



ISO/IEC 17025:2017

מעבדות כיוול

תעודת הסמכה מס' 16 מעבדות תקנים; מרכז תפעול חטיבת התעופה התעשייה האווירית לישראל

כתובת אתר ייחוס: מחלקה 4835, נתב"ג, 70100

עד יום: 23.06.2022

בתוקף מיום: 29.08.2021

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 / דרישות המפורטים מעלה. דרישות התקנים הם לכשירות מקצועית ולמערכות ניהול, שהינן הכרחיות למתן תוצאות אמינות. הסמכה זו ניתנה בהתאם לכללי תקן 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 דו צדדי (BLA) מול ארגון European co-operation for Accreditation (EA).

תעודה זו אינה מהווה אישור לפי סעיף 12 לחוק התקנים.

אתי פלר
מנכ"ל

הרשות הלאומית להסמכת מעבדות

תאריך הסמכה ראשון: 24.06.1996



הרשות הלאומית להסמכת מעבדות
Israel Laboratory Accreditation Authority

Calibration Laboratories

ISO/IEC 17025:2017

Accreditation Certificate No. 16

**Standard laboratories Operation center, Aviation group, Israel
Aerospace Industries**

Main site address: Department 4835, Ben Gurion Airport, 70100 , Israel

Valid from: 29.08.2021

Until: 23.06.2022

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 the standard 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-BLA (European co-operation for Accreditation Bi-Lateral Agreement) signatory.

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

Date of first accreditation: 24.06.1996

**Etty Feller
General Manager
Israel Laboratory Accreditation Authority**

Date of signature 29/08/2021

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Name and Address:

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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 – Chemical Quantities, pH Meters					כיול – גדלים כימיים - מדי pH		
1	A	P, T	pH indicators מדי pH	-414.12 mV to 414.12 mV equivalent to 0 pH to 14 pH	0.11 mV	CPE-863A	Calibration by means of electrical simulation, no realization or measurement of pH involved A calibrator is used as a DC voltage reference standard. Voltage values are converted to pH values by using Nernst equation.
2	A	P, T	pH meters with glass electrode מדי pH בעלי אלקטרודה זכוכית	4 pH to 10 pH	0.03 pH	CPE-863A	Buffer standards 4 pH, 7 pH, 10 pH
3	A	P, T	pH electrode slope שיפוע של אלקטרודה למד pH	90% - to 102%	0.45%	CPE-863A	Buffer standards 4 pH, 7 pH, 10 pH



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks		
Calibration – Electrical Quantities - DC and LF					כילול – גדלים חשמליים - זרם ישר ותדר נמוך				
4	A	P	DC Voltage, Sources	מתח בורם ישר, מחוללים	0.1 V	5 μ V/V	CPE-810B	Comparison to 732A, 752A OR – Of Reading Comparison to 732A Comparison to 732A, 752A RV 722 Fluke 8508 Fluke 5730A	
5	A	P			1 V	1.5 μ V/V			
6	A	P			10 V	0.6 μ V/V			
7	A	P			100 V	1.2 μ V/V			
8	A	P			1000 V	2.5 μ V/V			
9	A	P			Up to 10 mV]	10 μ V/V OR + 0.2 μ V			
10	A	P			(10 mV to 100 mV]	8 μ V/V OR + 0.2 μ V			
11	A	P			(100 mV to 10 V]	5 μ V/V			
12	A	P			(10 V to 1000 V]	6 μ V/V			
13	A	T			Up to 100 mV)	150 μ V/V OR + 5 μ V			
14	A	T			(100 mV to 10 V]	100 μ V/V			
15	A	T			(10 V to 1000 V]	80 μ V/V			
16	A	P	DC Voltage, Measuring Instruments	מתח בורם ישר, מכשירי מדידה	0.1 V	5 μ V/V	CPE-810B		OR - Of Reading
17	A	P			1 V	1.5 μ V/V			
18	A	P			10 V	1 μ V/V			
19	A	P			100 V	1.2 μ V/V			
20	A	P			1000 V	2.5 μ V/V			
21	A	P			Up to 10 mV]	10 μ V/V OR + 0.2 μ V			
22	A	P			(10 mV to 100 mV]	8 μ V/V OR + 0.2 μ V			
23	A	P			(100 mV to 10 V]	5 μ V/V			
24	A	P			(10 V to 1000 V]	6 μ V/V			
25	A	T	DC Voltage, Measuring Instruments	מתח בורם ישר, מכשירי מדידה	Up to 100 mV]	50 μ V/V OR + 2 μ V	CPE-810B	OR - Of Reading	
26	A	T			(100 mV to 10 V]	30 μ V/V			



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration – Electrical Quantities - DC and LF					כיול – גדלים חשמליים - זרם ישיר ותדר נמוך			
27	A	T		(10 V to 1000 V)	50 μ V/V			
28	A	P	DC Voltage Divider מחלק מתח למתח ישר	10 V to 700 V	0.5 μ V/V Of Input	CPE-841F	Voltage ratio 10 ⁻⁷ to 1 ESI RV-722	
29	A	P	DC Current, Sources , Measuring Instrument זרם ישר, מחוללים מכשירי מדידה	[10 pA to 1 μ A]	200 μ A/A OR + 10 pA	CPE-810F	Measuring Voltage across standard resistor OR - Of Reading	
30	A	P		(1 μ A to 10 μ A)	100 μ A/A			
31	A	P		(10 μ A to 100 μ A)	30 μ A/A			
32	A	P		(100 μ A to 0.1 A)	20 μ A/A			
33	A	P		(0.1 A to 1 A)	30 μ A/A			
34	A	P		(1 A to 10 A)	100 μ A/A			
35	A	P		(10 A to 100 A)	500 μ A/A			
36	A	P		(100 A to 500 A)	3.5 mA/A			For clamp meters
37	A	T		Up to 100 μ A]	1 mA/A OR + 1 nA			
38	A	T		(100 μ A to 1 A]	500 μ A/A			
39	A	T		(1 A to 10 A]	2.5 mA/A			
40	A	T		(10 A to 500 A]	20 mA/A			For clamp meters
41	A	P	AC Voltage, Measuring Instruments AC Voltage, Sources מתח חילופין, מכשירי מדידה מתח חילופין, מחוללים	0.5 V		CPE-810C	DMM Fluke 8508 Calibrator Datron 4808 AC/DC Transfer Holt 6A	
42	A	P		[20 Hz to 50 Hz]	200 μ V/V			
43	A	P		(50 Hz to 20 kHz]	70 μ V/V			
44	A	P		(20 kHz to 100 kHz]	200 μ V/V			
45	A	P		(100 kHz to 1 MHz]	1.5 mV/V			
46	A	P		1 V				
47	A	P		[20 Hz to 50 Hz]	200 μ V/V			
48	A	P		(50 Hz to 20 kHz]	70 μ V/V			
49	A	P	(20 kHz to 100 kHz]	200 μ V/V				



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיוול – גדלים חשמליים - זרם ישר ותדר נמוך		
48	A	P		(100 kHz to 1 MHz) 1.5 V	1.5 mV/V		
49	A	P		[20 Hz to 50 Hz]	200 μV/V		
50	A	P		(50 Hz to 20 kHz)	70 μV/V		
51	A	P		(20 kHz to 100 kHz)	200 μV/V		
52	A	P		(100 kHz to 1 MHz) 3 V	1.5 mV/V		
53	A	P		[20 Hz to 50 Hz]	200 μV/V		
54	A	P		(50 Hz to 20 kHz)	70 μV/V		
55	A	P		(20 kHz to 100 kHz)	200 μV/V		
56	A	P		(100 kHz to 1 MHz) 5 V	1.5 mV/V		
57	A	P		[20 Hz to 50 Hz]	200 μV/V		
58	A	P		(50 Hz to 20 kHz)	70 μV/V		
59	A	P		(20 kHz to 100 kHz)	200 μV/V		
60	A	P		(100 kHz to 1 MHz) 10 V	1.5 mV/V		
61	A	P		[20 Hz to 50 Hz]	200 μV/V		
62	A	P		(50 Hz to 20 kHz)	70 μV/V		
63	A	P		(20 kHz to 100 kHz)	200 μV/V		
64	A	P		(100 kHz to 1 MHz) 15 V	1.5 mV/V		
65	A	P		[20 Hz to 50 Hz]	200 μV/V		
66	A	P		(50 Hz to 20 kHz)	70 μV/V		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיוול – גדלים חשמליים - זרם ישר ותדר נמוך		
67	A	P		(20 kHz to 50 kHz)	200 μ V/V		
68	A	P		(50 kHz to 100 kHz)	500 μ V/V		
				30 V			
69	A	P		[20 Hz to 50 Hz]	200 μ V/V		
70	A	P		(50 Hz to 20 kHz)	70 μ V/V		
71	A	P		(20 kHz to 50 kHz)	200 μ V/V		
72	A	P		(50 kHz to 100 kHz)	500 μ V/V		
				50 V			
73	A	P		[20 Hz to 50 Hz]	200 μ V/V		
74	A	P		(50 Hz to 20 kHz)	70 μ V/V		
75	A	P		(20 kHz to 50 kHz)	200 μ V/V		
76	A	P		(50 kHz to 100 kHz)	500 μ V/V		
				100 V			
77	A	P		[20 Hz to 50 Hz]	200 μ V/V		
78	A	P		(50 Hz to 20 kHz)	70 μ V/V		
79	A	P		(20 kHz to 50 kHz)	200 μ V/V		
80	A	P		(50 kHz to 100 kHz)	500 μ V/V		
				300 V			
81	A	P		[20 Hz to 50 Hz]	200 μ V/V		Calibrator Datron 4808
82	A	P		(50 Hz to 10 kHz)	100 μ V/V		AC/DC Transfer
83	A	P		(10 kHz to 100 kHz)	500 μ V/V		HOLT 6A
				500 V			
84	A	P		[20 Hz to 50 Hz]	200 μ V/V		
85	A	P		(50 Hz to 10 kHz)	100 μ V/V		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיוול – גדלים חשמליים - זרם ישר ותדר נמוך		
86	A	P		(10 kHz to 100 kHz) 1000 V	500 μ V/V		True RMS Voltmeter DMM Fluke 8508 Calibrator Datron 4808
87	A	P		[50 Hz to 20 kHz]	200 μ V/V		
88	A	P		(20 kHz to 50 kHz) (1 mV to 1 V)	500 μ V/V		
89	A	P		[50 Hz to 20 kHz]	350 μ V/V OR +10 μ V		
90	A	P		(20 kHz to 100 kHz)	700 μ V/V OR +20 μ V		
91	A	P		(100 kHz to 1 MHz) [1 V to 10 V]	3.5 mV/V OR +30 μ V		
92	A	P		[50 Hz to 20 kHz]	150 μ V/V		
93	A	P		(20 kHz to 100 kHz)	300 μ V/V		
94	A	P		(100 kHz to 1 MHz) (10 V to 100 V)	3 mV/V		
95	A	P		[50 Hz to 20 kHz]	300 μ V/V		
96	A	P		(20 kHz to 100 kHz) (100 V to 1000 V)	300 μ V/V		
97	A	P		50 Hz to 50 kHz 100 V to 700 V	600 μ V/V		
98	A	P		50 kHz to 100 kHz	1 mV/V		
99	A	T	AC Voltage, Measuring Instruments	מתח חילופין, מכשירי מדידה [1 mV to 1 V] [50 Hz to 20 kHz]	1 mV/V OR +10 μ V	CPE-810C	OR - Of Reading
100	A	T		(20 kHz to 100 kHz)	5 mV/V OR +20 μ V		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיוול – גדלים חשמליים - זרם ישר ותדר נמוך		
101	A	T		(1 V to 10 V) [50 Hz to 20 kHz]	500 μ V/V		
102	A	T		(20 kHz to 100 kHz)	5 mV/V		
103	A	T		(10 V to 100 V) [50 Hz to 20 kHz]	500 μ V/V		
104	A	T		(20 kHz to 100 kHz)	5 mV/V		
105	A	T		(100 V to 1000V) [50 Hz to 1 kHz]	600 μ V/V		
106	A	T	AC Voltage, Sources	[1 mV to 1 V] [50 Hz to 20 kHz]	2 mV/V	CPE-810C	
107	A	T		(20 kHz to 100 kHz)	5 mV/V		
108	A	T		(1 V to 10 V) [50 Hz to 20 kHz]	1 mV/V		
109	A	T		(20 kHz to 100 kHz)	5 mV/V		
110	A	T		(10 V to 100 V) [50 Hz to 20 kHz]	1.5 mV/V		
111	A	T		(20 kHz to 100 kHz)	5 mV/V		
112	A	T		(100 V to 1000 V) 50 Hz to 1 kHz	600 μ V/V		
113	A	P	Voltage Ratio, Voltage Ratio Generator	AC ratio 10^{-7} to 1 400 Hz to 1 kHz	2 μ V/V of input	CPE-841G	Comparison ESI DT72A



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks				
Calibration – Electrical Quantities - DC and LF					כיוול – גדלים חשמליים - זרם ישר ותדר נמוך						
114	A	P	AC Current, Measuring Instruments and Sources	זרם חילופין, מכשירי מדידה זרם חילופין, מחוללים	[100 μA to 0.1 A]	CPE-810R					
115	A	P			(0.1 A to 1 A)			500 μA/A			
116	A	P			(1 A to 10 A)			200 μA/A			
117	A	P			(10 A to 500 A)			300 μA/A			
118	A	T			[100 μA to 1 A]			3.5 mA/A	CPE-810P	For clamp meters	
119	A	T			(1 A to 10 A)			2 mA/A	CPE-810J		
120	A	T			(100 μA to 1 A)			5 mA/A	CPE-810P	Generation only For clamp meters	
121	A	T			(1 A to 10 A)			6 mA/A			
122	A	T			(10 A to 500 A)			5 mA/A			
122	A	T			(10 A to 500 A)			20 mA/A			
123	A	P			DC Resistance, Measuring Instruments			התנגדות זרם ישר, מכשירי מדידה	0.1 Ω	CPE-841A	Standard Resistors OR - Of Reading
124	A	P							1 Ω		
125	A	P	10 Ω	5 μΩ/Ω							
126	A	P	25 Ω	6 μΩ/Ω							
127	A	P	100 Ω	3 μΩ/Ω							
128	A	P	1 kΩ	5 μΩ/Ω							
129	A	P	10 kΩ	0.7 μΩ/Ω							
130	A	P	100 kΩ	6 μΩ/Ω							
			DC Resistance, Resistors	התנגדות זרם ישר, נגדים							



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration – Electrical Quantities - DC and LF					כילול – גדלים חשמליים - זרם ישר ותדר נמוך			
131	A	P		1 MΩ	10 μΩ/Ω			
132	A	P		10 MΩ	15 μΩ/Ω			
133	A	P		Up to 0.1 Ω	50 μΩ/Ω OR + 0.1 μΩ		DMM Fluke 8508	
134	A	P		(0.1 Ω to 10 MΩ]	30 μΩ/Ω			
135	A	P		(10 MΩ to 1 GΩ]	100 μΩ/Ω	CPE-841E	Voltage applied 25-1000V, Reference Resistor	
136	A	P		(1 GΩ to 10 GΩ]	1 mΩ/Ω	CPE-810L		
137	A	P		(10 GΩ to 100 GΩ]	3 mΩ/Ω	CPE-841H		
138	A	P		(100 GΩ to 1 TΩ]	10 mΩ/Ω			
139	A	T	DC Resistance, Resistors	התנגדות זרם ישר, נגדים	Up to 100 mΩ)	100 μΩ/Ω OR + 1 μΩ	CPE-810L	OR - Of Reading
140	A	T			[0.1 Ω to 10 MΩ]	100 μΩ/Ω		
141	A	T			(10 MΩ to 100 MΩ]	1 mΩ/Ω		
142	A	T	DC Resistance, Measuring Instruments	התנגדות זרם ישר, מכשירי מדידה	Up to 100 mΩ]	1 mΩ	CPE-810L	
143	A	T			(0.1 Ω to 10 MΩ]	500 μΩ/Ω		
144	A	T			(10 MΩ to 100 MΩ]	6 mΩ/Ω		
145	A	P	Capacitance, Capacitors	קיבול, קבלים	100 pF	1 kHz	10 μF/F	Gen. Radio 1404A; 1404B 1621 Capacitance bridge
146	A	P			1000 pF	1 kHz	10 μF/F	
147	A	P			1 pF to 10 μF	100 Hz to 1 kHz	50 μF/F	
148	A	P,T	Capacitance, Generating Instruments	קיבול, מחוללים	100 pF to 10 μF	100 Hz to 1 kHz	2 mF/F	CPE-841I
149	A	P,T	Capacitance, Measuring Instruments	קיבול, מכשירי מדידה	1 pF to 10 μF	100 Hz to 1 kHz	500 μF/F	CPE-841L



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיוול – גדלים חשמליים - זרם ישר ותדר נמוך		
150	A	P	Inductance, Measuring Instruments and standards השראות, מכשירי מדידה וייחוס	100 μH	200 μH/H OR + 0.1 μH	CPE-841C/H	Genrad 1238 Genrad 1316 Genrad 1482-L Fluke PM 6304 OR - Of Reading
151	A	P		100 Hz			
152	A	P		400 Hz			
153	A	P		1 kHz	200 μH/H OR + 0.1 μH		
154	A	P		1 mH			
155	A	P		400 Hz			
156	A	P		100 Hz	200 μH/H OR + 0.1 μH		
157	A	P		400 Hz			
158	A	P		1 kHz			
159	A	P		10 mH	200 μH/H OR + 0.1 μH		
160	A	P		100 Hz			
161	A	P		400 Hz			
162	A	P		100 mH	200 μH/H		
163	A	P		1 kHz			
164	A	P		1 H			
165	A	P		10 H	250 μH/H		
166	A	P	100 Hz				
				400 Hz	500 μH/H		OR - Of Reading



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיול – גדלים חשמליים - זרם ישר ותדר נמוך		
167	A	P		[50 μH to 1 H]			
168	A	P		100 Hz to 1 kHz	1 mH/H OR + 0.2 μH		
169	A	T		(1 H to 10 H)			
170	A	T		100 Hz to 400 Hz	1 mH/H		
171	A	P	Conductivity, Conductivity meter	[8% to 108% IACS]	2% or 0.7% IACS whichever is greater	CPE-863I/863M	Reference material blocks; Comparison Specific Nominal Value
172	A	P		30% IACS	0.55% IACS		
173	A	P		45% IACS	0.50% IACS		
174	A	P		50% IACS	0.50% IACS		
175	A	P		60% IACS	0.40% IACS		
176	A	P		80% IACS	0.60% IACS		
177	A	P	AC Power, Power Calibrators and Power Meters	הספק זרם חילופין, כיילי הספק ומדי הספק	[1W to 2 kW] Power factor [0 to 1] Current [1 mA to 10 A] Voltage [30 mV to 1 kV] Frequency [50 Hz to 1 kHz]	CPE-840C CPE-812D	Clarke – Hess 2500A Holt HCF-1 shunt Fluke 5500A



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - DC and LF					כיול – גדלים חשמליים - זרם ישר ותדר נמוך		
178	A	P	Power factor, Power Calibrators and Power Meters גורם הספק, כיילי הספק ומדי הספק	[0 to 1] Power [1 W to 2 kW] Current [1 mA to 10 A] Voltage [30 mV to 1 kV] Frequency [50 Hz to 1 kHz]	0.002	CPE-840C CPE-812E	



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities – Magnetic Field and Flux					כיול – גדלים חשמליים - שטף ושדה מגנטי		
179	A	P	Magnetism, Measuring Instruments מגנטיות, מכשירי מדידה	AC (50HZ-1000HZ) [0.5 GAUSS to 10 GAUSS]	0.05 GAUSS	CPE-863H	Helmholtz Coil (AXIAL + TRANSVERS PROBS)
180	A	P		(10 GAUSS to 20 GAUSS)	0.5 %OR		OR – Of Reading
181	A	P		DC [0.5 GAUSS to 10 GAUSS]	0.08 GAUSS		Reference Magnet (AXIAL + TRANSVERS PROBS) (AXIAL PROB) (TRANSVERS PROB) (AXIAL PROB) (TRANSVERS PROB)
182	A	P		(10 GAUSS to 20 GAUSS)	0.7 %OR		
183	A	P		100 GAUSS	1.3 %OR		
184	A	P		500 GAUSS	1.3 %OR		
185	A	P		1000 GAUSS	0.8 %OR		
186	A	P		2000 GAUSS	0.8 %OR		
187	A	P		10,000 GAUSS	0.8 %OR		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities – HF Electrical Power and Energy					כיוול – גדלים חשמליים - הספק ואנרגיה חשמלית בתדר גבוה		
188	A	P	RF Power, Power Meters	הספק תדר גבוה, מדי הספק 1 mW	30 MHz 5.5 mW/W	CPE-812A	HP 432 A/H75 Reference source
189	A	P			50 MHz 4 mW/W		
190	A	P	RF Power, Power Sources	הספק תדר גבוה, מקורות הספק (0.1 nW – 1 nW)	30 MHz 23 mW/W	CPE-812B	Boonton 2520 Power calibrator
191	A	P	RF Power, Linearity of Power Sources & Meters	הספק תדר גבוה, ליניאריות של מקורות הספק [10 nW - 100 mW] (10 dB/step)	30 MHz 14 mW/W	CPE-812A/B	Boonton 2520 Power calibrator
192	A	P			[10 μW to 100 μW] [10 MHz to 1 GHz] 50 mW/W		
193	A	T	RF Power, Power Sources and Meters	הספק תדר גבוה, מקורות ומדי הספק [10 μW to 100 μW]	[10 MHz to 1 GHz] 60 mW/W	CPE-812B	Thermocouple Element Agilent E4417A Power meter
194	A	P			[10 μW to 10 mW] [100 kHz to 300 KHz] 50 mW/W		
195	A	P			[300 kHz to 1MHz] 25 mW/W		
196	A	P			(1 MHz to 4 GHz) 20 mW/W		
197	A	P			(4GHz to 12.4 GHz) 25 mW/W		
198	A	P			(12.4 GHz to 18 GHz) 35 mW/W		
199	A	P			[10 mW to 100 mW] (100 kHz to 300 KHz) 50 mW/W		
200	A	P			(300 kHz to 50MHz) 23 mW/W		
201	A	P			(50 MHz to 1GHz) 30 mW/W		
202	A	P			(1 GHz to 4GHz) 40 mW/W		
203	A	P			(4 GHz to 12.4GHz) 50 mW/W		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities – HF Electrical Power and Energy					כיוול – גדלים חשמליים - הספק ואנרגיה חשמלית בתדר גבוה		
204	A	P		(12.4 GHz to 18GHz] (100 mW to 3 W]	60 mW/W		
205	A	P		[10 MHz to 400 MHz]	32 mW/W		
206	A	P		(400 MHz to 12 GHz]	70 mW/W		
207	A	P	RF Power, Power Sources / Watt Meters	הספק תדר גבוה, מקורות הספק	[3 W to 50 W] [10 MHz to 400 MHz]	CPE-812C	Thermocouple Element Agilent E4417A Power meter Bird 8325 Attenuator RF Amplifier
208	A	P	DC Attenuation, Attenuators DC	הנחתה זרם ישר, מנחיתים זרם ישר	DC	CPE-840G	Calibrator Datron 4808 Multimeter Fluke 8508
209	A	P		[0 to 70 dB]	0.06 dB		
210	A	P		(70 to 80 dB]	0.1 dB		
				(80 to 90 dB]	0.5 dB		
211	A	P	LF&RF Attenuation, Attenuators LF&RF	הנחתה תדר נמוך תדר גבוה, מנחיתים תדר נמוך תדר גבוה	[1 kHz to 30 MHz]	CPE-840D	Agilent 8495B Agilent E8247C Marconi 2032
212	A	P		(30 MHz to 1 GHz]	0 to 70 dB		
213	A	P		(1 GHz to 7 GHz]	0 to 70 dB		
214	A	P		(7GHz to 12 GHz]	0 to 70 dB		
215	A	P		(12GHz-18GHz]	0 to 70dB		
216	A	P		(30 MHz to 4 GHz]	(0 to 70 dB)		
217	A	P		(4GHz to 12 GHz]	(70 to 90 dB]		
218	A	P		(12GHz to 18 GHz]	(70 to 90 dB]		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Electrical Quantities - RF Frequency, Time					כיוול – גדלים חשמליים - תדר גבוה, זמן		
219	A	P	Frequency, Frequency Measuring Instruments and Frequency Sources	תדר, מכשירי מדידת תדר ומחוללי תדר	1 MHz	CPE-832A	GPS Time & Frequency System Over 8 Hours 1 h integration time
220	A	P			5MHz		1 h integration time
221	A	P			10MHz		1 h integration time
222	A	P			[1 Hz to 1 MHz]	CPE-832D	10 sec integration time
223	A	P			(1 MHz to 18 GHz]		10 sec integration time
224	A	T			[1 Hz to 1 kHz]		1 sec integration time
225	A	T			(1 kHz to 18 GHz]		1 sec integration time
226	A	P.T	Time, Timers and stop watches	מדי זמן ושעוני עצר	30 sec to 24 h	CPI-580A CPI-580B	
227	A	P	Amplitude Modulation, Modulation Meters	אפנון תנופה, מד אפנון	Carrier frequency: [1 MHz to 1 GHz] Modulation frequency: [90 Hz to 10 kHz] Modulation depth: [5% - 95%]	CPE-835C CPE-835D	Carrier Oscilloscope DC Calibrator Signal generator OR - Of Reading
228	A	P	Frequency Modulation, Modulation Meters	אפנון תדר, מד אפנון	Carrier frequency [10 MHz to 1 GHz] Modulation frequency: [100 Hz to 10 kHz] Deviation frequency [200 Hz to 100 kHz]	CPE-835C CPE-835E	Deviation Spectrum analyzer Marconi 2032



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Mechanical Quantities – Form, Angle					כיול – גדלים מכניים – צורה, זווית		
229	A	P	Form, Roughness Ra, Roughness Measurement Instrument	צורה, חספוס פני שטח, מכשירי מדידת חספוס	0.3 μm to 5 μm	0.035 μm or 3.5% OR whichever is greater	BS 1134 CPM-185H CPM-198 Master surface finish; Surface finish machine CLA method Ra parameter only
230	A	P	Form, Roughness, Ra Roughness Samples	צורה, חספוס פני שטח, דוגמאות חספוס	0.3 μm to 5 μm	0.035 μm or 3.5% OR whichever is greater	BS 1134 CPM-185H CPM-198 Master surface finish; Surface finish machine CLA method Ra parameter only
231	A	P;T	Form, Flatness, Surface Plates, Granite	צורה, לוחות שטוחים, גרניט	Up to 100 μm	(1.5 + 0.8 L) μm	ISO 8512 CPM-175B L in meters Surface Plates size: 200 mm x 200 mm x 50 mm to 4000 mm x 4000 mm x 250 mm Two methods may be implemented: -Autocollimator (Union Jack Method) -Electronic Levels
232	A	P	Form, Flatness, Optical Flats	צורה, שטיחות, מישור אופטי	Up to 2.5 μm	0.1 μm	JIS B 7430 CPM-185F Optical Flats size: 10 mm to 100 mm Calibrated optical flats
233	A	P	Form, Straightness, Straightedges	צורה, ישרות, סרגל ישרות	Up to 5 mm	(1 + 2 L) μm	BS 5204 CPM-174 CPM-174B Straightness size: 300 mm to 2000 mm Gauge blocks L in meters



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Mechanical Quantities – Form, Angle					כיול – גדלים מכניים – צורה, זווית		
234	A	P	Form, Parallelism, Parallels צורה, מקבילות, מקבילים	Up to 1 mm	1.5 μm	BS 906 CPM-174A CPM-177A	Parallels size: 100mm x 20 mm x 10 mm to 400 mm x 100 mm x 50 mm Surface plate; Millimess
235	A	P	Angle, Angle Gauges זווית, אב מידה לזווית	1" to 180°	1"	N.P.L No. 26	Autocollimator; Master angle gauges
236	A	P	Angle, Poligons Rotary & Index Tables זווית, פוליגון, שולחן חלוקה	1° to 360°	1"	N.P.L No. 26 CPM-185B	Autocollimator; Index table
237	A	P	Angle, Autocollimators זווית, אוטוקולימטור	± 10'	0.25"	JIS B 7538 CPM-196	Small Angle Generator
238	A	P	Angle, Small Angle Generator זווית, מתקן זוויות קטנות	± 30'	0.2"	CPM-185O	Gauge blocks
239	A	P	Angle, Squares, Cylindrical זווית, גליל ניצב	Up to 1°	(6 L) μm	BS 939 CPM-170B	Squares sizes: Up to 600 mm Table; Autocollimator; Gauge blocks L in meters
240	A	P	Angle, Angle Cube זווית, קוביה	Up to 1000 mm	(10 L) μm	BS 5535 CPM-172B	Angle Cube size: 50 mm to 400 mm Autocollimator; Angle gauge, Surface plate L in meters
241	A	P;T	Angle, Squares זווית, זוויתן	Up to 90°	(10 L) μm	BS 5535 BS 939 CPM-174A	Squares size: Up to 600 mm Table; Autocollimator; Angle gauges L in meters



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Mechanical Quantities – Form, Angle					כיוול – גדלים מכניים – צורה, זווית		
242	A	P	Angle, Vee Blocks זווית, פריזמה V	Up to 45°	2.5 μm	BS 3731 CPM-171	Block size: 40 mm to 150 mm Surface plate; Sine-table; Millimess
243	A	P	Angle, Levels, electronic זווית, פלאס אלקטרוני	0.005 mm/meter to 1 mm/meter	1"	DIN 877 CPM-133A	Granite surface plate; Millimess Small Angle Generator
244	A	P	Angle, Levels, Spirit זווית, פלאס	0.001 mm/meter to 1 mm/meter	1"	DIN 877 CPM-133	Granite surface plate; Millimess Small Angle Generator
245	A	P	Angle, Sine Bars & Tables זווית, סרגלים ושולחנות סינוס	Up to 45°	3"	BS 3064 CPM-174B	Sine Bars size: 50 mm to 300 mm Granite surface plate; Gauge blocks L in meters
246	A	P;T	Angle, Bevel Protractor זווית, מד זווית	0° to 360°	2' or 1 div. whichever is greater	BS 1685 CPM-132	Table; Angel gauges
247	A	P	Angle, Clinometers זווית, מד שיפוע	0° to 45°	10"	TO 33K-4-1-805 CPM-134	Granite surface plate; Sine table
248	A	P	Angle, Theodolite זווית, תאודוליט	0° to 360°	1.5"	JIS B 7909 CPM-197	Test stand collimator
249	A	P	Revolution per minute Optical Tachometers מהירות סיבוב, מד מהירות סיבוב אופטי	1 rpm to 100000 rpm	0.0015 % of rpm value + 0.1 rpm	CPI-531A	Synthesized Function generator



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Mechanical Quantities - Length					כיול – גדלים מכניים - אורך		
250	A	P	Length, Gauge Blocks Comparators אורך, קומפרטורים לכיול מקבילונים	0-100 mm	0.07 μm	Euramet cg-2 CPM-185C	Gauge blocks
251	A	P	Length, Gauge Blocks (by Comparison) אורך, מקבילונים	0.3 mm to 100 mm	(0.1 + 0.8 L) μm	ISO 3650 JIS B7506 CPM-199	Gauge blocks; Comparator, L in meters
252	A	P	Length, Gauge Block Accessories אורך, אביזרי מקבילונים	2 mm to 25 mm	0.3 μm	BS 4311 JIS B 7506 CPM-177A	Gauge blocks; Comparator, L in meters
253	A	P	Length, Length Bars אורך, מוטות אורך	25 mm to 1000 mm	5 L	ISO R 286 ISO 3650 CPM-199	Gauge blocks; Comparator, L in meters
254	A	P	Length, Plain Ring Gauges, Parallel אורך, מדידי טבעת חלקה	[1 mm to 100 mm]	1.5 μm	JIS B 7420 CPM-160A CPM-160	Measuring machine Gauge blocks
255	A	P		(100 mm to 150 mm]	2 μm		
256	A	P	Length, Plain Plug Gauges אורך, מדידי תקע חלקים	[1 mm to 50 mm]	1 μm	JIS B 7420 CPM-161	Measuring machine 828E, Gauge blocks
257	A	P		(50 mm to 100 mm]	1.5 μm		
258	A	P		(100 mm to 150 mm]	2 μm		
259	A	P	Length, Thread Ring Gauges, Parallel אורך, מדידי הברגה טבעת, מקביל	2.5 mm to 100 mm	2 μm	ISO R 1502 ASME B1.2 CPM-150 CPM-150A	Measuring machine SIP,Std. Grooves ting & Check Set Gauges
260	A	P	Length, Thread Plug Gauges, Parallel אורך, מדידי הברגה זכר מקביל	1 mm to 150 mm	2 μm	ISO R 1502 ASME B1.2 CPM-151 CPM-151A	Measuring machine 828E, Gauge blocks, T.M Wires



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Mechanical Quantities - Length					כיול – גדלים מכניים - אורך		
261	A	P	Length, Measuring Pins אורך, מדדי קדח	0.1 mm to 25 mm	0.5 μm	DIN 7162 CPM-144B	Measuring machine 828E
262	A	P	Length, Thread Measuring Wires אורך, תיילים למדידת הברגה	0.17 mm to 6.35 mm	0.5 μm	Handbook H-28 CPM-185D	Laser micrometer
263	A	P	Length, Micrometer Heads, Dial testers אורך, מתקן לכיול ראשי מיקרומטרים, כייל חוגנים	0-25 mm	0.2 μm	DIN 863 CPM-185D	Gauge blocks
264	A	P	Length, Micrometer External אורך, מיקרומטר חיצוני	Up to 1000 mm	(1.5 + 5 L) μm	ISO 3611 CPM-120	Gauge blocks & End Rods, L in meters
265	A	P	Length, Micrometer External אורך, מיקרומטר חיצוני	Up to 300 mm	3 μm	ISO 3611 CPM-120	Gauge blocks L in meters
266	A	P	Length, Micrometer Internal 2-point אורך, מיקרומטר פנימי שתי נקודות	[5 mm to 700 mm]	(3.5 + 8 L) μm	DIN 863/4 CPM-121A CPM-121B	Surface plate: Height Master L in meters Gauge blocks
267	A	P	3-point שלוש נקודות	3.5 mm to 300 mm	(1.5 + 8 L) μm		Surface plate: Calibration tester Plane rings
268	A A	P T	Length, Micrometer Depth אורך, מיקרומטר עומק	Up to 300 mm	(1.5 + 8 L) μm 3 μm	DIN 863/2 CPM-122	Surface plate: Cal Bench L in meters
269	A	P	Length, Caliper Vernier אורך, זחון וורניר	0 to 1000 mm	(25 + 15 L) μm	DIN 862 CPM-131	Gauge blocks; End Rods L in meters
270	A	T		0 to 500 mm	(25 + 15 L) μm	CPM-131A	Gauge blocks; Length bars 1 div.=0.02mm



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration – Mechanical Quantities - Length					כיול – גדלים מכניים - אורך			
271	A	P	Length, Caliper Electronic	אורך, זחון אלקטרוני	Up to 1000 mm	(15 + 30 L) μm	DIN 862	Gauge blocks; End Rods
272	A	T			Up to 500 mm	(15 + 30 L) μm	CPM-131 CPM-131A	L in meters Gauge blocks; Length bars
273	A	P;T	Length, Height Gauge	אורך, מד גובה	Up to 1000 mm	(10 + 30 L) μm	BS 1643 CPM-130A	Gauge blocks; End Rods L in meters
274	A	P;T	Length, Height Gauge Micrometric	אורך, מד גובה מיקרומטרי	Up to 1000 mm	(1 + 1.5 L) μm	ISO 7863 CPM-130B	Surface plate; Gauge blocks L in meters
275	A	P	Length, Dial Indicator	אורך, חוּגן	Up to 100 mm	1 μm	DIN 879	Calibration tester & Gauge Blocks
276	A	T			Up to 100 mm	2 μm	CPM-140A	
277	A	P	Length, Dial Gauge, lever	אורך, חוּגן מנופּי	Up to 1 mm	0.5 μm	DIN 2270	Calibration tester
278	A	T			Up to 1 mm	1.5 μm	CPM-142	
279	A	P	Length, Bore Gauge	אורך, מדיד קדח	Up to 150 mm	1.5 μm	JIS B 7515	Calibration tester & Plain rings
280	A	T			Up to 150 mm	2 μm	CPM-144A CPM-144B	
281	A	P	Length, Optical Scale	אורך, סרגל אופטי	Up to 350 mm	1 μm	JIS B 7541 Cpm-185K	Measuring machine “SIP”
282	A	P	Length, Universal Measuring machine	אורך, מכשיר אוניברסלי למידת אורך	0-400 mm	(0.5+1.5 L) μm	CPM-151,151A,160,160A, 161,162,163,164	Gauge blocks L in meters
283	A	P	Length, Horizontal Measuring machine	אורך, מכשיר אופקי למדידת אורך	0-200 mm	(0.4+1.5L) μm	CPM-185D	Gauge blocks L in meters
284	A	P	Length, Electrical comparators	אורך, מכשירי השוואה אלקטרוניים	Up to 1 mm	0.5 μm	JIS B 7536	Calibration tester and Gauge blocks
285	A	T			Up to 1 mm	2 μm	CPM-185E	



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration – Physical Quantities – Optics					כיוול – גדלים פיזיקליים – אופטיקה			
286	A	P	Illuminance, Visible Light, Illuminance Meters and Sources	עוצמת ההארה, אור נראה, מדי עוצמת ההארה והמקורות	5 lx to 10000 lx	5.1 %	CPE-863E	Standard Illuminance meter
287	A	P	Irradiance, UV-A radiation, Irradiance Meters	עוצמת ההקרנה, קרנה אולטרא-סגולה מדי עוצמת ההקרנה	1.5 W/m ² to 50 W/m ²	8%	CPE-863E	CM-365 X UV meter international
288	A	T	Illuminance, Visible Light, Illuminance Sources	עוצמת ההארה, אור נראה, עוצמת המקורות	5 lx to 10000 lx	10%	CPE-863S	Standard Illuminance meter Laboratory is capable to conduct Illuminance measurement as well.



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration – Physical Quantities - Force, Torque					כיוול – גדלים פיזיקליים - כוח, מומנט			
289	A	P	Force, Load Cells	כח, תאי עומס	[1 N to 100 N]	0.02 N	ISO 376	Dead weights – Tension only
290	A	P			(100 N to 10 kN)	0.05% OR+1 N	CPM-188F	Dead weight machine
291	A	P			(10 kN to 445 kN)	0.10%	CPM-188H	Tension & Compression Proving Rings Tension & Compression OR - Of Reading
292	A	P	Force, Proving Rings	כח, טבעת כח	(100 N to 10 kN)	0.05% OR +1 N	ISO 376	Dead weight machine
293	A	P			(10 kN to 445 kN)	0.10%	CPM-188I	Tension & Compression OR - Of Reading Proving Rings Tension & Compression
294	A	P;T	Force, Dynamometers	כח, מדוי כח	Up to 445 kN	0.15 %	ISO 376	Dead weight and Calibrated proving rings
							CPM-188H	CMC not less than 0.25 of division in analog or 0.5 of last digit in digital instruments
295	A	T	Force, Tensile Testing Machines	כח, מכונות קריעה	Up to 445 kN	0.24 %	ASTM E4	Dead weight and Calibrated proving rings
							ISO7500-1	CMC not less than 0.25 of division in analog or 0.5 of last digit in digital instruments
							CPM-189	
							CPM-189A	
296	A	P	Torque, Torque Wrenches	מומנט, מפתח מומנט	0.3 N·m to 20 N·m	1 %OR	ISO 6789	Torque calibration system
297	A	P			20.1 N·m to 2250 N·m	0.5 %OR	CPM-110	
298	A	T			0.3 N·m to 400 N·m	1 %OR	CPM-110B	



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Physical Quantities - Force, Torque					כיול – גדלים פיזיקליים - כוח, מומנט		
299	A	P	Torque, מומנט, כילל מדי פיתול	0.1 N·m to 20 N·m	0.2 %OR	BS 7882	Calibrated mass & arm
300	A	P	Torque Testers	20.1 N·m to 2250 N·m	0.15 %OR	CPM-187A	
301	A	T		0.1 N·m to 2000 N·m	0.2 %OR	CPM-187B	
302	A	P	Torque, מומנט, מתמר פיתול	0.3 N·m to 20 N·m	0.2 %OR	BS 7882	Torque machine
303	A	P	Torque Trandusers	20.1 N·m to 2250 N·m	0.15 %OR	CPM-110A	Calibrated mass & arm
304	A	T		0.1 N·m to 2000 N·m	0.3 %OR		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Physical Quantities - Humidity					כיול – גדלים פיזיקליים - לחות		
305	A	P	לחות, מדדי לחות יחסית, רגשים, Relative humidity gauges, sensors, recorders	[10 %rh to 50 %rh] [5 °C to 25 °C]	0.7 %rh	NPL-ISBN-0-904457-24-9	Dew point & Humidity Chamber
306	A	P		[10 %rh to 50 %rh] [25 °C to 37 °C]	1.2 %rh	CPI-590H	rh– Relative Humidity
307	A	P		(50 %rh to 80 %rh) [5 °C to 28 °C]	1.3 %rh		
308	A	P		(80 %rh to 90 %rh) [5 °C to 26 °C]	2.0 %rh		
309	A	T	לחות, תאי לחות, בקרים, רשמי לחות Humidity chambers, controllers, relative humidity recorders, sensors etc.	[10 %rh to 80 %rh] [0 °C to 50 °C]	1.5 %rh	CPI-590H	HUMIDITY GENERATOR ROTRONIC HG2-S.
310	A	T		(80 %rh to 90 %rh) [10 °C to 50 °C]	2.4 %rh		rh – Relative Humidity



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks	
Calibration – Physical Quantities - Mass					כיוול – גדלים פיזיקליים - מסה			
311	A	P	Mass	מסה	1 mg to 100 mg	0.005 mg	OIML R 111-1 CPM-188A	Mass comparators & Calibrated mass.
312	A	P			200 mg	0.006 mg		
313	A	P			500 mg	0.008 mg		
314	A	P			1 g	0.010 mg		
315	A	P			2 g	0.012 mg		
316	A	P			5 g	0.015 mg		
317	A	P			10 g	0.020 mg		
318	A	P			20 g	0.025 mg		
319	A	P			50 g	0.030 mg		
320	A	P			100 g	0.050 mg		
321	A	P			200 g	0.100 mg		
322	A	P			500 g	0.8 mg		
323	A	P			1000 g	1.5 mg		
324	A	P			2000 g	2.0 mg		
325	A	P			5000 g	5.0 mg		
326	A	P			10000 g	10.0 mg		
327	A	P			20000 g	20.0 mg		
328	A	P;T	Non-automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.001 mg ופחות	(Up to 10 mg]	5 µg	OIML R 76-1 & Manufacturer instructions CPM-188C CPM-188E	Dead weights OIML class E2, F1, F2, M1, M2
329	A	P;T			(10 mg to 500 mg]	10 µg		
330	A	P;T	Resolution: 0.001 mg and less		(500 mg to 2 g]	12 µg		
331	A	P;T			(2 g to 5 g]	15 µg		
332	A	P;T			(5 g to 20 g]	25 µg		
333	A	P;T			(20 g to 50 g]	30 µg		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Physical Quantities - Mass					כילול – גדלים פיזיקליים - מסה		
334	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.01 mg	(Up to 5 g)	15 µg	
335	A	P;T	Resolution: 0.01 mg		(5 g to 50 g)	35 µg	
336	A	P;T			(50 g to 250 g)	130 µg	
337	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.1 mg	(Up to 50 g)	100 µg	
338	A	P;T	Resolution: 0.1 mg		(50 g to 250 g)	180 µg	
339	A	P;T			(250 g to 500 g)	1.1 mg	
340	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.001 g	(Up to 600 g)	1.5 mg	
341	A	P;T	Resolution: 0.001 g		(600 to 2000g)	3 mg	
342	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.01 g	(Up to 5.1 kg)	10 mg	
343	A	P;T	Resolution: 0.01 g		(5.1 to 12.1kg)	20 mg	
344	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.1 g	(Up to 8.1 kg)	100 mg	
345	A	P;T	Resolution: 0.1 g		(8.1 to 32 kg)	100 mg	
346	A	P;T			(32 kg to 64 kg)	200 mg	
347	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 1 g	(Up to 50 kg)	1 g	
348	A	P;T	Resolution: 1 g		(50 kg to 150 kg)	1 g	
349	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.01 kg	(Up to 200 kg)	10 g	
350	A	P;T	Resolution: 0.01 kg		(200 kg to 500 kg)	10 g	
351	A	P;T	Non automatic weighing instruments	מאזניים לא אוטומטיים כושר הפרדה: 0.1 kg	(Up to 1000 kg)	0.1 kg	
352	A	P;T	Resolution: 0.1 kg		(1000 kg to 2000 kg)	0.2 kg	



Item	Scope Type	Site	Measurand Instrument, Gauge		Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Physical Quantities - Mass						כיוול – גדלים פיזיקליים - מסה		
353	A	P	WHEEL & AIRCRAFT WEIGHING PLATFORM	משטחי שקילת רכב ומטוסים	(Up to 1000 kg]	0.0 7%OR or 1 div whichever is greater	OIML R 76-1 ISO 376	Load cells & Press
354	A	P	1 div: 0.5 kg, 1 kg, 2 kg, 5 kg, 10 kg	כושר הפרדה: 0.5 kg, 1 kg, 2 kg, 5 kg, 10 kg	(1000 kg to 30000 kg]	0.15 %OR or 1 div whichever is greater	Manufacturer instructions CPM-188L CPM-188J	



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			
355	A	P;T	Pressure, Pneumatic Absolute Pressure, Absolute Pressure Gauges	לחץ, מדי לחץ אבסולוטי	[0.029 Pa to 123 Pa]	5 %	OIML R 101 EURAMET cg-17 CPI-510M	Vacuum, Low MKS 390 ha – 00001 D.W.T Ruska
356	A	P			(6.28 kPa to 104 kPa)	0.035 %	OIML R 101	
357	A	P	Pressure, Pneumatic Gauge Pressure, Pressure Gauges	לחץ, מדידי לחץ פנאומטיים	[-100 kPa to 0.2 kPa]	25 Pa	OIML R 101 DKD R 6-1	Vacuum: Relative pressure, Negative Precision Pressure Indicator DRUCK 605R
358	A	T			[-85 kPa to 0.2 kPa]	0.25 %OR + 100 Pa	CPI-510A	Automatic pressure calibration system “King” 3666
359	A	P,T			[0 to 1.25 kPa]	1 Pa		Relative pressure Precision Pressure Indicator DRUCK 605R
360	A	P			(2.3 kPa to 4.8 MPa)	0.016 %OR+ 14 Pa	CPI-510N	OR - Of Reading in Pa D.W.T RUSKA
361	A	T	(2.3 kPa to 68 MPa)	0.15 %OR + 35 Pa		Automatic pressure calibration system “King” 3666		
362	A	P	Pressure, Hydraulic Pressure Gauges	לחץ, מדידי לחץ הידראוליים	[0.62 MPa to 12.4 MPa]	0.015 %	OIML R 101 DKD R 6-1	D.W.T. PRESSURMENTS OR - Of Reading
363	A	P			(12.4 MPa to 34.5 MPa)	0.08 %	CPI-510C	D.W.T BARNET
364	A	P			(34.5 MPa to 206 MPa)	0.025 %		Automatic pressure calibration system “King” 3666
365	A	T			[1.25 kPa to 68 MPa]	0.15 %OR + 35 Pa		



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			
366	A	P	Temperature, Liquid in Glass	טמפרטורה, מדי חום נוזל בזכוכית	[- 80 °C to - 40 °C]	0.06 °C	ASTM-E-77	SPRT; Intelligent probe
367	A	P	Thermometers		(- 40 °C to 100 °C)	0.05 °C	CPI-541D	
368	A	P			(100 °C to 250 °C)	0.1 °C		
369	A	P	Temperature, Thermocouples, Base Metal	טמפרטורה, צמד תרמיים, מתכות בסיסיות	[-80 °C to 250 °C]	0.5 °C	ASTM-E-220	Platinum thermocouple Intelligent Probe, Liquid Bath, Dry Block, Furnace
370	A	P	(K, N, T...)		(250 °C to 419 °C)	0.7 °C		
371	A	P			(419 °C to 1084 °C)	0.8 °C	CPI-546G	
372	A	T			-80 °C to 419 °C	0.7 °C		
373	A	P	Temperature, Thermocouples, Noble	טמפרטורה, צמד תרמיים, מתכות אצילית	[0 °C to 419 °C]	0.6 °C	ASTM-E-220	
374	A	P	Metal (S, R.)		(419 °C to 1084 °C)	0.8 °C	CPI-546G	
375	A	T			0 °C to 419 °C	0.6 °C		
376	A	P	Temperature, Platinum Resistance	טמפרטורה, מדי חום התנגדות פלטינה	[- 80 °C to 100 °C]	0.05 °C	ASTM-E-644	
377	A	P	Thermometers		(100 °C to 250 °C)	0.1 °C	CPI-546F	
378	A	P			(250 °C to 550 °C)	0.2 °C		
379	A	T	Temperature, Platinum Resistance	טמפרטורה, גששי טמפרטורה התנגדות	[- 30 °C to 100 °C]	0.1 °C	ASTM-E-644	SPRT, Liquid bath, Dry block, Furnace
380	A	T	Thermometers		(100 °C to 250 °C)	0.15 °C	CPI-546F	
381	A	T			(250 °C to 550 °C)	0.25 °C		
382	A	P;T	Temperature, Electronic Thermometers including sensors	טמפרטורה, מדי טמפרטורה אלקטרוניים עם גששים	[- 80 °C to 600 °C]	As for sensors plus one significant digit or 0.5 scale division.	ASTM-E-644 ASTM-E-220 CPI-546F CPI-546G	SPRT, T/C-R
383	A	P;T	Temperature, Temperature indicators and simulators for	טמפרטורה, מדי ומדמי טמפרטורה עבור צמד תרמיים מתכות בסיסיות	[-200°C to -150 °C]	0.3 °C	EURAMET/cg-11	Calibration by means of electrical simulation Excluding CJ compensation
384	A	P;T	Base metal thermocouples		(-150 °C to 1370 °C)	0.15 °C	Manufacturer's Specifications	



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		
385	A	P;T		[-200 °C to -150 °C]	0.4 °C	CPI-590J	Including CJ compensation
386	A	P;T		(-150 °C to 1370 °C)	0.2 °C	CPI-541B	Including CJ compensation
387	A	P;T	Temperature, Temperature indicators and simulators for Noble metal thermocouples	[-50 °C to 0 °C]	0.4 °C	EURAMET/cg-11 Manufacturer's Specifications	Calibration by means of electrical simulation Excluding CJ compensation
388	A	P;T		(0 °C to 1768 °C)	0.2 °C		
389	A	P;T		[-50 °C to 0 °C]	0.7 °C	CPI-590J CPI-541B	Including CJ compensation Including CJ compensation
390	A	P;T		(0 °C to 1768 °C)	0.4 °C		
391	A	P;T	Temperature, Temperature Indicators and simulators for Resistance sensors	[-200 °C to 0 °C]	0.05 °C	EURAMET/cg-11 Manufacturer's Specifications CPI-590J CPI-541B	Calibration by means of electrical simulation
392	A	P;T		(0 °C to 650 °C)	0.1 °C		
393	A	P;T		(650 °C to 850 °C)	0.2 °C		
394	A	P	Temperature, Temperature Indicators and simulators Calibration of cold junction compensation for all kinds of thermocouples	20 °C to 26 °C	0.3 °C	EURAMET/cg-11/v.01 Manufacturer's Specifications CPI-590J CPI-541B	
395	A	P;T	Temperature Uniformity Test, Temperature Controlled Chambers,	[- 80 °C to 100 °C]	0.5 °C	AMS 2750E DKD-R5-7 EURAMET CG-20 CPI-546C	Thermocouples; Data logger
396	A	P;T		(100 °C to 300 °C)	0.8 °C		
397	A	P;T		(300 °C to 600 °C)	1.0 °C		
398	A	P;T		(600 °C to 1100 °C)	3.0 °C		



Item	Scope Type	Site	Measurand Instrument, Gauge	Range [Including margins] (Does not include margins)	Uncertainty of Measurement ¹	Reference Documents	Remarks
Calibration – Small (up to 2L) Volume Volumetric instruments					כיול – כיול מכשירים וולומטריים – נפחים קטנים עד 2 ליטר		
399	A	P	Volumetric apparatus	[1 µl to 10 µl]	0.06 µl	ISO 8655-1,2,3,6	Analytical Balance & water grade 3
400	A	P	Piston pipettes and burettes	(10 µl to 200 µl]	0.20 µl	ISO 4787	
401	A	P		(200 µl to 500 µl]	0.7 µl	CPM-201C	
402	A	P		(500 µl to 1000 µl]	2 µl	CPM-201B	
403	A	P		(1 ml to 10 ml]	15 µl		
404	A	P		(10 ml to 50 ml]	20 µl		
405	A	P	Volumetric instruments made from glass	[Up to 10 ml]	20 µl		
406	A	P	(flasks,cylinder,burette)	(10 ml to 50 ml]	40 µl		

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 %.



הרשות הלאומית להסמכת מעבדות
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