

DATA

2D PIV SYSTEM STANDARD RANGE

**FROM € 36,500. FOR A COMPLETE SYSTEM
FULLY UPGRADEABLE TO STEREO 3D**



2D PIV system

top left: CCD camera with mounted lens and bandpass filter; background: TFT with VidPIV screenshot; top right: light sheet optics in front of laser head; down: Synchronizer, processor and laser power supply preinstalled and wired in compact mobile system chassis

HIGHLIGHTS

- Choice of high Quantum Efficiency cross-correlation cameras (up to 65% QE, down to 200ns interframing time)
- Dual Nd:YAG laser, from 2x15mJ to 2x120mJ and 15Hz repetition rate
- VidPIV 4.6XP, ILA's PIV software, full version, tree-based visual programming interface, includes the latest algorithms, e.g. subpixel offset shift using B-Spline, window deformation (differential), multi-pass correlation, POD analysis
- Directly upgradeable to 3D stereo
- Micro-PIV configuration available
- High-speed PIV configuration available
- Compact and smooth-action divergent Light Sheet Optics (20 and 50 degrees)
- External PIV Synchronizer, USB-programmable
- Removable PIV bandpass filter, 532 nm
- 25mm f/1.4 manual focus lens
- PIV processor, GHz-CPU, 17" TFT, DVD/CD-RW
- Delivered with high-quality mobile system chassis



LASER OPTIONS

The standard range of systems can be equipped with Lasers with pulse energies from 15 to 120mJ, depending on the size of the measurement area. For example, the achievable field of illumination in mm with a 2x30mJ laser would be:

in water 450x340 (particles Ø10-50µm), in air 300x230 (particles Ø1-5µm)

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|-----------------------|------------------------------------|
| New Wave Solo 2x15mJ | 2x15mJ @532nm, 15Hz |
| New Wave Solo 2x30mJ | 2x30mJ @532nm, 15Hz |
| New Wave Solo 2x50mJ | 2x50mJ @532nm, 15Hz |
| New Wave Solo 2x120mJ | 2x120mJ @532nm, 15Hz |
| New Wave Pegasus | 2x10mJ @1kHz and 527nm, up to 5kHz |

GENERAL CAMERA OPTIONS

Two types of cameras are offered depending on the velocity range to be measured. For instance, with the PCO Pixelfly QE it is possible to measure velocities up to 100m/s, depending on interframing time, image magnification factor, region of interest and size of interrogation window. For low light and/or high velocity flows, the PCO Sensicam QE is recommended.

| | |
|-----------------|---|
| PCO Pixelfly QE | Ultra compact, 12 bit, 6 image pairs/s, min. interframing time 10us |
| PCO Sensicam QE | High sensitivity, 12 bit, 5 image pairs/s, min. interframing time 200ns, cooled |

3D STEREO UPGRADE

Standard range systems are directly upgradeable to 3D stereo PIV. The 3D stereo upgrade package includes a pair of Scheimpflug tilt adapter mounts with support, a calibration kit, and the VidPIV 3D software module.

MICRO PIV CONFIGURATION

The system can be ordered in Micro-PIV configuration, where it operates through a high-quality Olympus epi-fluorescence microscope . This configuration includes the following options:

- Olympus BX51 Microscope with CCD camera interface
- Laser interface
- PCO Sensicam QE camera
- 2 x 15mJ, 15Hz PIV Laser

HIGH-SPEED PIV CONFIGURATION

An affordable high-speed PIV configuration is also available in the ILA standard range, with the following changes:

- Laser: New Wave Pegasus 2 x 10mJ @ 1kHz, up to 5kHz repetition rate
- Camera: IDT X-Stream XS-4, 5kHz frame rate at 512x512 resolution

