



VIRTUOSO® Advanced Vision Solutions



General Information

Manufacturer	Model
Vitrex B.V. Seggelant-Noord 2, 3237 MG Vierpolders, The Netherlands	Virtuoso® Advanced Vision Solutions
SKU #	
EQ00.R01	
Regulatory Compliance	
European Medical Device Regulation (EU) 2017/745, and the following additional European Directives: • Directive 2011/65/EU on the Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) • Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) • Directive 2014/53/EU on Radio Equipment (RED)	
Electrical Safety Compliance	
EN IEC 60601-1:2006/A13:2024 Medical electrical equipment- Part 1: General requirements for basic safety and essential performance EN IEC 60601-1-2: 2015/ A1:2021 Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic disturbances - Requirements and tests.	
Lens Removal, Vitrectomy, and Diathermy Safety Compliance	
Lens Removal and Vitrectomy Devices IEC 80601-2-58:2024 Medical electrical equipment - Part 2-58: Particular requirements for the basic safety and essential performance of lens removal devices and vitrectomy devices for ophthalmic surgery.	
Diathermy IEC 60601-2-2:2017/A1:2023 Medical electrical equipment - Part 2-2: Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories.	

Performance Characteristics of the Virtuoso® Advanced Vision Solutions

Diathermy Function	Irrigation Pressure
200 kHz, 10 W at 200 Ohm load	5 to 120 mmHg
Aspiration Pressure	Phacoemulsification
up to 650+ mmHg	≥80 W at 40kHz
Vitrectomy Cut Rate	
60 to 20,000 cpm, single cut mode selectable	

Environmental Specifications

Transport Feature Specification	Storage Feature Specification
- Temperature -10°C to 50°C (14°F to 122°F) - Humidity 10% to 95% relative humidity (non-condensing) - Atmospheric pressure range 500mbar to 1060mbar - Protection Polyethylene (PE) protection cover	- Temperature -10°C to 50°C (14°F to 122°F) - Humidity 10% to 95% relative humidity (non-condensing) - Atmospheric pressure range 500mbar to 1060mbar - Room Storage room must be clean - Dust protection Cover the system with a dust cover
Operating Ranges Specification	
- Temperature 10 °C to 35 °C (50°F to 95°F) - Humidity (EQ00.R01, EQ00.R03) 30% to 90% relative humidity (non-condensing) - Humidity (EQ00.R02) 30% to 60% relative humidity (non-condensing) - Atmospheric pressure range 800mbar to 1060mbar - Operation and Handling IEC 60601-1 sections 15.3.2/15.3.4.1/15.3.5	

Power Requirements Specifications

Mains Supply Voltage/Frequency	Fuses
100-240 VAC, 50/60 Hz	2x T 6.3A H
Power Consumption	Protection Class
500 VA	IP20 According to standard EN 60601-1 clause 6, the protection against electrical shock is Class I

Fluidic Specifications

Irrigation Pressure	
Compensated IOP Control Set point range 5–120mmHg, Pressure accuracy Anterior < ± 10mmHg	
Aspiration Flow Control	Aspiration Vacuum Control
Flow range 0–60ml/min Aspiration Vacuum limit range (sea level) 0mmHg to 650+mmHg	Vacuum range (sea level) 0mmHg to 650+mmHg Flow limit range 0.5–60ml/min

Anterior Vitrectomy

Handpiece Type	Default Cutting Rate
Dual-cutting blade	User programmable
Available Cutting Rate	Pneumatic Drive
From 60 to 20000 (2x 30-10000) cpm (Cuts per Minute), Single Cut (2x1)	Dual Pneumatic Drive from Pressurized air by internal source
Cutting Mode	Control
Fixed or linear	Footpedal
Probes (Sizes and Lengths)	
23G (working length 15mm), 25G (working length 18mm)	

Diathermy

Power Consumption	Frequency
10 W (200 Ohm)	200 kHz
Maximum HF Voltage	Diathermy Cable Maximum Working Voltage
270Vpp	300Vpk
Diathermy Handpiece Maximum Working Voltage	
550Vpk	

Phacoemulsification

Handpiece Type	Frequency
Four piezoelectric crystals	40–43 kHz (Phaco Emulsification) - 42–45kHz (Phaco Fragmentation)
Stroke Length of Tip (100%)	Power Control
80 ±20% µm	Fixed or linear control of U/S power via footpedal
U/S mode	Statistics
Continuous mode Pulse mode from 1 to 250pps (pps = Pulse Per Second) , duty cycle from 5 to 95%. Burst Mode, programmable duration from 5 to 1000 ms), intervals from 60 to 3000 ms.	U/S Time, EPT (Equivalent Phaco Time), Irrigation/Aspiration Time & Volume, Vitrectomy Time & average cutting speed

Equipment Classification According to EN 60601-1

Type of Protection Against Electric Shock	
Class I	
Degree of Protection Against Electric Shock	
Diathermy	Type BF, floating both at high and low frequencies
U/S	Type B
Vitrectomy	Type BF
Degree of Protection Against Water (System Unit)	IPX0
Degree of Protection Against Water (Footpedal)	IPX8
Degree of Safety in the Presence of a Flammable Anaesthetics	Not suitable

Remote Control

Dimensions	Weight
108mm x 68mm x 23mm	85 grams, without batteries
Batteries	FCC ID
2 X 1.5V AA	SQGBT700
Class	Effective Radiated Power
Class 1	18dBm
Wireless Technology	Maximum Operating Distance (Wireless)
Bluetooth classic; 2.4GHz ISM Band	4m

Footswitch

Dimensions	Weight
280mm x 640mm x 1150mm	2.5kg
Protection Class	Power Supply
IPX8	Internal Battery
FCC ID	Class
SQGBT700	Class 1
Radiated Power	Wireless Technology
18dBm	Bluetooth classic; 2.4GHz ISM Band
Functions	Maximum Operating Distance (Wireless)
Programmable as Single Linear Vertical actuation or Dual Linear Vertical and Horizontal actuation. 8 satellite switches (10 including horizontal yaw)	4m

NOTE:

- 1) The weight and dimensions shown are approximate.
- 2) Specifications are subject to change without notice.

Hardware Dimensions (Height x Width x Depth)

System: 1710mm (H) x 640mm (W) x 755mm (D)
 Instrument Tray: 420mm x 300mm to 400mm x 280mm (W x D).
 Instrument Tray Maximum Load:
 1kg when fully extended - 2kg when fully retracted

Weight:

110 Kg



Contact Information:

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