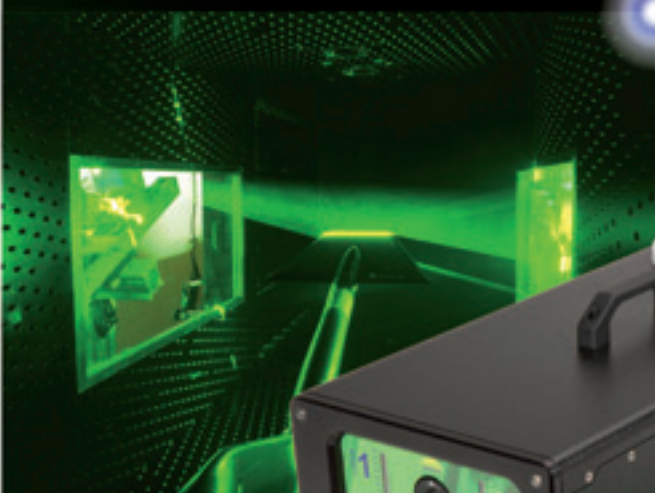


EverGreen, a state of the art laser for PIV



Tough, Rugged, Reliable.
Simply easy to use




EverGreen
BIG SKY LASER SERIES.

User-friendly EverGreen

FREES YOU TO CONCENTRATE ON THE ART OF PIV

COMPACT AND PORTABLE

The EverGreen PIV system was designed to move with the experiment. It is at home in the lab, wind tunnel, and in the outside world. The most interesting flows and turbulence may not be in controlled environments.

+ SINGLE HEAD: COMPACT SIZE

The EverGreen incorporates two lasers into a single rugged monoblock. Quantel fits this into the smallest footprint possible. Wrestling with two lasers and two power supplies is no longer necessary. Roll bar handles on the laser head allow you to grab and go to your next installation.

+ SINGLE POWER SUPPLY: EASY CARRY HANDLE AND SMALL SIZE

The single Integrated Cooling and Electronic (ICE) unit is also small and portable. Closed loop water-to-air cooling avoids the need for an external water supply. This 18 kg (40 lbs) miniaturized ICE powers all the EverGreen models.

QUICK SET-UP

There is no need to align or adjust. Faculty and students can concentrate on the science of PIV and not the tools. The EverGreen becomes a valuable instrument in the education of graduate students as it requires little training and supervision.

Industrial users value the savings from quick installation and integration.

+ QUICK DISCONNECT CABLES

The single power cable and the water hoses quickly disconnect from the head and ICE allowing for rapid set up and transport. The focus at Quantel is on taking the lasers out of the laboratory and into "real world" applications. The laser head can be completely removed from its cabling via quick disconnects. The coolant lines self-seal allowing the operator to easily transport the laser head and ICE unit separately.

+ INTUITIVE FRONT PANEL

A simple yet comprehensive front panel allows the user a selection of operating choices. A push of the button toggles the laser over to accept external trigger commands for more complete control.

+ FULLY COMPATIBLE WITH COMMERCIAL PIV SYSTEMS

Integrates seamlessly with the imaging system, computer, and software.



EASY INTERFACE

As well as supplying lasers for PIV to universities and other research institutions, Quantel works closely with the world's leading suppliers of complete PIV systems. The EverGreen fits flawlessly into existing or custom PIV systems.

+ COMPREHENSIVE INTERFACE: CONTROL PANEL, RS232, BNC EXTERNAL TRIGGERS

Easy access front panel, intuitive controls.

+ VERSATILE CONTROL

Fire one laser or both.

Choose the trigger source in single or double pulse mode.

Select internal flashlamp frequency.

Vary energy of each laser independently.

+ ALIGNMENT MODE

Laser energy can be attenuated for easy alignment of the external optics. Simply press the Alignment Mode button to toggle between low laser energy output setting and normal laser energy output.

This allows positioning of downstream optics without worry of optical damage.

+ UNIVERSAL OPTICAL MOUNTS

Attach light sheet optics directly to the laser head.





TOUGH AND RUGGED

PIV researchers require a real world tool to study flows wherever they occur. This necessitates a laser that is as tough and rugged as the real world. Such a laser is born from the 20 years of the Big Sky Laser experience.

+ I-BEAM CONSTRUCTION

The EverGreen laser heads are all machined from a single block of aircraft grade aluminum in an I-beam configuration to ensure maximum stiffness, stability, and resistance to warping. All optics are hard mounted and, once aligned, are extremely resistant to misalignment. The folded resonator configuration places the output coupler and the rear mirror in the same plane. Any slight movement due to environment conditions occurs identically in both mirrors. Alignment is assured.

+ ROBUST BIG SKY OPTOMECHANICS

Proprietary beam combining optics ensures precision beam overlap to within +/- 100 μ radians, +/- 100 μ meters. This produces easy to use matching light sheet widths and thicknesses. Correlation noise is reduced.

+ VIBRATION TESTED DESIGN

Rugged design at home in the lab or wind tunnel. The EverGreen has undergone extensive shock and vibration testing to prove the integrity of its design and its stability to survive under harsh environmental conditions.

+ TEMPERATURE CYCLED

The EverGreen laser system is temperature cycled from 5 to 60°C and tested prior shipment. This ensures that optical components are seated and each unit performs to specifications over a wide operating range.



RELIABLE

Today's PIV user demands light, not a science project. The EverGreen is designed to deliver on the Big Sky Laser tradition of reliable, instantaneous laser light from the moment you take it out of the box. Laser reliability is further enhanced with the EverGreen's new maintenance free laser head and the lowest cost of ownership, ever.

+ MAINTENANCE FREE LASER HEAD

The EverGreen laser system is NitroSealed™ to make it impervious to contamination from seed particles, dust or humidity. There is never a need for the user to open the EverGreen laser head. All optics, alignment and flash lamps are warranted for two full years. No alignment or adjustment is necessary because your time is valuable.

+ LASER BRAIN

The laser brain makes switching heads simple, as calibration data is stored ready to be read by the ICE. This eliminates the need for matched head – ICE combinations.

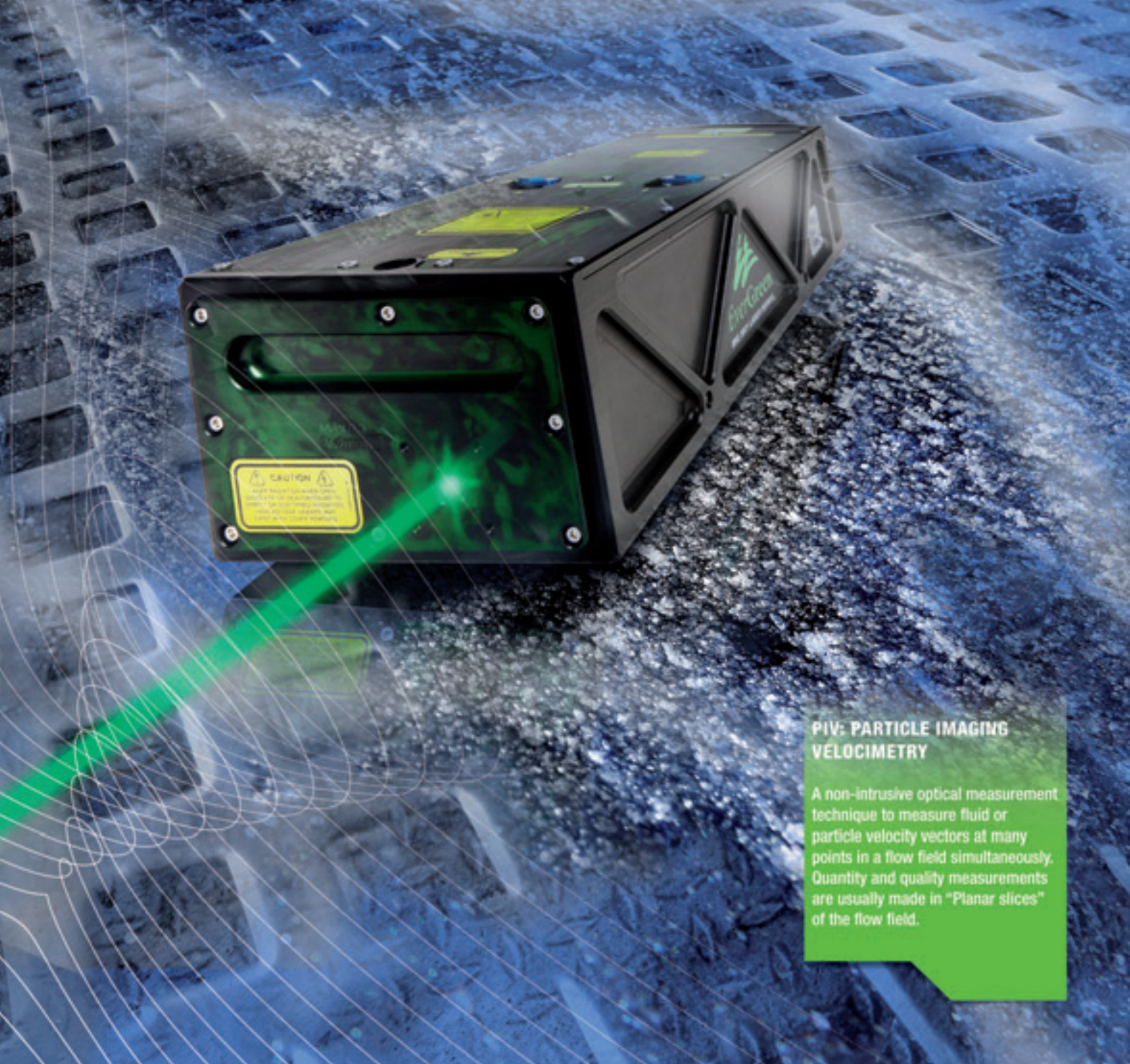
+ LOW COST OF OWNERSHIP

Only replace the deionization cartridge and water every 6 months. No maintenance required for the laser head during the warranty period.

+ COMPREHENSIVE 2-YEAR WARRANTY

Quantel prides itself on building quality products and supporting this product with exceptional service. Our lasers are designed for the user needing a rugged, reliable source for real-world applications. Our success is measured by the success of our customers. A key component of Quantel is a service organization centered on helping our customers. A service contract may be purchased with the laser or any time in the two year warranty period, without prequalification.





PIV: PARTICLE IMAGING VELOCIMETRY

A non-intrusive optical measurement technique to measure fluid or particle velocity vectors at many points in a flow field simultaneously. Quantity and quality measurements are usually made in "Planar slices" of the flow field.

THE EVERGREEN FROM QUANTEL

Is a double pulsed laser system available in a choice of three energies: 70, 145 and 200 mJ at 532 nm. These dual cavity lasers deliver two pulses of green light separated by user adjustable timing. The user precisely controls the temporal separation of each pulse from milliseconds to nanoseconds. It is the ideal laser for Particle Imaging Velocimetry applications (PIV).


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