 500 to 800 KPa (72 to 116 PSI) 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) 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
VITRECTOMY	
Handpiece type	20/23/25G pneumatically powered guillotine cutter (VIT)
Cutting mode	reciprocating motion
Default cut rate	user programmable
Cutting rate	up to 2500 cuts/min (upgradable to 4000 cuts/min)
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

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 IEC 60601-1-2 IEC 60601-2-2

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





121010 Vit module

Technical specifications **Vit Module**

PARAMETER	SPECIFICATION
Model	Pulsar ² ESP Minimal Stress
ILLUMINATION	
Source	5100 °K HID xenon lamp
Light intensity	adjustable in 4 steps by motorized diaphragm
Filters	green filter
STERILE AIR INFUSION	
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
SILICONE INFUSION	
Pressure range	from 40 KPa (5,8 PSI) to 500 Kpa (72,5 PSI) 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
SCISSORS	
Microscissors type	Semi-disposable pneumatically powered - progressive cut
Cutting range	from 60 to 320 cuts/min ~ single cut
Actuating system	pressurized air
ELECTRICAL SPECS	
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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