

## CALIBRATION CERTIFICATE

1709-12765

### Customer information

Client : Heckmann Präzisionstechnik GmbH (Digi-Pas)  
 Contact : Fr. Sarah Heckmann  
 Address : Wilhelm-Leuschner-Str. 36  
 68519 Viernheim  
 Germany  
 Reference client :  
 Reference Trescal : 201718045/3

### Instrument information

Make / type : DIGI-PAS / DWL-1300 XY  
 Description : Inclinometer  
 Range : 0 .. 5 °  
 Serial number : 11A21716  
 Identification number :  
 Accuracy :

Date of calibration : 16 October 2017

### Method of calibration

P1-02-G.017 Calibration of spirit levels / inclinometers

The calibration of the levels/clinometers consists of a visual inspection and a series of measurements. Firstly, we examine the general condition of the surfaces and the functionality of the readout. Nextly we measure the zero, the deviations and, if necessary, the perpendicularity of the instrument.

### Environmental conditions (limits during measurements)

Ambient temperature : 20 °C ± 1 °C  
 Relative humidity : 45%rh ± 20%rh

### Used reference

The equipment used is traceable to National and/or International standards.  
 R3797/3 Rotary encoder Cert.170504038

### Note

The instrument is measured but not adjusted, so the results are both 'as found' as 'as left'.

Issue date: 12 January 2018

Technician  
 Koen Groffen



Head of the laboratory  
 Luc Van Pelt



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 Unless otherwise stated, the calibration was performed at the address mentioned in the footnote.

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-	Description	Reference value	Instrument value	Difference	Tolerance ±	Uncertainty ±	Units	-
1	◀	0,000	0,000	0,000	0,010	0,008	°	
2	◀	0,500	0,510	0,010	0,010	0,008	°	
3	◀	1,000	1,010	0,010	0,010	0,008	°	
4	◀	2,000	2,020	0,020	0,030	0,008	°	
5	◀	4,500	4,520	0,020	0,030	0,008	°	
6	▶	0,000	0,000	0,000	0,010	0,008	°	
7	▶	0,500	0,500	0,000	0,010	0,008	°	
8	▶	1,000	1,000	0,000	0,010	0,008	°	
9	▶	2,000	2,010	0,010	0,030	0,008	°	
10	▶	4,500	4,520	0,020	0,030	0,008	°	

-	Description	Reference value	Instrument value	Difference	Tolerance ±	Uncertainty ±	Units	-
1	▼	0,000	0,000	0,000	0,010	0,008	°	
2	▼	0,500	0,500	0,000	0,010	0,008	°	
3	▼	1,000	1,000	0,000	0,010	0,008	°	
4	▼	2,000	2,000	0,000	0,030	0,008	°	
5	▼	4,500	4,510	0,010	0,030	0,008	°	
6	▲	0,000	0,000	0,000	0,010	0,008	°	
7	▲	0,500	0,510	0,010	0,010	0,008	°	
8	▲	1,000	1,010	0,010	0,010	0,008	°	
9	▲	2,000	2,010	0,010	0,030	0,008	°	
10	▲	4,500	4,520	0,020	0,030	0,008	°	

The stated uncertainty is that of the entire set-up including the object under test.

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , providing a level of confidence of approximately 95% .

The uncertainty is calculated following EA-4/02 in accordance with the requirements of the ISO/IEC 17025.