

3D Calibration Plate

Validated calibration
plates

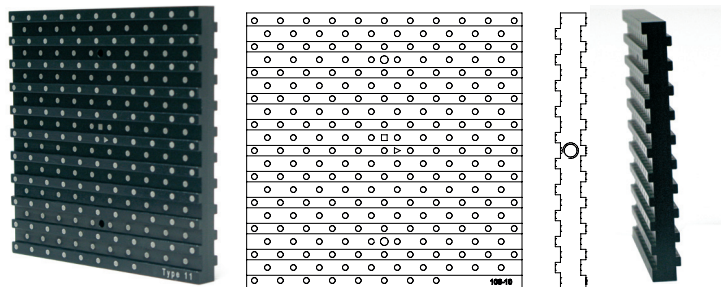
The two-level double-sided **3D Calibration Plate** allows calibration of a stereo (Stereo-PIV, Stereo-DIC) or volume (Tomo-PIV) setup with only a **single view calibration**. Taking a single image from one target position is sufficient to calibrate the entire volume.

In contrast to widely used flat calibration targets, physically scanning the volume or taking several views is not required. The **3D Calibration Plates** are active on both sides, so that camera views from any side of the measurement region are possible. This feature is extremely convenient, when the measurement plane is difficult to access, like in a basin or heat chamber.

DaVis finds the marks on a calibration plate by **automated mark detection**. It can distinguish between both sides of a calibration plate and recognizes its orientation by detecting additional position marks.

Each **Calibration Plate** is measured at a dedicated test bench to quantify the geometrical deviations from its technical specifications. This is done to monitor the quality of the manufacturing process within LaVision's quality management system. Furthermore, this measurement is also performed with the aim of creating an individual **Validated Calibration Plate** file containing the true geometrical properties of the actual plate.

Since each manufactured **Calibration Plate** has its unique ID, DaVis can identify the corresponding validated calibration plate file and will correct the camera calibration from all quantified systematic errors.



2-level double-sided calibration plate

Type	Dot distance	Dot diameter	Level separation
025-3.3	3.3 mm	0.9 mm	1 mm
058-5	5 mm	1.2 mm	1 mm
106-10	10 mm	2.2 mm	2 mm
204-15	15 mm	3.2 mm	3 mm
309-15	15 mm	3 mm	3 mm

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Applications

- ▶ Stereo-PIV
- ▶ Tomographic PIV
- ▶ 3D PTV
- ▶ 3D Strain

Features

- ▶ high precision dot pattern
- ▶ two-level double-sided pattern suitable for simultaneous calibration from opposite sides
- ▶ fiducials for automatic mark search identifying front and back side automatically
- ▶ screw thread on border for easy mounting

Ambient conditions

- ▶ temperature range: 0°C – 40°C
- ▶ humidity: 0% - 90%, non-condensing
- ▶ store in a dry environment
- ▶ handle with care and avoid shock

Ordering information

Part number	Description
1108960	Type 025-3.3, dimensions: 25 mm x 25 mm
1108961	Type 058-5, dimensions: 58 mm x 58 mm
1108962	Type 106-10, dimensions: 106 mm x 106 mm
1108963	Type 204-15, dimensions: 204 mm x 204 mm
1108964	Type 309-15, dimensions: 309 mm x 309 mm

Data provided by LaVision is believed to be true.
However, no responsibility is assumed for
possible inaccuracies or omissions. All data are
subject to change without notice.

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