

# K2<sup>6.0</sup>

Models LK6-A12, LK6-A22, LK6-A42, LK6-A62



## COMMERCIAL/INDUSTRIAL DISINFECTION SOLUTIONS

LUMINOR's K2 line of disinfection systems are specifically designed and built to handle the challenging environments of process and manufacturing industries as well as pool and leisure applications.

K2<sup>6.0</sup> includes a discrete 254nm Teflon™ based UV sensor to continuously monitor the UV output produced by the system. Displayed on the LCD screen in either "% UV Intensity" or "mW/cm<sup>2</sup>", K2<sup>6.0</sup> provides the information that these demanding commercial /industrial systems require. Constructed with highly polished 316L stainless steel reactors and stainless steel enclosures, K2<sup>6.0</sup> uses proven low pressure amalgam (LP-AM) lamp technology for maximum power density and efficiency all in a small footprint.

Controlling microbiological (bacteria & virus) issues in water (or other viscous fluids), including *E.coli*, *Cryptosporidium*, and *Giardia lamblia* is safe and simple with LUMINOR UV systems. UV does not affect the aesthetic quality of the fluid and the process does not add anything to the fluid, nor create any disinfection by-products.

Covering a wide variety of applications in both regulated and unregulated markets, K2 offers environmentally friendly disinfection at lower capital and operating costs than traditional disinfection solutions.

### Product Features

- Discrete 254nm Teflon™ based UV sensor (user selectable output) with 4-20 mA output and solenoid-ready
- Modular 304 stainless steel control panel with LED display for UV output, remaining lamp life, total running hours, audible & visual lamp failure, remote-on and dry contacts
- 316L stainless steel, polished reactors with flanged end-plate
- Designed & manufactured to ASME pressure vessel standards
- Flow rates stated at 95% UVT at a dose of 30 mJ/cm<sup>2</sup>
- User friendly bayonet style lamp connectors (quick ¼ turn removal with no extra tools needed)
- True gland seal retaining nuts with positive stop
- Reliable, industry proven low pressure amalgam (LP-AM) coated UV lamps with ceramic bases for durability and a 12,000 hour lamp life
- Constant current electronic ballasts

### Applications Include:

- Food & Beverage
- Pharmaceutical
- Swimming Pools
- Water Reuse
- Ultrapure
- Recreational Water
- Aquaculture
- Municipal

### Available Systems

**LK6-A12 for flow rates of 325 lpm (85 gpm) (20 m<sup>3</sup>/hr)**

**LK6-A22 for flow rates of 650 lpm (175 gpm) (40 m<sup>3</sup>/hr)**

**LK6-A42 for flow rates of 1500 lpm (400 gpm) (90 m<sup>3</sup>/hr)**

**LK6-A62 for flow rates of 2400 lpm (625 gpm) (140 m<sup>3</sup>/hr)**

## Control Features

- Discrete 254nm Teflon™ based UV sensor (visually displayed as either "% UV Intensity" or "mW/cm<sup>2</sup>")
- User configurable "Low UV" early warning (visual and audible)
- 4-20mA output for remote monitoring of UV intensity
- Individual lamp status indicators (visual & audible failure indicators)
- Lamp age monitor (visual & audible failure indicators)
- Lamp cycle counter (tracks total on-off lamp cycles)
- Service time monitor (tracks total system running time)
- Chamber temperature monitor (monitors high temperatures and no flow conditions)
- Panel temperature monitor (protects electronic circuits from extreme temperatures)
- Remote on/off feature (allows reactor to be controlled remotely and timed with other system components)
- Automatic reactor shut-down (user configurable)
- Dry contact outputs
  - Minor alarm (NO/NC)
  - Major alarm (NO/NC)
  - Reactor ready (valve control feature)(NO/NC)
- Major alarm output (audible & visual)
- Minor alarm output (audible & visual)

## K2<sup>6.0</sup> - Equipment Specifications

K2<sup>6.0</sup>, Commercial / Industrial / Municipal UV Systems, UV Monitored

| Model                                  | LK6-A12   | LK6-A22                 | LK6-A42                 | LK6-A62                  |
|--|---|-------------------------|-------------------------|--------------------------|
| Flow Rate<br>(@15mJ/cm <sup>2</sup> *) | 167 GPM   | 327 GPM                 | 758 GPM                 | 1170 GPM                 |
|  | 630 lpm   | 1240 lpm                | 2870 lpm                | 4420 lpm                 |
|  | 28.6 m <sup>3</sup> /hr   | 55.0 m <sup>3</sup> /hr | 87.7 m <sup>3</sup> /hr | 175.4 m <sup>3</sup> /hr |
| Flow Rate<br>(@30mJ/cm <sup>2</sup> )  | 88.8 GPM  | 174 GPM                 | 404 GPM                 | 623 GPM                  |
|  | 336 lpm   | 659 lpm                 | 1530 lpm                | 2360 lpm                 |
|  | 20.2 m <sup>3</sup> /hr   | 39.5 m <sup>3</sup> /hr | 91.8 m <sup>3</sup> /hr | 141 m <sup>3</sup> /hr   |
| Flow Rate<br>(@40mJ/cm <sup>2</sup> )  | 66.6 GPM  | 131 GPM                 | 303 GPM                 | 467 GPM                  |
|  | 252 lpm   | 496 lpm                 | 1150 lpm                | 1770 lpm                 |
|  | 15.1 m <sup>3</sup> /hr   | 29.8 m <sup>3</sup> /hr | 68.8 m <sup>3</sup> /hr | 106 m <sup>3</sup> /hr   |
| Port Size                              | 2" MNPT   | 3" Flange               | 4" Flange               | 6" Flange                |
| Electrical                             | 220V / 50-60Hz  |                         |                         |                          |
| Electrical Connection                  | Direct Wire   |                         |                         |                          |
| Lamp Watts                             | 207   | 414                     | 828                     | 1242                     |
| Power (Watts)                          | 240   | 460                     | 900                     | 1340                     |
| Chamber Material                       | 316L Stainless Steel, A249 Pressure Rated Tubing, Polished & Passivated |                         |                         |                          |
| Replacement Lamp                       | RL-1000A (1 required)   | RL-1000A (2 required)   | RL-1000A (4 required)   | RL-1000A (6 required)    |
| Replacement Sleeve                     | RQ-1000 (1 required)  | RQ-1000 (2 required)    | RQ-1000 (4 required)    | RQ-1000 (6 required)     |
| Reactor Dimensions                     | Contact Factory   |                         |                         |                          |
| Controller Dimensions                  | Contact Factory   |                         |                         |                          |
| Maximum Operating Pressure             | 10.3 bar (150 psi)  |                         |                         |                          |
| Operating Temperature Range            | 2-40° C (36-104° F)   |                         |                         |                          |
| 254nm UV Intensity Monitor             | Yes   |                         |                         |                          |
| UVT Monitoring                         | Optional / Upgradeable  |                         |                         |                          |
| Dose Calculations                      | Optional / Upgradeable  |                         |                         |                          |
| Flow Monitoring                        | Optional / Upgradeable  |                         |                         |                          |
| Internal Fault History                 | Yes   |                         |                         |                          |
| Remote - On                            | Yes   |                         |                         |                          |
| Dry Contacts (Solenoid Ready)          | Yes   |                         |                         |                          |
| 4-20 mA Output                         | Yes   |                         |                         |                          |
| Drain Ports                            | Yes, 3/8"   |                         | Yes, 1/2"               |                          |
| Lamp Age Counter                       | Yes   |                         |                         |                          |
| Sample Ports                           | No  |                         | Yes                     |                          |
| Visual Lamp-Out Indicator              | Yes   |                         |                         |                          |
| Audible Lamp-Out Alarm                 | Yes   |                         |                         |                          |
| Shipping Weight                        | Contact Factory   |                         |                         |                          |

\*Port sizes are based on flow rates for 30mJ/cm<sup>2</sup> or higher doses. Flow rates for lower doses may not be achievable. Contact factory for custom port sizing.



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## System Features

### UV Sensor Module - Included



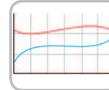
Allows the 254nm UV wavelength to be measured and displayed via the K2 controller. The sensors plug directly into the controller and are mounted in the sensor ports located on all K2<sup>6.0</sup> reactors.

### Remote Monitoring (Dry Contacts) Output - Included



Provides a dry contact signal (on/off) from the K2 controller to be sent to a remote location. Can be used for remote on, solenoid connection, PLC connection, remote alarm, remote visual, or many other options.

### 4-20 mA Output - Included



Allows for a 4-20 mA signal output from the the K2 controller. Used to send this signal to a remote device such as a PLC or data logger.

### Expandability Port - Included



Integral communication port allows for system expandability and "future-proofing". New options and expansion modules can communicate with main circuit board through this port.

## Manufacturer's Warranty

LUMINOR UV systems are covered by the following warranty:

**REACTORS** - Ten (10) year Limited Warranty  
**ELECTRONICS** - Three (3) year Limited Warranty  
**UV LAMPS** - One (1) year Limited Warranty  
**QUARTZ SLEEVES** - One (1) year Limited Warranty

Please refer to LUMINOR's complete warranty document for specific details, including conditions and exclusions. This document may be found on the web or by contacting LUMINOR directly.

## Replacement Parts

| System         | Lamps                    | Sleeves                 | Ballast |
|----------------|--------------------------|-------------------------|---------|
| <b>LK6-A12</b> | RL-1000A<br>(1 required) | RQ-1000<br>(1 required) | RB-K21  |
| <b>LK6-A22</b> | RL-1000A<br>(2 required) | RQ-1000<br>(2 required) | RB-K22  |
| <b>LK6-A42</b> | RL-1000A<br>(4 required) | RQ-1000<br>(4 required) | RB-K22  |
| <b>LK6-A62</b> | RL-1000A<br>(6 required) | RQ-1000<br>(6 required) | RB-K22  |

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