

# LIGHTSonic

## PHACOEMULSIFIER



## PRODUCT OVERVIEW

## LIGHTSONIC PRODUCT OVERVIEW

The LightSonic Phacoemulsifier (Phaco) is a medical device commonly used in ophthalmic practices to treat a person suffering from a cataract. With a Phaco machine, a doctor can use ultrasound to break up the lens in the patient's eye, while simultaneously aspirating the broken pieces through the same hand piece. Therefore, the quality of the hand piece which the doctor uses can be almost as important as the quality of the Phaco machine itself. Once the Phaco machine has been used to break-up and suck out the original lens, the doctor will insert a new prosthetic lens, called an Intra-ocular lens, into the patient's eye through a small incision.

If you are familiar with other LightMed brand products such as lasers from our LightLas or TruScan family, then you should remember that many laser systems require little more than the console, slit lamp, and contact lens to deliver laser energy to the patients eye, which is typically why much attention is paid to the internal components of a laser console. Whilst this is true for lasers, Phacoemulsifiers, like the LightSonic, are treated rather differently. A Phaco machine is shipped with several important accessories as well as tubing, and most of these must be replaced throughout the lifetime of the machine. Failure to do so can result in decreased performance, and an incorrect perception by your end user that the Phaco is poor or "low quality."

There are two versions of the LightSonic Phaco System available:

- LightSonic Lite
- LightSonic Pro

Both the LightSonic Lite and LightSonic Pro models feature the following accessories:

- All-Titanium Phaco hand piece with a 30° Phaco tip
- Multi-function, linear-control foot pedal
- Irrigation/Aspiration hand piece with both regular aspiration tip *and* 45° tip
- Irrigation sleeve
- Variable-rate Vitrector with wide cutting range
- Cautery forceps
- Tubing kit and Test chamber also included

## LIGHTSONIC LITE & LIGHTSONIC PRO PRODUCT DIFFERENTIATION

The LightSonic Lite can operate in the following modes:

- Cautery mode
- Irrigation/Aspiration (I/A) Mode
- Ultrasonic (U/S) Mode
- Ultrasonic Pulsing (U/S Pulse) Mode
- Vitrectomy Mode

The LightSonic Pro can operate in the following modes:

- Cautery mode
- Irrigation/Aspiration (I/A) Mode
- Ultrasonic (U/S) Mode
- Ultrasonic Pulsing (U/S Pulse) Mode
- **Ultrasonic Cold (Cold Phaco) Mode**
- Vitrectomy Mode

As you can see, the primary difference between the Lite and Pro models is the addition of the Cold Phaco mode. This feature will be discussed later in the clinical application section.

Regardless whether the Lite or Pro model, both have been designed with the physician and patient in mind. Clever systems are in place to alert the physician of parameter settings, as well as give warnings without he/she having to look away from the patient's eye.

When the doctor does require to operate the controls, he/she will find that the large, easy-to-read displays are conveniently located close to the controls which manipulate them, whilst changing from one mode to another or manipulating the treatment parameters is as simple as pushing a button or turning a dial.

LightMed's traditional fair business model, offering "industry's best value for money ophthalmic surgical solutions" has been manifested in the LightSonic Phaco System. The systems (both Pro and Lite) are positioned at very competitive rates, whilst also having outstanding clinical performance. Furthermore, the LightSonic Phaco system can be bundled with the iSTREAM Intra-ocular lens, as well as LightLas YAG laser system, complementing a physician's armamentarium, assuring better practice dynamics and making it a great investment.

## WHAT IS COLD PHACO?

Traditional phacoemulsification can be likened to an accelerating car with only one gear. When the vehicle is stopped, there is no action other than the idling of the engine. As you begin to press on the gas pedal, the car begins to accelerate, slowly picking up speed. Just like in a car, you can stop accelerating at any time, and maintain a consistent speed, whilst the acceleration pedal (gas pedal) remains depressed. There is also a brake, so that you can stop the car. In traditional phacoemulsification, the “brake” can be likened to the reverse-function on the Phaco’s foot pedal. Thus the single-gear car, gives the driver the opportunity to do the following:

1. Accelerate
2. Decelerate
3. Cruise
4. Brake

Thus, the traditional Phacoemulsification allows the Doctor to perform the following actions simultaneously:

1. Increase/Decrease the ultrasound power
2. Increase/Decrease the aspiration rate
3. Increased/Decrease the vacuum
4. Reverse flow in the event of an occlusion

Going back to the car example, if you add the ability to change gears, you now have a much more dynamic driving experience, and are better suited to handle different types of terrain. In the same regard, the Cold Phaco allows the Doctor to perform the following actions simultaneously:

1. Increase/Decrease the ultrasound power
2. Increase/Decrease the aspiration rate
3. Increased/Decrease the vacuum
4. Reverse flow in the event of an occlusion
5. Switch between standard ultrasonic and pulsed ultrasonic delivery
6. Adjust the width of the pulse in pulse mode

Therefore, the Cold Phaco is a huge advantage for the LightSonic Pro, and there are not many consoles in the market that offer an entry-level price point with upper-level features such as this one.

## LIGHTSONIC TECHNICAL SPECIFICATIONS

<b>I/A</b>	
Aspiration Rate:	0 to 40 cc/min
Vacuum Limit:	0 to 500 mmHg
<b>U/S STD</b>	
U/S Power:	0 to 100%, 40kHz/ 50 Watts maximum
Aspiration Rate:	0 to 40 cc/min
Vacuum Limit:	0 to 200 mmHg
<b>U/S PULSE</b>	
U/S Power:	0 to 100%, 40 kHz, Footpedal Controlled
Aspiration Rate:	10 to 50 cc/MIN
U/S Vacuum:	0 to 200/650 mmHg
Pulse Rates:	LO 4.5 PPS MED 6.5PPS HI 10 PPS XTR 15 PPS
<b>U/S COLD</b>	
U/S Power:	0 to 100%, 40 kHz, Footpedal Controlled
Aspiration Rate:	10 to 50 cc/MIN
U/S Vacuum:	0 to 200/650 mmHg
Pulse Widths:	LO 20 mS MED 40 mS HI 90 mS XTR 120 mS
<b>VITRECTOMY</b>	
Cut Rate:	60 to 600 cuts/min, single cut
Aspiration Rate:	0 to 40 cc/min
Vacuum Limit:	0 to 500 mmHg
U/S TIMER	0.0 to 9.9 MIN, Pushbutton Reset (U/S Modes only)
IRR	Irrigation only, gravity feed
ELECTRICAL	100 - 240 VAC, 50/60 Hz

## LIGHTSONIC FEATURES AND BENEFITS

### Simplicity

- Ergonomically designed system focused on the reliability and convenience. System features unsurpassed quality internal components from the precision peristaltic pump, to the stainless steel vacuum transducer.
  - Exceptional Reliability
  - Large displays and setting functions.
  - Lightweight and portable system.
  - Extremely Simple Operation - No programming, no complexity, no confusion.

### U/S Cold Phaco Mode (pro)

- Assuring convenience and improves patients visual outcomes, by allowing the physician to control ultrasonics and aspiration rate simultaneously.

### Continuously Auto-Tuned Emulsification

- Highly advanced high power ultrasonics can emulsify all nuclei from softest to hardest densities.
- Continuous Auto-Tuning circuitry allows for exceptional control at all power levels and nuclei densities.

### All Titanium Phaco Hand piece

- Very Lightweight.
- Highly Durable.
- Non corrosive.

### Advanced Irrigation and Aspiration

- The low-pulsation, six roller peristaltic pump offers the surgeon complete vacuum and aspiration flow, as well as freedom of anterior chamber shallowing.
  - Fully adjustable vacuum for latest and safety Phaco techniques.
  - Enhanced safety by audible system status to convey system status.

### Integrated Vitrectomy and Cautery

- Internal air compressor eliminates connection to external air source for vitrectomy.
- Wide range of cutting adjustments.
- Single cut mode (for use with optional pneumatic scissors)
- Bipolar diathermy delivering predictable tissue cauterization.

## Most Economical Phaco Solution

- The unique blend and combining a very competitive price point, coupled with quality, durability and simplicity.
- Allowing high re-usability of all accessories assuring better economies of scale.

## LightMed premium quality Hydrophobic iStream IOL's

- iStream IOL: Aspheric; Preloaded and Non-Loaded.
- iStream IOL: Next-Gen Hydrophobic material minimizing onset of glistering.
- iStream IOL: Absolute Zero Aspheric Abberation; biconvex optic restoring ideal conditions of young eye.
- iStream IOL: Micro Grip Structures; halving the time of IOL deployment and assuring exceptional stability.

## LIGHTSONIC PRICING INFORMATION

LightMed Pricing		Effective Date: 1 <sup>st</sup> March, 2012
Part Number	Description	Price US \$
02-90xx	LightSonic™ Pro 1	\$ 7,660.00
02-90yy	LightSonic™ Lite 1	\$ 6,040.00
01-9003	U/S Handpiece 2	\$ 1,250.00
Consumables		
28-9058	U/S Tip, 19GA	\$ 40.00
23-9022	U/S Tip, 20GA	\$ 50.00
23-9003	Irr Sleeve (Pkg 5)	\$ 30.00
23-9004	Test Chamber (Pkg 5)	\$ 30.00
23-9000	I/A Handpiece	\$ 320.00
23-9001	Aspiration Tip, .3mm	\$ 88.00
23-9002	Aspiration Tip, .3mm 45°	\$ 90.00
23-9005	Vitrector, Guillotine 20GA	\$ 230.00
F-3000	Forceps, Straight, .4mm	\$ 235.00
F-5000	Cord (Cautery), Reusable, 12'	\$ 55.00
75-9002	Operator's Manual (Lite)	\$ 40.00
75-9003	Operator's Manual (Pro)	\$ 40.00

1. Includes foot pedal and power cord.
2. To substitute with Fischer connector (01-899145), add \$1700.00 to list price.
3. LightMed may substitute with upgraded item at the same price.



## LIGHTSONIC INCLUDED ACCESSORIES

- U/S Tip, 19GA
- U/S Tip, 20GA
- Irr Sleeve (Pkg 5)
- Test Chamber (Pkg 5)
- I/A Handpiece
- Aspiration Tip, .3mm
- Aspiration Tip, .3mm 45°
- Vitrector, Guillotine 20GA
- Forceps, Straight, .4mm
- Cord (Cautery), Reusable, 12'
- Operator's Manual