



ISO/IEC 17025:2017

מעבדות כיוול

תעודת הסמכה מס' 0035 מאגנוס הנדסה ואחזקה בע"מ

כתובת אתר ייחוס: רח' נחל שניר 15, ת.ד. 13189, אזור התעשייה, יבנה, 8122503

עד יום: 27.02.2025

בתוקף מיום: 19.02.2023

הארגון נבדק ונבחן על ידי הרשות הלאומית להסמכת מעבדות (להלן הרשות) ונמצא ראוי להסמכה בהתאם לנספח פירוט היקף ההסמכה המצורף לתעודה זו, המהווה חלק בלתי נפרד ממנה ומספרו זהה למספר התעודה. הסמכה מצביעה על כשירות מקצועית ותפעול מערכת ניהול איכות בעלת הכרה בינלאומית. הארגון המוסמך על ידי הרשות, עומד בתקנים/ בדרישות המפורטים מעלה. דרישות התקנים הם לכשירות מקצועית ולמערכות ניהול, שהינן הכרחיות למתן תוצאות אמינות. הסמכה זו ניתנה בהתאם לכללי ISO/IEC 17011:2017 לפיהם פועלת הרשות ובמסגרתם מקיימת פיקוח שוטף על הארגון לצורך בחינת תפקודו המתמשך בהתאם לדרישות ההסמכה. ההסמכה תקפה כל עוד הארגון עונה לאמות המידה שנקבעו על ידי הרשות. הרשות חתומה על הסכם הכרה רב צדדי (MLA) מול ארגון (EA) European Accreditation Cooperation.

תעודה זו אינה מהווה אישור לפי סעיף 12 לחוק התקנים.

אתי פלר
מנכ"ל
הרשות הלאומית להסמכת מעבדות

תאריך הסמכה ראשון: 28.02.2001



הרשות הלאומית להסמכת מעבדות
Israel Laboratory Accreditation Authority

Calibration Laboratories

ISO/IEC 17025:2017

Accreditation Certificate No. 0035

Magnus Calibration Laboratory

Main site address: 15 Nahal Snir St., P.O.B. 13189, Industrial Zone, Yavne, 8122503, Israel

Valid from: 19.02.2023

Until: 27.02.2025

The organization was assessed by the Israel Laboratory Accreditation Authority (ISRAC) and found to be worthy of accreditation to the detailed schedule attached.

The schedule is an integral part of this certificate and is numbered with the above certificate number.

Accreditation demonstrates technical competence and operation of an internationally recognized quality management system.

The organization accredited by ISRAC complies with the standards/requirements mentioned above, meets the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically competent results. This accreditation is granted in accordance with the requirements of ISO/IEC 17011:2017, and entails periodic surveillance and reassessment by ISRAC to ensure that the organization continues to comply with the accreditation requirements.

The accreditation is valid provided that the organization continues to meet the criteria as laid down by ISRAC. ISRAC is an EA-MLA (European Accreditation Cooperation Multi-Lateral Agreement) signatory.

This certificate does not constitute an approval in accordance with article 12 of the standard law.

**Etty Feller
General Manager**

Israel Laboratory Accreditation Authority

Date of first accreditation: 28.02.2001

Date of signature 19/02/2023

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	<u>Name and Address:</u>
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Fax	+972-8-942-0858
E-mail (contact person)	Lab@magnus-eng.com

Site: P or T or M , P-Permanent, T-Temporary, M-Mobile

A permanent (P) or temporary (T) place, or a stationary or mobile (M) facility, at or from which the organization performs activities forming part of its scope of accreditation, starting from sampling to final issuance of a report or certificate and / or quality system activities. A temporary (T) site is a site established under the responsibility of an accredited permanent site. All activities performed at a temporary site are the responsibility of the permanent site. An outdoors work is also considered to be a temporary site. Temporary site will be a site that involves work for special project and the activity will be defined in time (up to 2 years).

Type of Scopes: A- Fixed, C- Flexible scope in analytical tests : Type of matrix, analytes, experimental systems and/or analytical characteristics may be subject to changes, in accordance with the laboratory's approved and documented procedures. For details, please refer to the list of Accredited Tests, available from the laboratory upon request.



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration - Large Volume Volumetric Instruments					כיוול – כיוול מכשירים וולומטריים – נפחים גדולים		
1	A	P	Liquid Mass. Liquid Mass Meters	מסת נוזלים. מדי מסת נוזל	[1 kg to 1600 kg]	0.04 %OR	Internal Calibration Procedure 9 Internal Procedure OR - of reading
2	A	P	Liquid Mass. Weighing Tanks, Liquid Mass Meters	מסת נוזלים. מיכלים שקולים, מדי מסת נוזל	[1600 kg to 195000 kg] At flow rate of 0.12 kg/min to 2000 kg/min	0.13 %OR	Calibration Procedure CI-06 ISO 10790 Calibration by means of Coriolis flow meter
3	A	T	Liquid Mass. Weighing Tanks, Liquid Mass Meters	מסת נוזלים. מיכלים שקולים, מדי מסת נוזל	[1 kg to 195000 kg] At flow rate of 0.12 kg/min to 2000 kg/min	0.13 %OR	Calibration Procedure CI-06 ISO 10790 Calibration by means of Coriolis flow meter
4	A	P;T	Liquid Volume. Liquid Tanks, Liquid Volume Meters	נפח נוזלים. מיכלים למדידת נפח נוזלים, מדי נפח נוזלים	[1 L to 195000 L] At flow rate of 0.12 L/min to 2000 L/min	0.14 %OR	Calibration Procedure CI-06 ISO 10790 Calibration by means of Coriolis flow and density meter.



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration - Physical Quantities - Liquid and Air Flow					כיוול - גדלים פיזיקליים - זרימה, נוזל ואויר		
5	A	P	Liquid Mass Flow rate,	[3.6 g/min to 30 g/min]	0.09 %OR	Calibration Procedure	Calibration by means of weighing
6	A	P	Liquid Mass Flow rate Meter	(0.03 kg/min to 60 kg/min)	0.03 %OR	CI-02, CI-05	
7	A	P		(60 kg/min to 300 kg/min)	0.04 %OR	ISO 10790	
8	A	P		(300 kg/min to 2000 kg/min)	0.05 %OR		
9	A	P;T	Liquid Mass Flow rate,	[3.6 g/min to 30 g/min]	0.40 %OR	Calibration Procedure	Calibration by means of Coriolis flow meter
10	A	P;T	Liquid Mass Flow rate Meter	(30 g/min to 120 g/min)	0.14 %OR	CI-03, CI-04	
11	A	P;T		[0.12 kg/min to 2000 kg/min]	0.11 %OR	ISO 10790	
12	A	P	Liquid Volume Flow rate,	[3.6 mL/min to 30 mL/min]	0.10 %OR	Calibration Procedure	Calibration by means of weighing and density calibration
13	A	P	Liquid Volume Flow rate Meter	(0.03 L/min to 60 L/min)	0.04 %OR	CI-02, CI-05	
14	A	P		(60 L/min to 300 L/min)	0.05 %OR	ISO 10790	
15	A	P		(300 L/min to 2000 L/min)	0.06 %OR		
16	A	P;T	Liquid Volume Flow rate,	[3.6 mL/min to 30 mL/min]	0.40 %OR	Calibration Procedure	Calibration by means of Coriolis flow meter
17	A	P;T	Liquid Volume Flow rate Meter	(30 mL/min to 120 mL/min)	0.15 %OR	CI-03, CI-04	
18	A	P;T		(0.12 L/min to 2000 L/min)	0.12 %OR	ISO 10790	
19	A	P;T	Gas Mass Flow rate,	[6 mg/min to 12 mg/min]	0.70 %OR	Calibration Procedure	Flow rates values may be converted to other units by taking into account relevant reference conditions.
20	A	P;T	Gas Mass Flow rate Meter	(0.06 g/min to 3.6 g/min)	0.65 %OR	CI-07	
21	A	P		(3.6 g/min to 2 kg/min)	0.60 %OR		
22	A	T		(3.6 g/min to 900 kg/min)	0.60 %OR		
23	A	P;T	Gas Volume Flow rate,	[0.5 mL/min to 5 mL/min]	0.80 %OR	Calibration Procedure	Calibration by means of Piston prover Flow rates values may be converted to other units by taking into account relevant reference conditions.
24	A	P;T	Gas Volume Flow rate Meter	[5 mL/min to 100 L/min]	0.35 %OR	CI-07	



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration - Physical Quantities - Pressure					כיוול - גדלים פיזיקליים - לחץ			
25	A	P;T	Pressure, Hydraulic , Gauge Pressure meters and transmitters	לחץ, לחץ יחסי הידראולי מדי לחץ משדרי לחץ	[0.7 MPa to 100 MPa]	1.2 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
26	A	P;T	Pressure, Pneumatic, Absolute Pressure meters and transmitters	לחץ, לחץ אבסולוטי פניאומטי מדי לחץ משדרי לחץ	[5 kPa to 2 MPa]	0.7 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
27	A	P;T	Pressure, Pneumatic, Absolute Pressure meters and transmitters	לחץ, לחץ יחסי פניאומטי מדי לחץ משדרי לחץ	(2 MPa to 10 MPa)	1.1 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
28	A	P;T	Pressure, Pneumatic, Gauge Pressure meters and transmitters	לחץ, לחץ יחסי פניאומטי מדי לחץ משדרי לחץ	[-95 kPa to -20 kPa]	0.7 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
29	A	P;T	Pressure, Pneumatic, Gauge Pressure meters and transmitters	לחץ, לחץ יחסי פניאומטי מדי לחץ משדרי לחץ	[-20 kPa to 20 kPa]	15 Pa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
30	A	P;T	Pressure, Pneumatic, Gauge Pressure meters and transmitters	לחץ, לחץ יחסי פניאומטי מדי לחץ משדרי לחץ	(20 kPa to 2 MPa)	0.7 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
31	A	P;T	Pressure, Pneumatic, Gauge Pressure meters and transmitters	לחץ, לחץ יחסי פניאומטי מדי לחץ משדרי לחץ	(2 MPa to 10 MPa)	1.1 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck
32	A	P;T	Pressure, Pneumatic, Gauge Pressure meters and transmitters	לחץ, לחץ יחסי פניאומטי מדי לחץ משדרי לחץ	(10 MPa to 15 MPa)	1.2 Pa/kPa	Calibration Procedure CI-11 based on EURAMET cg-17 OIML R 101	Pressure Calibrator Druck



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration - Physical Quantities - Temperature					כיוול - גדלים פיזיקליים - טמפרטורה			
33	A	P;T	Temperature, Temperature indicators for resistance sensors	טמפרטורה, מדדי טמפרטורה לגששי התנגדות	[-200 °C to 650 °C]	0.25 °C	Calibration Procedure CI-22 based on ASTM E 1137/1137M	Calibration by electrical simulation
34	A	P;T	Temperature, Temperature resistance sensors	טמפרטורה, מדי טמפרטורה התנגדות	[-30 °C to 150 °C]	0.08 °C	Calibration Procedure CI-21 based on ASTM E 1137/1137M	Comparison to PRT in liquid bath
35	A	P;T	Temperature, Temperature resistance sensors	טמפרטורה, מדי טמפרטורה התנגדות	[-100 °C to 155 °C]	0.05 °C	Calibration Procedure CI-21 based on ASTM E 1137/1137M	Comparison to PRT in dry bath



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration - Mechanical Quantities - Accelerometers					כיוול - גדלים מכניים – מדי תאוצה		
36	A	P	Acceleration Piezoresistive Type accelerometer	מד תאוצה פייזורזיסטיבי [5 m/s ² to 200 m/s ²] [5 Hz to 50 Hz]	1.7 %OR	Calibration Procedure CI-10 based on ISO 16063-21	Back to back calibration versus standard accelerometer DUT Sensitivity range 0.1 pC/g to 999 pC/g g = 9.80655 m/s ² DUT mass up to 200 g OR –of reading
37	A	P		(50 Hz to 10 kHz]	1.2 %OR		
38	A	P	Acceleration Piezoelectric Type accelerometer	מד תאוצה פייזואלקטרי [5 m/s ² to 200 m/s ²] [5Hz to 50 Hz]	1.7 %OR	Calibration Procedure CI-10 based on ISO 16063-21	Back to back calibration versus standard accelerometer DUT Sensitivity range 0.1 mV/g to 999 mV/g g = 9.80655 m/s ² DUT mass up to 200 g OR –of reading
39	A	P		(50 Hz to 10 kHz]	1.2 %OR		
40	A	P	Vibration Transducer Type Velocity Transducer	מד מהירות [5 m/s ² to 200 m/s ²] [45 Hz to 50 Hz]	1.7 %OR	Calibration Procedure CI-10 based on ISO 16063-21	Back to back calibration versus standard accelerometer DUT Sensitivity range 0.1 mV/IPS to 999 mV/IPS g = 9.80655 m/s ² DUT mass up to 200 g OR –of reading
41	A	P		(50 Hz to 3.5 kHz]	1.2 %OR		

¹) The uncertainty covered by the CMC expressed as the standard measurement uncertainty multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95 %.