SWEDAC
Styrelsen för ackreditering och teknisk kontroll
Swedish Board for Accreditation and Conformity Assessment

Appendix 1

Date: 2021-09-01

Reference: 2021/637

Scope of accreditation

Calibration laboratory according to SS-EN ISO/IEC 17025:2018

RISE Research Institutes of Sweden AB | Borås | Accreditation number | 1002

Kontroll och kalibrering | *A002626-012*

Correction

for current decision dated 2021-04-28 in case 2021/637
Description: Inhouse method 2664, parameter Dew point and Frost point perfomed in field//Erik Lindell 2021-09-01

Electricity and Magnetism

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Capacitance	Inhouse method; KVf 20		Capacitance showing	0,22 to 3,2999 nF	0,39 % + 0,0078 nF		Yes	2	Yes	
			Capacitance showing	0,33 to 0,46999 mF	0,5 % + 160 nF		Yes	2	Yes	
			Capacitance showing	0,33 to 0,579999 µF	0,3 % + 0,16 nF		Yes	2	Yes	
			Capacitance showing	0,47 to 1,09999 mF	0,35 % + 780 nF		Yes	2	Yes	
			Capacitance showing	0,58 to 1,09999 µF	0,19 % + 0,78 nF		Yes	2	Yes	
			Capacitance showing	1,1 to 2,8 mF	0,39 % + 1,2 µF		Yes	2	Yes	
			Capacitance showing	1,1 to 3,29999 µF	0,31 % + 1,2 nF		Yes	2	Yes	
			Capacitance showing	11 to 32,9999 µF	0,31 % + 23 nF		Yes	2	Yes	
			Capacitance showing	11 to 32,9999 mF	0,58 % + 23 µF		Yes	2	Yes	
			Capacitance showing	110 to 280 µF	0,39 % + 120 nF		Yes	2	Yes	
			Capacitance showing	110 to 329,999 nF	0,19 % + 0,023 nF		Yes	2	Yes	
			Capacitance showing	2,800001 to 3,29999 mF	0,35 % + 2,3 µF		Yes	2	Yes	
			Capacitance showing	280,001 to 329,999 µF	0,35 % + 230 nF		Yes	2	Yes	
			Capacitance showing	3,3 to 10,9999 µF	0,19 % + 7,8 nF		Yes	2	Yes	

Electricity and Magnetism

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Capacitance	Inhouse method; KVf 20		Capacitance showing	3,3 to 109,999 nF	0,19 % + 0,0078 nF		Yes	2	Yes	
			Capacitance showing	3,3 to 4,6999 mF	0,5 % + 1,6 µF		Yes	2	Yes	
			Capacitance showing	33 to 110 mF	0,78 % + 47 µF		Yes	2	Yes	
			Capacitance showing	33 to 40,699 µF	0,5 % + 16 nF		Yes	2	Yes	
			Capacitance showing	4,7 to 10,9999 mF	0,35 % + 7,8 µF		Yes	2	Yes	
			Capacitance showing	40,7 to 109,999 µF	0,35 % + 78 nF		Yes	2	Yes	
Conductivity	Inhouse method; KVf 20		Conduction showing	0,9 to 2,99999 µS	0,0026 %		Yes	2	Yes	
			Conduction showing	2,5 to 2,99999 nS	0,4 %		Yes	2	Yes	
			Conduction showing	3 to 8,99999 nS	0,26 %		Yes	2	Yes	
			Conduction showing	30 to 89,999 nS	0,025 %		Yes	2	Yes	
			Conduction showing	300 to 899,99 nS	0,0054 %		Yes	2	Yes	
			Conduction showing	9 to 29,9999 nS	0,041 %		Yes	2	Yes	
			Conduction showing	90 to 299,99 nS	0,01 %		Yes	2	Yes	
Current	Inhouse method; KVf 20	AC	Current showing	0,33 to 1,09999 A	0,039 % ppm + 78 µA		Yes	2	Yes	45 Hz – 1 kHz
		AC	Current showing	0,33 to 2,49999 mA	0,078 % ppm + 0,12 µA		Yes	2	Yes	45 Hz – 1 kHz
		AC	Current showing	1,1 to 2,99999 A	0,047 % ppm + 78 µA		Yes	2	Yes	45 Hz – 1 kHz
		AC	Current showing	11 to 20 A	0,093 % ppm + 3900 µA		Yes	2	Yes	45 Hz – 100 Hz
		AC	Current showing	2,5 to 3,29999 mA	0,07 % ppm + 0,3 µA		Yes	2	Yes	45 Hz – 1 kHz
		AC	Current showing	20,001 to 29,999 A	0,3 % + 1,6 mA		Yes	2	Yes	45 Hz – 440 Hz, current coil

Electricity and Magnetism

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Current	Inhouse method; KVf 20	AC	Current showing	200,001 to 1000 A	0,3 % + 156 mA		Yes	2	Yes	45 Hz – 100 Hz, current coil
		AC	Current showing	29 to 329,99 µA	0,097 % ppm + 0,078 µA		Yes	2	Yes	45 Hz – 1 kHz
		AC	Current showing	3 to 10,9999 A	0,039 % ppm + 1550 µA		Yes	2	Yes	45 Hz – 100 Hz
		AC	Current showing	3,3 to 32,9999 mA	0,031 % ppm + 1,6 µA		Yes	2	Yes	45 Hz – 1 kHz
		AC	Current showing	30 to 32 A	0,3 % + 32 mA		Yes	2	Yes	45 Hz – 100 Hz, current coil
		AC	Current showing	32,001 to 200 A	0,3 % + 32 mA		Yes	2	Yes	45 Hz – 100 Hz, current coil
		AC	Current showing	33 to 329,999 mA	0,031 % ppm + 16 µA		Yes	2	Yes	45 Hz – 1 kHz
		DC	Current showing	+/-1,09999 A	155 ppm + 31 µA		Yes	2	Yes	
		DC	Current showing	+/-10,9999 A	390 ppm + 390 µA		Yes	2	Yes	
		DC	Current showing	+/-1000 A	0,26 % + 225 mA		Yes	2	Yes	Current coil
		DC	Current showing	+/-105 A	0,24 % + 3,9 mA		Yes	2	Yes	Current coil
		DC	Current showing	+/-109,999 A	0,24 + 3,9 mA		Yes	2	Yes	Current coil
		DC	Current showing	+/-17,3999 A	775 ppm + 580 µA		Yes	2	Yes	
		DC	Current showing	+/-189,999 µA	140 ppm + 0,011 µA		Yes	2	Yes	
		DC	Current showing	+/-2,99999 A	295 ppm + 31 µA		Yes	2	Yes	
		DC	Current showing	+/-20 A	550 ppm + 4500 µA		Yes	2	Yes	
		DC	Current showing	+/-200 A	0,26 % + 45 mA		Yes	2	Yes	Current coil
		DC	Current showing	+/-3,29999 mA	78 ppm + 0,038 µA		Yes	2	Yes	

Electricity and Magnetism

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Current	Inhouse method; KVf 20	DC	Current showing	+/-32 A	0,24 % + 3,9 mA		Yes	2	Yes	Current coil
		DC	Current showing	+/-32,9999 mA	78 ppm + 0,19 µA		Yes	2	Yes	
		DC	Current showing	+/-329,999 µA	120 ppm + 0,016 µA		Yes	2	Yes	
		DC	Current showing	+/-329,999 mA	78 ppm + 1,9 µA		Yes	2	Yes	
		DC	Current showing	+/-525 A	0,24 % + 20 mA		Yes	2	Yes	Current coil
		DC	Current showing	+/-549,999 A	0,24 % + 20 mA		Yes	2	Yes	Current coil
Resistance	Inhouse method; KVf 20	ESR	Resistance showing	0 ohm	0,00078 Ohm		Yes	2	Yes	
		ESR	Resistance showing	0,0011 to 10,999 Ohm	31 ppm + 0,00078 Ohm		Yes	2	Yes	
		ESR	Resistance showing	0,110 to 1,099999 kOhm	22 ppm + 0,0016 Ohm		Yes	2	Yes	
		ESR	Resistance showing	0,110 to 1,099999 MOhm	25 ppm + 1,6 Ohm		Yes	2	Yes	
		ESR	Resistance showing	1,1 to 10,99999 kOhm	22 ppm + 0,016 Ohm		Yes	2	Yes	
		ESR	Resistance showing	1.1 to 3,299999 MOhm	47 ppm + 23 Ohm		Yes	2	Yes	
		ESR	Resistance showing	11 to 109,9999 kOhm	22 ppm + 0,16 Ohm		Yes	2	Yes	
		ESR	Resistance showing	11 to 32,9999 Ohm	23 ppm + 0,0012 Ohm		Yes	2	Yes	
		ESR	Resistance showing	11 to 32,99999 MOhm	190 ppm + 1900 Ohm		Yes	2	Yes	
		ESR	Resistance showing	110 to 137 MOhm	2600 ppm + 40000 Ohm		Yes	2	Yes	
		ESR	Resistance showing	137,001 to 400 MOhm	2300 ppm + 78000 Ohm		Yes	2	Yes	

Electricity and Magnetism

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Resistance	Inhouse method; KVf 20	ESR	Resistance showing	3,3 to 10,99999 MOhm	100 ppm + 39 Ohm		Yes	2	Yes	
		ESR	Resistance showing	33 to 109,9999 MOhm	390 ppm + 2300 Ohm		Yes	2	Yes	
		ESR	Resistance showing	33 to 109,9999 Ohm	22 ppm + 0,0011 Ohm		Yes	2	Yes	
		ESR	Resistance showing	400,001 to 1100 MOhm	11600 ppm + 39000 Ohm		Yes	2	Yes	
Voltage	Inhouse method; KVf 20	AC	Voltage showing	0.33 to 3,29999 V	120 ppm + 47 µV		Yes	2	Yes	45 Hz – 10 kHz
		AC	Voltage showing	1,000 to 32,999 mV	120 ppm + 4,7 µV		Yes	2	Yes	45 Hz – 10 kHz
		AC	Voltage showing	3.3 to 32,9999 V	120 ppm + 470 µV		Yes	2	Yes	45 Hz – 10 kHz
		AC	Voltage showing	33 to 329,999 mV	110 ppm + 6,2 µV		Yes	2	Yes	45 Hz – 10 kHz
		AC	Voltage showing	33 to 329,999 V	150 ppm + 1550 µV		Yes	2	Yes	45 Hz – 1 kHz
		AC	Voltage showing	330 to 1050 V	190 ppm + 7800 µV		Yes	2	Yes	1 kHz – 5 kHz
		DC	Voltage showing	+/- 1050 V	14 ppm+ 1160 µV		Yes	2	Yes	
		DC	Voltage showing	+/- 3,299999 V	9 ppm + 1,6 µV		Yes	2	Yes	
		DC	Voltage showing	+/- 32,99999 V	9 ppm + 16 µV		Yes	2	Yes	
		DC	Voltage showing	+/- 329,9999 mV	16 ppm + 0,78 µV		Yes	2	Yes	
		DC	Voltage showing	+/- 329,9999 V	14 ppm + 116 µV		Yes	2	Yes	

Length related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Length	Inhouse method; KVf 30		dial guage	0 - 1	7 µm		Yes	2	Yes	
			Measuring gauge	0 - 30 mm	7 µm		Yes	2	Yes	

Length related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Length	Inhouse method; KVf 31		Micrometer	0 - 1000 mm	3 µm		Yes	2	Yes	
			Three point micrometer	6 - 150 mm	4 µm		Yes	2	Yes	
	Inhouse method; KVf 32		Calliper	0 - 1500 mm	20 µm		Yes	2	Yes	
	Inhouse method; KVj 62		Extensometer	0 - 60 mm	0,30 µm		Yes	2	Yes	

Mass related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Flow	Inhouse method; 2527	Gas flow	Gas flow meter	0,00001 – 120 g/s	0,9% of actual flow		Yes	2	Yes	
		Gas flow	Gas flow meter	0,12 – 2,9 kg/s	1,3-1,4% of actual flow		Yes	2	Yes	
	NT VVS 018	Airflow/Airspeed	Anemometer	0,1 – 0,5 m/s	0,02 m/s		Yes	2	No	
		Airflow/Airspeed	Anemometer	0,5 – 1,0 m/s	0,03 m/s		Yes	2	No	
		Airflow/Airspeed	Anemometer	1,0 – 4,0 m/s	2,9% of actual speed (m/s)		Yes	2	No	
		Airflow/Airspeed	Anemometer	4,0 – 35,0 m/s	3,7% of actual speed (m/s)		Yes	2	No	
Force	Inhouse method; KVj 60		Tensile testing machine	1N - 1MN	0,12 %		Yes	2	Yes	
			Tension and pressure testing machines	1N - 5MN	0,12 %		Yes	2	Yes	
	SS-EN ISO 7500-1		Tensile testing machine	1N - 1MN	0,12 %		Yes	2	Yes	
			Tension and pressure testing machines	1N - 5MN	0,12 %		Yes	2	Yes	
Impact testing	Inhouse method; KVj 61		Impact testing machine	1J - 200J	1 J	Indirekt	Yes	2	Yes	
Mass	Inhouse method; KVj 18		NAWI	0,1-1 g	2-3 µg	E1	Yes	2	Yes	

Mass related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Mass	Inhouse method; KVj 18		NAWI	0,5-1 kg	0,26-0,76 mg	E2	Yes	2	Yes	
			NAWI	100-200 g	17-30 µg	E1	Yes	2	Yes	
			NAWI	100-200 kg	0,58-1,2 g	F1	Yes	2	Yes	
			NAWI	10-100 g	6-17 µg	E1	Yes	2	Yes	
			NAWI	10-100 kg	0,017-0,58 g	F1	Yes	2	Yes	
			NAWI	10-100 mg	1-2 µg	E1	Yes	2	Yes	
			NAWI	1-10 g	3-6 µg	E1	Yes	2	Yes	
			NAWI	1-10 kg	0,76-6,2 mg	E2	Yes	2	Yes	
			NAWI	1-10 mg	1-1 µg	E1	Yes	2	Yes	
			NAWI	200-500 g	30-73 µg	E1	Yes	2	Yes	
	Inhouse method; KVj 19		Automatic weighing instuments	10000-20000 kg	2-4 kg	M2	Yes	2	Yes	
			Automatic weighing instuments	1000-5000 kg	0,2-1 kg	M2	Yes	2	Yes	
			Automatic weighing instuments	100-500 kg	9-41 g	M1	Yes	2	Yes	
			Automatic weighing instuments	1-100 kg	6-9 g	M1	Yes	2	Yes	
			Automatic weighing instuments	5000-10000 kg	1-2 kg	M2	Yes	2	Yes	
			Automatic weighing instuments	500-1000 kg	0,1-0,2 kg	M2	Yes	2	Yes	
	Inhouse method; KVj 41		Weight	100 kg	3 g	M1 – M2	Yes	2	Yes	
			Weight	1000 kg	30 g	M1 – M2	Yes	2	Yes	
			Weight	500 kg	10 g	M1 – M2	Yes	2	Yes	

Mass related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Mass	Inhouse method; KVj 44		NAWI	0,5-1000 kg	0,3-82 g	M1	Yes	2	Yes	
			NAWI	100-300 ton	35-81 kg	M2	Yes	2	Yes	
			NAWI	10-100 ton	3,5-35 kg	M2	Yes	2	Yes	
			NAWI	1-10 ton	0,35-3,5 kg	M2	Yes	2	Yes	
	Inhouse method; KVj 6		Weight	1 g	0,3 mg	M1	Yes	2	Yes	
			Weight	1 kg	16 mg	M1	Yes	2	Yes	
			Weight	1 mg	0,06 mg	M1	Yes	2	Yes	
			Weight	10 g	0,6 mg	M1	Yes	2	Yes	
			Weight	10 kg	160 mg	M1	Yes	2	Yes	
			Weight	10 mg	0,08 mg	M1	Yes	2	Yes	
			Weight	100 g	1,6 mg	M1	Yes	2	Yes	
			Weight	100 mg	0,16 mg	M1	Yes	2	Yes	
			Weight	2 g	0,4 mg	M1	Yes	2	Yes	
			Weight	2 kg	30 mg	M1	Yes	2	Yes	
			Weight	2 mg	0,06 mg	M1	Yes	2	Yes	
			Weight	20 g	0,8 mg	M1	Yes	2	Yes	
			Weight	20 kg	300 mg	M1	Yes	2	Yes	
			Weight	20 mg	0,10 mg	M1	Yes	2	Yes	
			Weight	200 g	3,0 mg	M1	Yes	2	Yes	
			Weight	200 mg	0,20 mg	M1	Yes	2	Yes	
			Weight	5 g	0,5 mg	M1	Yes	2	Yes	
			Weight	5 kg	80 mg	M1	Yes	2	Yes	

Mass related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Mass	Inhouse method; KVj 6		Weight	5 mg	0,06 mg	M1	Yes	2	Yes	
			Weight	50 g	1,0 mg	M1	Yes	2	Yes	
			Weight	50 kg	800 mg	M1	Yes	2	Yes	
			Weight	50 mg	0,12 mg	M1	Yes	2	Yes	
			Weight	500 g	8,0 mg	M1	Yes	2	Yes	
			Weight	500 mg	0,25 mg	M1	Yes	2	Yes	
	Inhouse method; KVj 7		Weight	1 g	0,10 mg	M1	Yes	2	No	
			Weight	1 kg	5,0 mg	M1	Yes	2	No	
			Weight	1 mg	0,02 mg	M1	Yes	2	No	
			Weight	10 g	0,20 mg	M1	Yes	2	No	
			Weight	10 kg	50 mg	M1	Yes	2	No	
			Weight	10 mg	0,03 mg	M1	Yes	2	No	
			Weight	100 g	0,5 mg	M1	Yes	2	No	
			Weight	100 mg	0,05 mg	M1	Yes	2	No	
			Weight	2 g	0,12 mg	M1	Yes	2	No	
			Weight	2 kg	10 mg	M1	Yes	2	No	
			Weight	2 mg	0,02 mg	M1	Yes	2	No	
			Weight	20 g	0,25 mg	M1	Yes	2	No	
			Weight	20 kg	100 mg	M1	Yes	2	No	
			Weight	20 mg	0,03 mg	M1	Yes	2	No	
			Weight	200 g	1,0 mg	M1	Yes	2	No	
			Weight	200 mg	0,06 mg	M1	Yes	2	No	

Mass related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Mass	Inhouse method; KVj 7		Weight	5 g	0,16 mg	M1	Yes	2	No	
			Weight	5 kg	25 mg	M1	Yes	2	No	
			Weight	5 mg	0,02 mg	M1	Yes	2	No	
			Weight	50 g	0,3 mg	M1	Yes	2	No	
			Weight	50 kg	250 mg	M1	Yes	2	No	
			Weight	50 mg	0,04 mg	M1	Yes	2	No	
			Weight	500 g	2,5 mg	M1	Yes	2	No	
			Weight	500 mg	0,08 mg	M1	Yes	2	No	
	Inhouse method; KVj 70		Vehicle gas dispenser	< 18,5 kg/min	0,55 %	Mass flow meter	Yes	2	Yes	
	Inhouse method; KVj 9		Automatic weighing instuments	100-500 kg	6-60 g	M1	Yes	2	Yes	
			Automatic weighing instuments	10-100 kg	0,6-6 g	F1	Yes	2	Yes	
			Automatic weighing instuments	1-10 kg	6-60 mg	E2	Yes	2	Yes	
			Automatic weighing instuments	1-1000 g	0,6-6 mg	E2	Yes	2	Yes	
Pressure	Inhouse method; 3635	Gauge pressure	Press showing measuring instrument	±20 kPa	0.54% of actual pressure, but not less than 0.7 Pa		Yes	2	Yes	
		Gauge pressure	Press showing measuring instrument	±23000 Pa	0.2% of actual pressure, but not less than 0.3 Pa		Yes	2	No	
	Inhouse method; KVf 34	Absolute pressure	Press showing measuring instrument	900-1100 mbar	1,1 hPa		Yes	2	Yes	Gas
		Gauge pressure	Press showing measuring instrument	> 2 MPa - 7 MPa	1,4 kPa		Yes	2	Yes	Gas

Mass related quantities

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Pressure	Inhouse method; KVf 34	Gauge pressure	Press showing measuring instrument	> 20 MPa - 70 MPa	50 kPa		Yes	2	Yes	Vatten
		Gauge pressure	Press showing measuring instrument	> 200 kPa - 2 MPa	0,4 kPa		Yes	2	Yes	Gas
		Gauge pressure	Press showing measuring instrument	> 7 MPa - 20 MPa	4 kPa		Yes	2	Yes	Gas
		Gauge pressure	Press showing measuring instrument	-95 kPa - 200 kPa	0,04 kPa		Yes	2	Yes	Gas
Torque	Inhouse method; KVf 35		Torque wrench	> 10 Nm – 60 Nm	0,18 Nm		Yes	2	Yes	
			Torque wrench	> 5 Nm – 10 Nm	0,09 Nm		Yes	2	Yes	
			Torque wrench	> 500 Nm – 1500 Nm	10 Nm		Yes	2	Yes	
			Torque wrench	> 60 Nm –500 Nm	1,9 Nm		Yes	2	Yes	
			Torque wrench	0,5 Nm - 5 Nm	0,011 Nm		Yes	2	Yes	
Volume	Inhouse method; KVj 73		Volume meters	< 60 l/min	0,11 %		Yes	2	Yes	10L and 20L handheld standard
			Volume meters	< 60 l/min	0,11 %		Yes	2	Yes	10L and 20L permanently mounted standard
			Volume meters	< 60 l/min	0,12 %		Yes	2	Yes	5L handheld
			Volume meters	> 60 l/min	0,13 %		Yes	2	Yes	From 50L to 1000L permanently mounted standard

Temperature

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Humidity	**Inhouse method; 2664**	**Dew point**	**Humidity meter**	**-17 - +62°C**	**0,16 °C**		**Yes**	**2**	**Yes**	
		Dew point	**Humidity meter**	**-55 - +2°C**	**0,12 °C**		**Yes**	**2**	**Yes**	
		Frost point	**Humidity meter**	**-15 - +0°C**	**0,16 °C**		**Yes**	**2**	**Yes**	
		Frost point	**Humidity meter**	**-50 - +0°C**	**0,12 °C**		**Yes**	**2**	**Yes**	
		Relative humidity	Humidity meter	1 – 95 %-rh	1.0 %-rh + 1.3 % of true relative vapor content, but at least 1.3 %-rh		Yes	2	Yes	
		Relative humidity	Humidity meter	1 – 95 %-rh	1.43% of true relative vapor content, but at least 0.25%-rh		Yes	2	No	
Temperature	Inhouse method; 2664		Temperature sensors	-15 - +62°C	0,15 °C		Yes	2	No	
			Temperature sensors	-20 - +80°C	0.3°C + 1.0% of actual temperature difference against ambient		Yes	2	No	
	Inhouse method; KVf 25		Contact thermometer	200 °C - 600 °C	2 °C		Yes	2	Yes	Nordtest-method NT VVS 102 & 103
			Contact thermometer	25 °C – 95 °C	0,07 °C		Yes	2	Yes	Nordtest-method NT VVS 102 & 103
			Contact thermometer	-30 °C - 25 °C	0,13 °C		Yes	2	Yes	Nordtest-method NT VVS 102 & 103
			Contact thermometer	95 °C - 200 °C	0,09 °C		Yes	2	Yes	Nordtest-method NT VVS 102 & 103
	Inhouse method; KVf 26		Pyrometer	-15 °C - 120 °C	2,7 °C		Yes	2	Yes	4180, 4181 Precision infrared Calibrator Users Guide.

Temperature

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Temperature	Inhouse method; KVf 27		Devices for thermocouple	0,0 °C to 1000,0 °C	0,12 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	0,1 °C to 100,0 °C	0,09 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	0,1 °C to 100,0 °C	0,29 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	0,1 °C to 100,0 °C	0,30 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	0,1 °C to 200,0 °C	0,07 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	0,1 °C to 200,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	0,1 °C to 600,0 °C	0,06 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	100,1 °C to 400,0 °C	0,22 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	100,1 °C to 800,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1000,1 °C to 1600,0 °C	0,15 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1000,1 °C to 1600,0 °C	0,17 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1000,1 °C to 1800,0 °C	0,18 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1550,1 °C to 1820,0 °C	0,17 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1600,1 °C to 1767,0 °C	0,18 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1600,1 °C to 1767,0 °C	0,20 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	1800,1 °C to 2000,0 °C	0,20 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-199,9 °C to -100,0 °C	0,09 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-199,9 °C to -100,0 °C	0,12 °C		Yes	2	Yes	IEC-584

Temperature

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Temperature	Inhouse method; KVf 27		Devices for thermocouple	-199,9 °C to -100,0 °C	0,18 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-200,0 °C to 0,0 °C	0,12 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-200,0 °C to -100,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	200,1 °C to 400,0 °C	0,07 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	200,1 °C to 600,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	2000,1 °C to 2316,0 °C	0,28 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-210,0 °C to -100,0 °C	0,11 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-24,9 °C to 0,0 °C	0,33 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-24,9 °C to 0,0 °C	0,35 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-250,0 °C to -200,0 °C	0,19 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-250,0 °C to -200,0 °C	0,27 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-250,0 °C to -200,0 °C	0,36 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-250,0 °C to -200,0 °C	0,57 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	400,1 °C to 600,0 °C	0,17 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	400,1 °C to 600,0 °C	0,18 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-50,0 °C to -25,0 °C	0,40 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-50,0 °C to -25,0 °C	0,43 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	500,1 °C to 800,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	600,0 °C to 800,0°C	0,27 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	600,1 °C to 1000,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	600,1 °C to 1000,0 °C	0,16 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	600,1 °C to 1000,0 °C	0,17 °C		Yes	2	Yes	IEC-584

Temperature

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Temperature	Inhouse method; KVf 27		Devices for thermocouple	800,1 °C to 1200,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	800,1 °C to 1300,0 °C	0,09 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	800,1 °C to 1372,0 °C	0,10 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	800,1 °C to 1550,0 °C	0,22 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-99,9 °C to 0,0 °C	0,07 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-99,9 °C to 0,0 °C	0,09 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-99,9 °C to 500,0 °C	0,08 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-99,9 °C to 800,0 °C	0,07 °C		Yes	2	Yes	IEC-584
			Devices for thermocouple	-99,9 °C to 900,0 °C	0,07 °C		Yes	2	Yes	IEC-584
	Inhouse method; KVf 28		Climate cabinet	-30 °C to 200 °C	0,5 °C		Yes	2	Yes	IEC-584

Time and Frequence

Technology area	*Method*	*Parameter*	*Material*	*Measure*	*Best measuring ability (CMC) +/-*	*Technique*	*Flex*	*Type of flex*	*Field*	*Note*
Frequency	Inhouse method; KVf 20		Frequency showing	0,01 to 0,49 Hz	1,9 ppm + 0,0039 Hz		Yes	2	Yes	
			Frequency showing	0,5 Hz to 10 MHz	0,25 ppm		Yes	2	Yes	
		Duty cycles	Pulse showing	1 to 99 %	0,01 %		Yes	2	Yes	

Calibration and measurement capability, CMC, is the smallest uncertainty the calibration laboratory can provide, expressed as the expanded uncertainty having a coverage probability of approximately 95%.

Changes in the scope of accreditation are in bold.

The scope of accreditation is flexible as specified in this decision. The accredited body must always retain a current list of the scope for which it is accredited.

Type of flexible scope
1: - Introduce new version of standard method and make editorial changes to non-standard method
2: - Introduce new version of standard method and make editorial changes to non-standard method - Introduce new version and modifications of non-standard method. The procedure must be equivalent