

CERTIFICATE OF COMPLIANCE

SCANNER #SP.10.85094649

The reference object used in the examinations is a dumbbell ball bar manufactured by "Trapet Precision Engineering". Such an object is commonly used for VDI 2634 verification of laser scanners and fringe projection systems.

The ball bar was certified with the use of a CMM (coordinate measuring machine ZEISS PRISMO Navigator 900 MASS) by ISM 3D S.L. (certificate No ISM 4.7.2013).

The expanded uncertainty U (coverage factor $k = 2$) for center to center distance and balls' diameters are listed as follows:

- a) center to center distance 0.8 mkm.
- b) ball's diameter 0.5 mkm.

ENVIRONMENTAL CONDITIONS

The temperature of the reference object and environment was kept at 20C $\pm$ 0.5C during the examination.

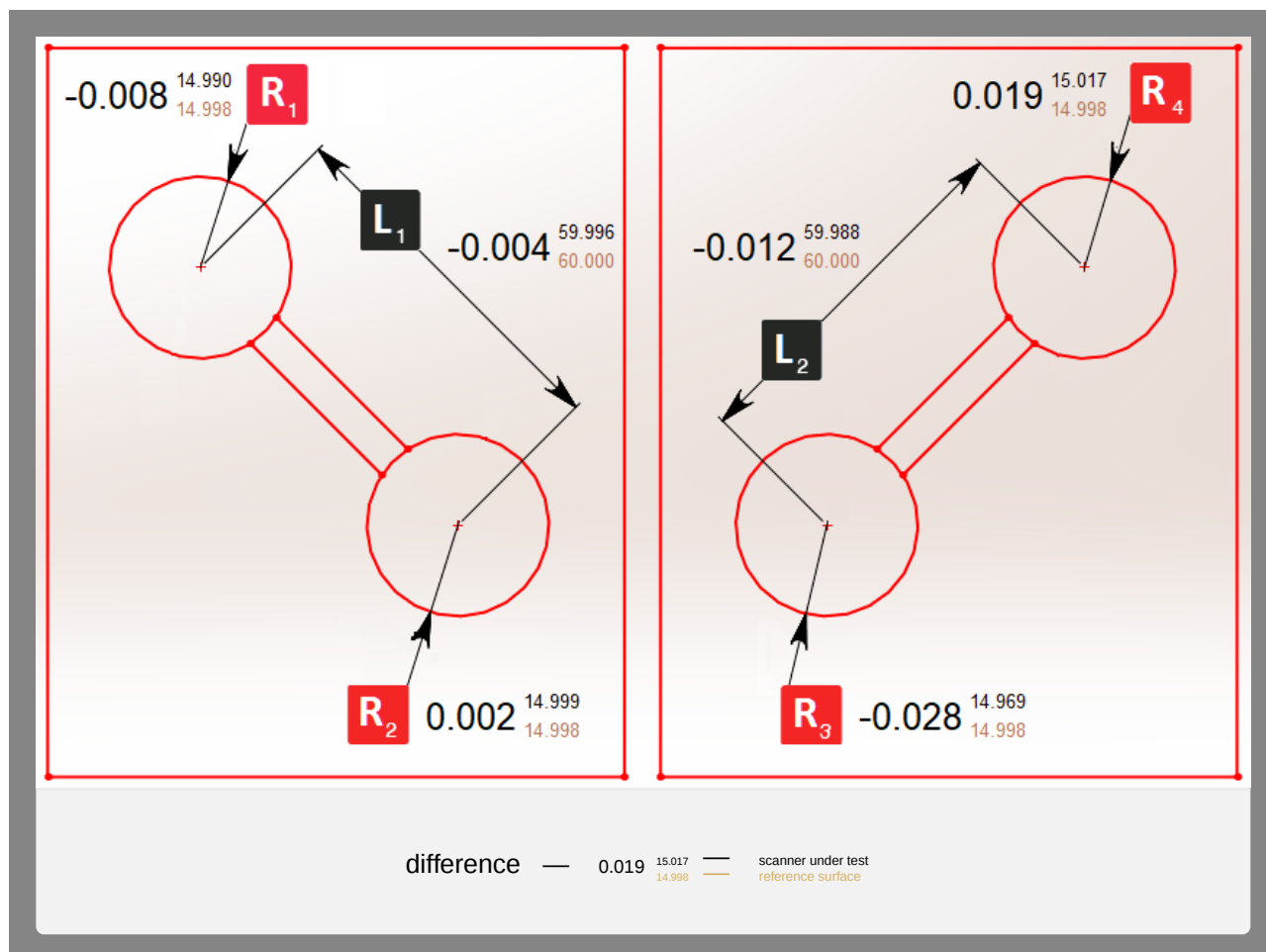


Fig. 1

CERTIFICATE OF COMPLIANCE

MEASUREMENT PROCEDURE

Measurements were carried out in two steps: the ball bar was sequentially measured in two positions in the field view of the scanner being tested (see fig. 1). Both measurements yielded a digitized surface in which spherical segments were singled out and their diameters and center-to-center distances were calculated with the use of the least squares fitting method.

EXAMINATION RESULTS

The results of the measurements as well as differences between readings taken from the reference object and the surface obtained with the scanner being tested are grouped in the table below.

QUALITY PARAMETER	REFERENCE SURFACE	SCANNER UNDER TEST	DIFFERENCE
L1, mm.	60.000	59.996	-0.004
L2, mm.	60.000	59.988	-0.012
R1, mm.	14.998	14.990	-0.008
R2, mm.	14.998	14.999	0.002
R3, mm.	14.998	14.969	-0.028
R4, mm.	14.998	15.017	0.019

According to the results of the internal examination, Artec 3D certifies that the aforementioned 3D Scanner SP.10.85094649 meets or exceeds all the metrological requirements specified in the service manual.

The certificate creation date: 06.10.2022

