

V3V SYSTEM 9000 SERIES: VOLUMETRIC 3-COMPONENT VELOCIMETRY

SKU: INSIGHTV3V-4G

The V3V™ Volumetric 3-Component PIV system from TSI offers many unique and outstanding features for your 3D3C measurements for gaseous and liquid flows. The V3V-9000 series framed-based volumetric PIV system is intended to be simple to use with the ability to obtain results quickly. Users can select specific camera models as well as the V3V camera mounting frame to cater to unique experimental setups, ensuring the most appropriate frame rate, spatial resolution and volume size for the accurate three dimensional results.



PRODUCT DETAILS

The uniquely designed, patented V3V camera mounting frames, V3V-9000-TS and V3V-9000-CS, offer different volume sizes and spatial resolutions required for users' measurements. The frame allows the camera to be secured quickly such that the system is ready to take measurements in less than 30 minutes. Unlike other types

of volumetric PIV systems, TSI's V3V 9000 series does not require the time intensive process to adjust the camera location and angle to obtain the correct focusing.

Choice of cameras determines the spatial resolution and capture rate required to achieve the best possible results; and the three cameras are detachable from the V3V camera mounting frame so users can further their measurement capabilities. Moreover, the cameras are easily configured for planar-PIV, stereo-PIV or PLIF measurements.

The appropriate selection of the camera frame and camera type depends on what you need to measure. Various cameras with high pixel resolution and frame rate are available. There are two types of frames: V3V-9000-CS and V3V-9000-TS. The V3V-9000-CS frame is intended for large volume size to provide the coherent structure of the flow, while the V3V-9000-TS gives the more detailed turbulent flow structure in a smaller volume. Refer to the Required Components section below, to get the specifications of the various types of cameras and the two frames.

The V3V-9000 system uses the Insight V3V-DPIR image capture and data analysis software package to extract the highest possible vector field information for the flow measurement.

APPLICATIONS

- Pulsating flows
- Wind turbine flows
- Bio-locomotive flows
- Boundary layer flows
- Two phase flows with bubbles
- Flow Structure from flapping wing
- Flows analysis of biomedical devices
- Vortex generation

FEATURES & BENEFITS

- Measure three components of velocity in Volume for gaseous and liquid flows
- Selectable V3V-9000 frame for volume size and spatial resolution
- Selectable camera types for high spatial resolution, or high temporal resolution, or both
- Detachable camera arrangement, making it easy to use the cameras for other planar PIV measurement
- Built-in mounting brackets allowing cameras to be attached quickly and easily without alignment