CALIBRATION CERTIFICATE

General Information

Product	HandySCAN 700™|Elite	**Condition**	As left
Manufactured by	Creaform Inc.		
HandySCAN 3D S/N	9620422	**Certificate number**	02-23318-0548
		Calibration date	2023-11-15
		Ambient temperature	Min 19.3 ˚C; Max 19.3 ˚C
		Calibration center	Creaform - Head Office Lab 4700, rue de la Pascaline Lévis, Québec, G6W 0L9, Canada

Acceptance Test Procedure

Performance Testing Procedure[1]

Volumetric performance 4 ballbars of 2 different lengths (see Equipments for details) are used to perform this procedure. Sphere-to-sphere length measurements are taken and deviations between measured and nominal lengths are reported. The acceptance limits of the sphere spacing test are defined as a variable dependent on the length of the artefact (0.0200 mm + 0.0600 mm/m).

Note 1 : Refer to procedure ATP962-01 for more details.

Calibration Results

Test	*Specification*	*Limits +/-*	*Result*	*Status*
Sphere Spacing (Max. dev.)	Volumetric Accuracy (0.520 m)	0.0512	-0.0208	**Passed**
	Volumetric Accuracy (0.395 m)	0.0437	-0.0093	**Passed**

Equipments

Apparatus	*Type*	*Serial number*	*Certificate number*	*Calibration date*
Ballbar #1	Ballbar 520 mm	BB520_005	55695	2023-01-25
Ballbar #2	Ballbar 520 mm	BB520_006	55696	2023-01-25
Ballbar #3	Ballbar 395 mm	BB395_005	55693	2023-01-25
Ballbar #4	Ballbar 395 mm	BB395_006	55694	2023-01-25
Comet System	Thermometer	SC2-2	E23-SC2-S2	2023-06-20

These calibration results are traceable to the International System of Units (SI) through Euramet laboratories for Europe (LNE, NPL, PTB, etc), the NIST or NRC for North America, ISO/IEC 17025 accredited calibration laboratories or National Metrology Institutes that are signatories to the International CIPM MRA (Mutual Recognition Arrangement).

This certificate shall not be reproduced, except in full, without written authorisation from Creaform Inc.
This certificate invalidates all other certificates generated before : 15/11/2023, 7:57

Digitally approved by :

Jean-Francois Mercier
Calibration and Test Specialist

Unless otherwise stated, mm is the unit.

Sphere Spacing

Summary

Specification	Limits +/-	Status	Max. Deviation (Result)
Volumetric Accuracy (0.520 m)	0.0512	**Passed**	-0.0208
Volumetric Accuracy (0.395 m)	0.0437	**Passed**	-0.0093

Detailed Results

Position	Limits +/-	Sphere Spacing Deviation	Sphere Spacing (Nominal)	Sphere Spacing (Measured)
Z2	0.0512	**-0.0030**	520.6534	520.6505
Z3	0.0512	**-0.0208**	520.7570	520.7362
Y4	0.0437	**-0.0093**	394.2200	394.2106
X5	0.0436	**-0.0063**	393.6967	393.6904
	Average Deviation	-0.0098		
	Max. dev. L=0.520 m (Result)	**-0.0208**	**Passed**	
	Max. dev. L=0.395 m (Result)	**-0.0093**	**Passed**	

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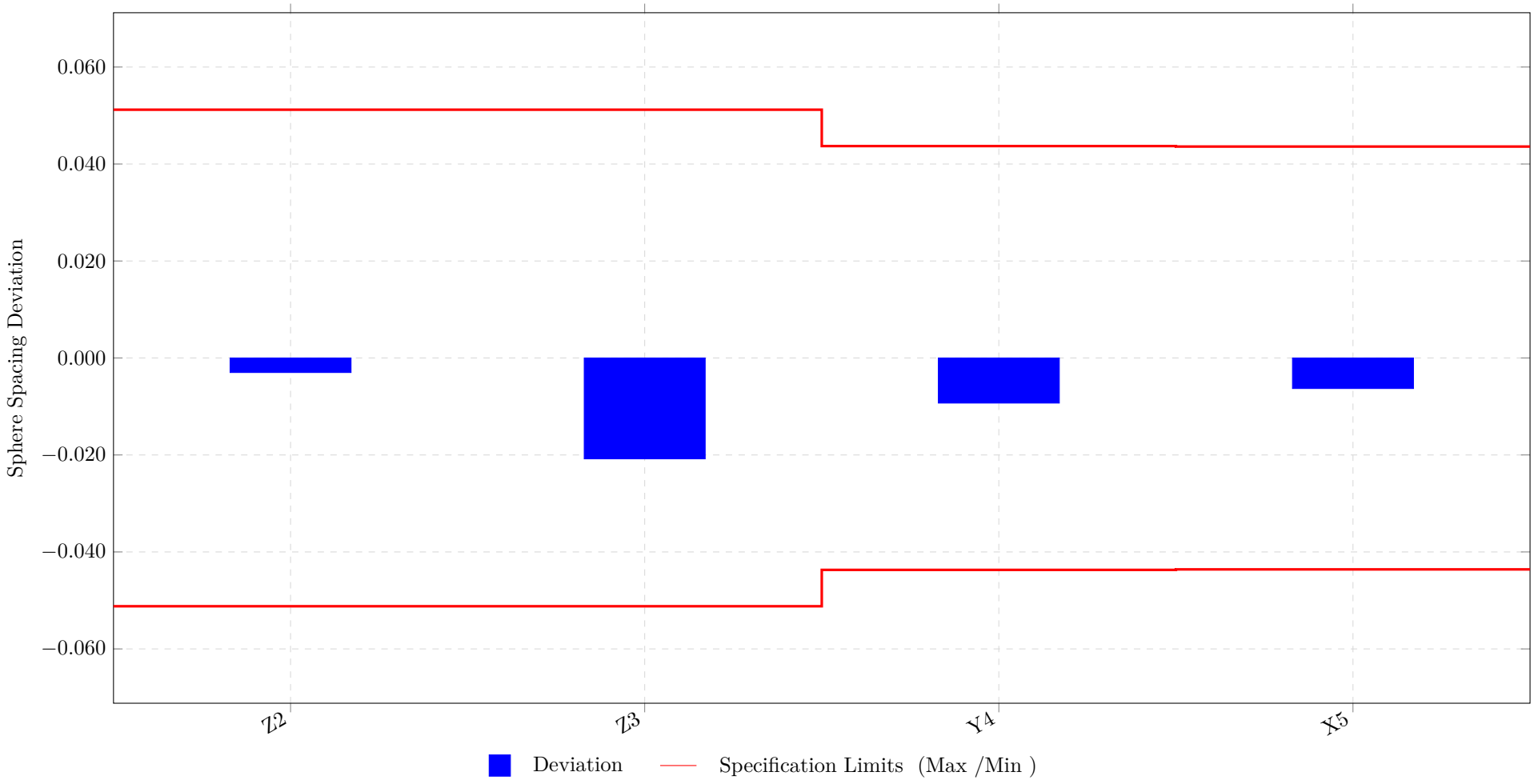
Sphere Spacing

Graph



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Sphere Diameter

Summary

Specification	Max. Deviation (Result)
Accuracy	-0.0151

Detailed Results

Position	Size Deviation	Diameter (Nominal)	Diameter (Measured)
SPH1A	0.0034	38.0934	38.0969
SPH1B	-0.0041	38.0996	38.0956
SPH2A	-0.0151	38.0918	38.0768
SPH2B	0.0023	38.1057	38.1080
SPH3A	0.0021	38.1005	38.1026
SPH3B	-0.0012	38.0999	38.0986
SPH4A	-0.0006	38.0996	38.0990
SPH4B	-0.0139	38.1036	38.0897
Average Deviation	-0.0034		
Max. dev. (Result)	**-0.0151**		

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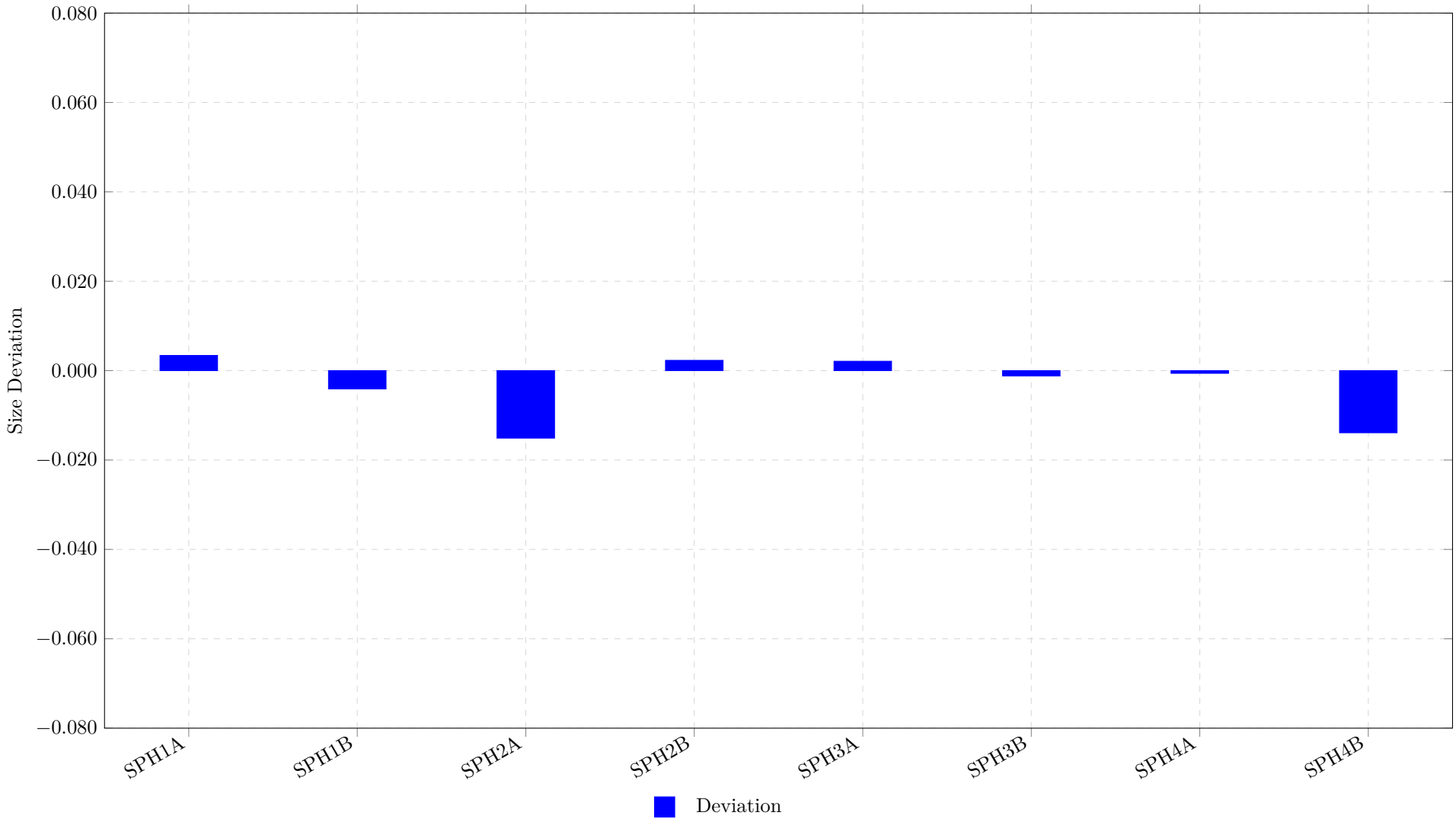
Sphere Diameter

Graph



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