

CRYO-LINE

General Features

The CRYO-LINE medical device is designed for use in ophthalmic surgery by qualified personnel. More specifically, the surgical procedures where the device can be used are listed below:

- Retinal detachment
- Glaucoma
- Cataract



CRYO-LINE operates according to the physical law of the Joule-Thomson effect to freeze the tip of the probe and reach freezing temperatures of approximately -60°C . The gases used must be medical-grade, hyperdry Nitrous oxide (N_2O) or Carbon dioxide (CO_2), at saturated vapor pressure (approx. 60 bar) and room temperature. The gases must be stored in non-siphon cylinders. The CRYO-LINE device consists of a control console fitted with a high-pressure hose and inlet filter for connection to a gas cylinder, and a foot pedal.


The console is equipped with a connector for attaching a hose, which allows the exhaust gas to be channeled and released outside the operating theater if N_2O is used.

Available accessories include a series of cryosurgical probes and an instrument cart with cylinder housing.

The probes are all reusable and can be decontaminated, cleaned and sterilized in a steam autoclave, as specified in the Instructions for Use. All probes are fitted with a thermocouple, which allows the temperature reached at the end of the probe to be measured.

The temperature, which is measured continuously, is displayed on the console in degrees Centigrade ($^{\circ}\text{C}$) or Fahrenheit ($^{\circ}\text{F}$). The probes are made from materials with high thermal conductivity to enable rapid cooling and thawing. The probe cable is about two meters long.

Product Information

Ophthalmic Cryosurgery System	General Device Description	SKU#
	CRYO-LINE	131002

Technical Specifications

Manufacturer	Model
OPTIKON 2000 S.p.A. via del Casale di Settebagni, 13 00138 Rome - Italy	CRYO-LINE
Technical Standards	
EN 60601-1:2006+A11:2011; EN 60601-1-2:2015	

Environmental Specifications

Storage	During Operation
Temp. range -10°C to +70°C, humidity 10-100% (non-condensing)	Temp. range +10°C to +40°C, humidity 30-75%.

Electrical Specifications

Input Voltage	Frequency
Selectable at 100/120/220/240 V AC	50/60 Hz
Power Consumption	Fuses
80 VA	220-240 V: 1 A T 100-120 V: 2 A T

Pneumatic Circuit

Supply Gas	Maximum Input Pressure
Medical-grade, hyperdry N ₂ O or CO ₂ in non-siphon cylinders	70 bar - 1015 PSI

Classification of the Instrument according to IEC 60601-1

Type of Protection against Electric Shocks	
Class I	
Degree of Protection against Electric Shocks	Type of Protection against Harmful Entry of Water
Cryosurgical probe: BF	IPX1
Degree of Safety for Use in the Presence of a Flammable Anesthetic Mixture with Air, Oxygen or Nitrous Oxide	
Unsuitable	

Dimensions

Height	Width
172 mm	393 mm
Depth	Weight
470 mm	10 Kg

Compatible Accessories

Q.ty	SKU #		Image
1	183001 INSTRUMENT CART WITH CYLINDER HOUSING	The surgical instrument cart was designed to house the console of a BVI surgical system and move it easily around the operating theater. It is equipped with a housing for some of the commercial available sizes of CO ₂ or N ₂ O cylinders. The base of the cart is fitted with anti-static wheels with a locking mechanism. Dimensioni Height: 106 cm Width: 57,5 cm Depth: 54 cm Weight: 28 Kg	
1	132005 SPARE CARTRIDGE FOR GAS FILTER	Spare cartridge for gas filter	
1	132008 CYLINDER ADAPTER FOR NITROUS OXIDE N ₂ O ISO5145 standard	Cylinder adapter for nitrous oxide N ₂ O (ISO5145 standard)	
1	132010 CYLINDER ADAPTER FOR NITROUS OXIDE French standard	Cylinder adapter for nitrous oxide (French standard)	
1	132009 CYLINDER ADAPTER FOR CARBON DIOXIDE ISO5145 standard	Cylinder adapter for carbon dioxide (ISO5145 standard)	
1	132006 CO ₂ CYLINDER ADAPTER Chinese standard	CO ₂ cylinder adapter (Chinese standard)	
1	132012 CO ₂ CYLINDER ADAPTER DIN 477 N.6	CO ₂ cylinder adapter DIN 477 N.6 (German standard)	

Compatible Accessories

Q.ty	SKU #		Image
1	133002 CRYOPROBE FOR RETINA, BALL	Cryoprobe for Retina, Ball	
1	133004 CRYOPROBE FOR RETINA, "T" SHAPED	Cryoprobe for Retina, "T" Shaped	
1	133005 CRYOPROBE FOR RETINA, "BONNET"	Cryoprobe for Retina, "Bonnet"	
1	133006 CRYOPROBE FOR GLAUCOMA	Cryoprobe for Glaucoma	

Contact Information:

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