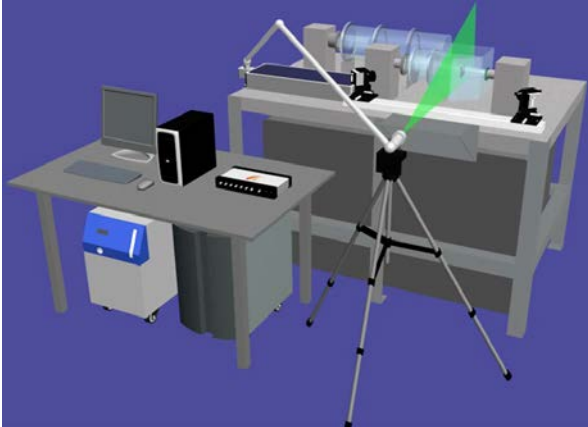
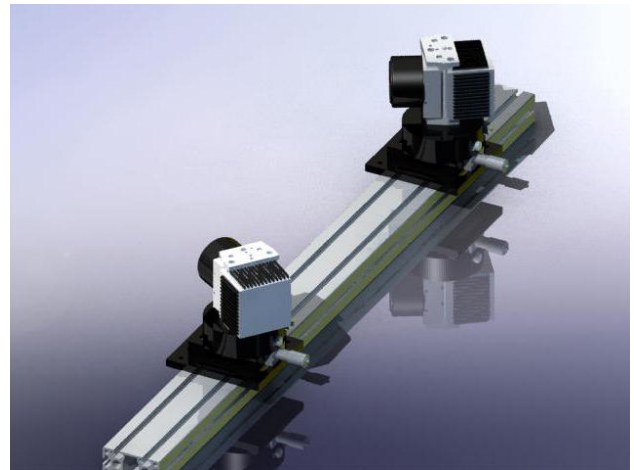


MicroVec 3D PIV System

3D PIV system is based on the original 2D PIV system but uses the principle of stereoscopic imaging to add the third dimension. At least two sets of cameras view the test area from different angles and with the two sets of two-dimensional velocity vector components a third velocity vector component can be calculated within the test area. The image is first calibrated, and afterward this third velocity component can be evaluated.

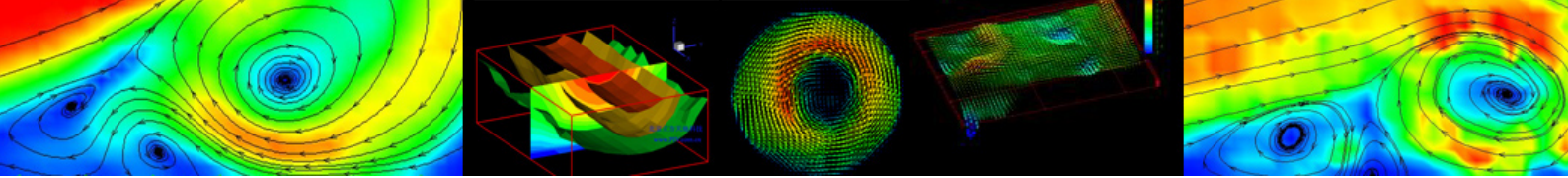


MicroVec 3D PIV software includes camera auto-calibration spot search function. It auto detects the spot, measures and adjusts the perspective distortion caused by the misaligned orientation of the cameras. The third velocity vector component can be then measured and calculated using a stereoscopic imaging, resulting in presentation of 3D velocity vectors for the entire area.



Microvec 3D PIV system offers solution for perfect adjustment of the angle between the cameras and camera lens in order to focus correctly. To do this, it uses the Scheimpflug principle. This is achieved by mounting the cameras on Scheimpflug mounts. MicroVec 3D PIV software supports patented Scheimpflug principle optical unit designed specifically for the system.

MicroVec 3D PIV software ensures multiple camera synchronization support for image acquisition from two cameras.

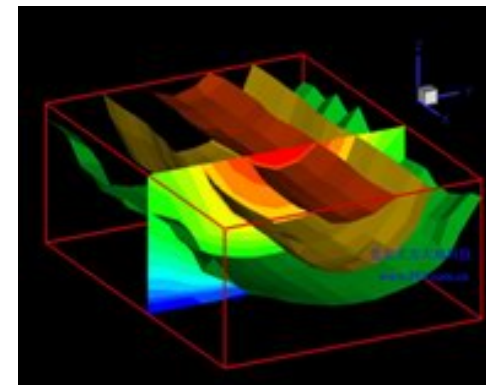
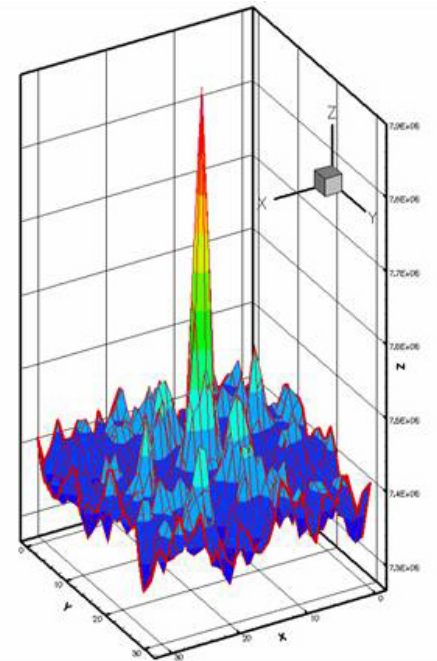


Standard Components:

- **PIV laser:** 2x50mJ/15Hz, 2x200mJ/15Hz, 2x350mJ/10Hz, 2x500mJ/10Hz
- **CCD cameras:** including lens, all interface cable and camera frame grabber: 2 x 2 MP/30fps, 2 x 5MP/16fps, 2 x 11MP/6fps, 2 x 16MP/4fps or 2 x 29MP/2fps
- **Synchronizer:** 7 or 15 channel TTL control, 0.15ns jitter, USB controlled
- PIV Image Capture Module & 3D high precision MicroVec software with multi-grid and multi-pass, window deformation and GPU support, includes auto-calibration function for 3D image creation, supports patented Scheimpflug Principle optical unit

Features:

- Software ready to run for image-acquisition and image-processing control
- Integrated and easy control of all hardware components: cameras, laser, synchronizer, external trigger
- Support multiple image files: TIFF, BMP, JPG and AVI
- 3D calibrating spot auto search and identify function (auto create 3D calibrating data and saving setting)
- 3D image auto calibration and combination function (supporting Scheimpflug image capture)
- Support 3D data deduction from 2D PIV data
- 3D GPU data process function
- Support for 3D Tecplot data interface.



Applications:

- Wind Wind tunnels
- Water tunnels
- Aerospace and Aeronautics
- Micro electromechanical systems (MEMS)
- Chemical Mixing Equipment
- 3D vortex flow
- Compressors, turbines, fans, pumps, sprays

