

Discipline  Function		NEBB Instrument Master List (Effective January 1, 2026)														<div><div>BET</div><div>BCT</div><div>CBT</div><div>PBT</div><div>RCx</div><div>Sound</div><div>Vibration</div></div>										Notes	Calibration Requirements												
			RANGE				ACCURACY				RESOLUTION																												
Air	Air Pressure		0	in wg	to	10	in wg		2%	of reading	±	0.001	in wg	0.001	in wg	<	1	in wg	x	x	x		x	x			12 Months												
			0	Pa	to	2500	Pa		2%	of reading	±	0.25	Pa	0.10	Pa	<	250	Pa																					
														1.0	Pa	>	250	Pa																					
	Air Velocity Instrument for Pitot Traverse		100	fpm	to	3500	fpm	±	5%	of reading	±	7	fpm	1	fpm					x	x	x		x	x			12 Months											
			0.50	m/s	to	20	m/s	±	5%	of reading	±	0.04	m/s	0.01	m/s																								
FHT Air Velocity (Thermal Anemometer)		25	fpm	to	2500	fpm	±	3%	of reading	±	3	fpm	1	fpm							x						12 Months												
		0.10	m/s	to	12.7	m/s	±	3%	of reading	±	0.02	m/s	0.01	m/s																									
Digital Direct Reading Hood		100	cfm	to	2000	cfm	±	5%	of reading	±	7	cfm	1	cfm					x	x		x	x			12 Months													
		50	l/s	to	944	l/s	±	5%	of reading	±	4	l/s	1	l/s																									
Temperature	Air Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F				x	x		x	x			12 Months													
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C																								
	Immersion Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F				x			x	x			12 Months													
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C																								
Humidity	Humidity Meter with detachable probe		10	% RH	to	90	% RH	±	3%	RH				1%				x			x		x			12 Months													
Electrical	Amperage Measurement		0.1	AC Ampere	to	100	AC Amperes	±	2%	of reading	±	5	digits	0.1	AC Ampere				x			x	x			12 Months													
	Voltage Meter - True RMS		1	VAC	to	600	VAC	±	2%	of reading	±	5	digits	1	Volt																		12 Months						
Rotation	Rotation Measurement		60	rpm	to	5000	rpm	±	2%	of reading	±	2	rpm	1	rpm				x			x		x			12 Months												
Hydronic	Pressure Measurement		0.4	psi	to	200	psi	±	2%	of reading	±	1	psi	0.1	psi				x			x	x			12 Months													
			3	kPa	to	1400	kPa	±	2%	of reading	±	7	kPa	1.0	kPa																								
	Δ Pressure measurement		0.4	psi	to	75	psi	±	2%	of reading	±	0.5	psi	0.01	psi				x			x	x			12 Months													
			3	kPa	to	500	kPa	±	2%	of reading	±	3.5	kPa	0.1	kPa																								
RCx Instruments	Receptacle Circuit Tester		125	VAC				Not Applicable				Not Applicable										x						Not Required											
	Voltage Detector		50	VAC	to	1000	VAC	Not Applicable				Not Applicable										x						Not Required											
	Light Level Measurement		0	FC	to	4000	FC	±	3%	of reading	+	5%	full scale	0.1	FC							x				Per Manufacturer's Requirements													
	0	lx	to	40000	lx	±	3%	of reading	+	5%	full scale	1.0	lx																										
BET / RCx Instruments	Temp Documentation Thermal Camera		32	°F	to	212	°F	±	3%		or	5.5	°F	0.1 @ 86 °F	&	160 x 120		x			x				*8	Per Manufacturer's Requirements													
			0	°C	to	100	°C	±	3%		or	3	°C	0.1 @ 30 °C	&	160 x 120																							

Discipline  Function		NEBB Instrument Master List (Effective January 1, 2026)														BEI RCx CPT PII RCx Sound TdB Vibration																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Data Loggers	Carbon Dioxide CO <sub>2</sub>		0	ppm	to	2500	ppm	±	5%	of reading	±	50	ppm	1	ppm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

Discipline  Function		NEBB Instrument Master List (Effective January 1, 2026)											<div><div>BET</div><div>BCE</div><div>CPT</div><div>BCe</div><div>PSI</div><div>Sound</div><div>Vibration</div></div>										Notes	Calibration Requirements							
			RANGE				ACCURACY				RESOLUTION																				
CPT Option 1	Aerosol Photometer	CHOOSE ONLY 1 OF THE 2 OPTIONS	The instrument shall have a threshold sensitivity of 0.01%-100% of the challenge aerosol particles and be capable of measuring concentrations with a minimum range from 10 to 90 micrograms/liter. Sample flow rate shall be 28.3 L/min (1 cfm). Readout shall be linear with an accuracy of 1% of full scale of the selected range. ± 2% of reading with a flow rate of 28.3 L/min (1 cfm).													x										*1 & *7	12 Months or 400 operating hours				
	Pneumatic Aerosol Generator		A device that can aerosolize oil medium to serve as an artificial challenge for filter integrity testing of systems under 3,000 cfm, typically Laskin nozzle(s) type, atomizer, etc.													x										*1	Not Required				
	Thermal Aerosol Generator		A device that can aerosolize oil medium to serve as an artificial challenge for filter integrity testing of systems of 3,000 to 60,000 cfm													x										*1	Not Required				
CPT Option 2	Optical Particle Counter for Scan Test		A particle counter should have at least a 1.0 cfm flow rate with a threshold sensitivity of at least 0.3µm. The counter must have an audible alarm for every particle that is counted. The particle counter shall have a continuous counting mode or a sample time that exceeds the time required to completely scan the area of the filter under test. This counter may also be used for Cleanliness Classification above.													x										*1 & *7	12 Months				
	Diluter		A device used with the scanning particle counter to sample the aerosol challenge upstream of a filter under test. The dilution ratio should be between 300 – 1,000:1. The resulting counts after dilution should not exceed 100,000 particles.													x										*1	12 Months				
	Aerosol Generator		A device that can aerosolize oil or microsphere medium to serve as an artificial challenge for filter integrity testing.													x										*1	Not Required				
FHT Instruments	Tracer Gas Detector		Minimum detection range: 0.01 PPM. Minimum response time: 1 second. The units shall be configured to measure sulfur hexafluoride (SF6), or other approved tracer gas, and display in concentration measurement units. (PPM)				±	10%	of reading	or	0.025	ppm	0.01	ppm				x									12 Months				
			whichever is greater															x													
	Detection Calibrator		Device used to calibrate the detection instrument in accordance with the manufacturer's specifications.				Not Applicable				Not Applicable							x									12 Months When Required				
	Local Challenge Source		Device that can generate a small relatively neutrally buoyant smoke, discharging with minimal velocity.				Not Applicable				Not Applicable							x										Not Required			
	Large Challenge Source		Device that can generate a large relatively neutrally buoyant smoke, discharging with minimal velocity.				Not Applicable				Not Applicable							x										Not Required			
	Ejector w/critical orifice		Shall conform to the requirements as indicated in the current edition of NEBB FHT PS. See appendix D for instrument specifications.				Not Applicable				Not Applicable							x										Not Required			
	Orifice Calibrator	Flow Meter	0	l/m	to	10	l/m	±	3%				0.1	l/m					x								Calibrate to appropriate tracer gas				
		Mechanical Device	0	l/m	to	15	l/m	±	0.1	l/m			0.1	l/m					x							*2	12 Months				
	Tracer Gas		Sulfur Hexafluoride Commercial grade (Minimum purity of 99%) or approved replacement gas.				Not Applicable				Not Applicable							x									SDS Required				
	Mannequin		A three dimensional mannequin (torso) with arms and shall be of reasonable human proportions and be clothed with a lab coat. The height must be adjustable to meet the height requirements of the various hood configurations; i.e. standard bench hood, ADA height, floor mounted, etc. Probe shall be placed in the normal breathing zone based on the various heights.				Not Applicable				Not Applicable							x									Not Required				
BET Instruments	Digital pressure flow measurement system		Not Applicable				±	4%	of reading					0.1 Pa (0.0004 inwc, 0.002 psf)				x									Per Manufacturer's Requirements				

Discipline  Function		NEBB Instrument Master List (Effective January 1, 2026)				BETRCxBET									
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Discipline  Function		BET Required Instrumentation (Effective January 1, 2026)																		
			RANGE				ACCURACY				RESOLUTION				Notes	Calibration Requirements				
Air	Air Pressure		0	in wg	to	10	in wg		2%	of reading	±	0.001	in wg	0.001	in wg	<	1	in wg		12 Months
														0.01	in wg	>	1	in wg		
			0	Pa	to	2500	Pa		2%	of reading	±	0.25	Pa	0.10	Pa	<	250	Pa		
														1	Pa	>	250	Pa		
	Air Velocity Instrument for Pitot Traverse		100	fpm	to	3500	fpm	±	5%	of reading	±	7	fpm	1	fpm					12 Months
			0.50	m/s	to	20	m/s	±	5%	of reading	±	0.04	m/s	0.01	m/s					
Temperature	Air Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F					12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C					
BET / RCx Instruments	Temp Documentation Thermal Camera		32	°F	to	212	°F	±	3%		or	5.5	°F	0.1 @ 86 °F		&	160 x 120			Per Manufacturer's Requirements
			0	°C	to	100	°C	±	3%		or	3	°C	0.1 @ 30 °C		&	160 x 120			
BET Instruments	Digital pressure flow measurement system		Not Applicable					±	4%	of reading				0.1 Pa (0.0004 inwc, 0.002 psf)					Per Manufacturer's Requirements	

#### NOTES

- \*1 CPT Option - choose only Option 1 OR Option 2 - along with required instrument for CPT certification (All instruments in any of the chosen is required)
- \*2 FHT Orifice Calibrator - Choose only one.
- \*3 Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)
- \*4 Firms may own or rent vibration equipment instrumentation for vibration certification
- \*5 Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced
- \*6 Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.
- \*7 Calibrated per Industry/Manufacturer standards.
- \*8 Firms may own or rent Temp Documentation Thermal Camera for RCx. BET Temp Documentation Thermal Camera must be owned.
- \*9 Sound level meters with vibration integrators are *NOT* acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.
- \*10 Vibration meters, which *ONLY* acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation. These types of meters may only be used if the contract documents specifically allow for their usage.

**General Note:** Some local jurisdictions require qualified electrician for any electrical readings

**Calibration Requirement:** Instruments require a 3-point calibration, traceable to National Institute of Standards and Technology (NIST) or National Metrology Institute (NMI) unless otherwise noted.

Discipline  Function		BSC Required Instrumentation (Effective January 1, 2026)																			
			RANGE				ACCURACY				RESOLUTION				Notes	Calibration Requirements					
Air	Air Pressure		0	in wg	to	10	in wg		2%	of reading	±	0.001	in wg	0.001 0.01	in wg in wg	< >	1 1	in wg in wg		12 Months	
			0	Pa	to	2500	Pa		2%	of reading	±	0.25	Pa	0.10 1	Pa Pa	< >	250 250	Pa Pa			
	Air Velocity Instrument for Pitot Traverse		100	fpm	to	3500	fpm	±	5%	of reading	±	7	fpm	1	fpm						12 Months
			0.50	m/s	to	20	m/s	±	5%	of reading	±	0.04	m/s	0.01	m/s						
	Digital Direct Reading Hood		100	cfm	to	2000	cfm	±	5%	of reading	±	7	cfm	1	cfm						12 Months
			50	l/s	to	944	l/s	±	5%	of reading	±	4	l/s	1	l/s						
Temperature	Air Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F						12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C						
	Immersion Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F						12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C						
Humidity	Humidity Meter with detachable probe		10	% RH	to	90	% RH		3%	RH				1%						12 Months	
Electrical	Amperage Measurement		0.1	AC Ampere	to	100	AC Amperes		2%	of reading	±	5	digits	0.1	AC Ampere					12 Months	
	Voltage Meter - True RMS		1	VAC	to	600	VAC		2%	of reading	±	5	digits	1	Volt					12 Months	
Rotation	Rotation Measurement		60	rpm	to	5000	rpm		2%	of reading	±	2	rpm	1	rpm					12 Months	
Hydronic	Pressure Measurement		0.4	psi	to	200	psi		2%	of reading	±	1	psi	0.1	psi					12 Months	
			3	kPa	to	1400	kPa		2%	of reading	±	7	kPa	1	kPa						
	Δ Pressure measurement		0.4	psi	to	75	psi		2%	of reading	±	0.5	psi	0.01	psi					12 Months	
			3	kPa	to	500	kPa		2%	of reading	±	3.5	kPa	0.1	kPa						

#### NOTES

- \*1 CPT Option - choose only Option 1 OR Option 2 - along with required instrument for CPT certification (All instruments in any of the chosen is required)
- \*2 FHT Orifice Calibrator - Choose only one.
- \*3 Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)
- \*4 Firms may own or rent vibration equipment instrumentation for vibration certification
- \*5 Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced
- \*6 Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.
- \*7 Calibrated per Industry/Manufacturer standards.
- \*8 Firms may own or rent Temp Documentation Thermal Camera for RCx. BET Temp Documentation Thermal Camera must be owned.
- \*9 Sound level meters with vibration integrators are *NOT* acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.
- \*10 Vibration meters, which *ONLY* acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation. These types of meters may only be used if the contract documents specifically allow for their usage.

**General Note:** Some local jurisdictions require qualified electrician for any electrical readings

<div>Discipline</div> <div>Function</div>	BSC Required Instrumentation (Effective January 1, 2026)					
		RANGE	ACCURACY	RESOLUTION	Notes	Calibration Requirements
Calibration Requirement: Instruments require a 3-point calibration, traceable to National Institute of Standards and Technology (NIST) or National Metrology Institute (NMI) unless otherwise noted.						

Discipline  Function		CPT Required Instrumentation (Effective January 1, 2026)																		
		RANGE						ACCURACY						RESOLUTION						Notes
Air	Air Pressure		0	in wg	to	10	in wg		2%	of reading	±	0.001	in wg	0.001	in wg	<	1	in wg		12 Months
			0	Pa	to	2500	Pa		2%	of reading	±	0.25	Pa	0.10	Pa	<	250	Pa		
													1	Pa	>	250	Pa			
	Air Velocity Instrument for Pitot Traverse		100	fpm	to	3500	fpm	±	5%	of reading	±	7	fpm	1	fpm					12 Months
			0.50	m/s	to	20	m/s	±	5%	of reading	±	0.04	m/s	0.01	m/s					
	Digital Direct Reading Hood		100	cfm	to	2000	cfm	±	5%	of reading	±	7	cfm	1	cfm					12 Months
		50	l/s	to	944	l/s	±	5%	of reading	±	4	l/s	1	l/s						
CPT Instruments	Particle Counter	A light scattering instrument with display or recording means to count and size discrete particles in air, as defined by ASTM F50-07. Instruments of this type shall provide for a minimum sampling flow rate of 28.3 L/min (1.0 cfm) and a threshold size discrimination of a minimum of 0.3 micrometer in size.																*7	12 Months	
CPT Option 1	Aerosol Photometer	CHOOSE ONLY 1 OF THE 2 OPTIONS	The instrument shall have a threshold sensitivity of 0.01%-100% of the challenge aerosol particles and be capable of measuring concentrations with a minimum range from 10 to 90 micrograms/liter. Sample flow rate shall be 28.3 L/min (1 cfm). Readout shall be linear with an accuracy of 1% of full scale of the selected range. ± 2% of reading with a flow rate of 28.3 L/min (1 cfm).																*1 & *7	12 Months or 400 operating hours
	Pneumatic Aerosol Generator		A device that can aerosolize oil medium to serve as an artificial challenge for filter integrity testing of systems under 3,000 cfm, typically Laskin nozzle(s) type, atomizer, etc.																*1	Not Required
	Thermal Aerosol Generator		A device that can aerosolize oil medium to serve as an artificial challenge for filter integrity testing of systems of 3,000 to 60,000 cfm																*1	Not Required
CPT Option 2	Optical Particle Counter for Scan Test		A particle counter should have at least a 1.0 cfm flow rate with a threshold sensitivity of at least 0.3µm. The counter must have an audible alarm for every particle that is counted. The particle counter shall have a continuous counting mode or a sample time that exceeds the time required to completely scan the area of the filter under test. This counter may also be used for Cleanliness Classification above.																*1 & *7	12 Months
	Diluter		A device used with the scanning particle counter to sample the aerosol challenge upstream of a filter under test. The dilution ratio should be between 300 – 1,000:1. The resulting counts after dilution should not exceed 100,000 particles.																*1	12 Months
	Aerosol Generator		A device that can aerosolize oil or microsphere medium to serve as an artificial challenge for filter integrity testing.																*1	Not Required
NOTES																				
<div><div>*1</div><div>CPT Option - choose only Option 1 OR Option 2 - along with required instrument for CPT certification (All instruments in any of the chosen is required)</div><div>*2</div><div>FHT Orifice Calibrator - Choose only one.</div><div>*3</div><div>Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)</div><div>*4</div><div>Firms may own or rent vibration equipment instrumentation for vibration certification</div><div>*5</div><div>Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced</div><div>*6</div><div>Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.</div><div>*7</div><div>Calibrated per Industry/Manufacturer standards.</div><div>*8</div><div>Firms may own or rent Temp Documentation Thermal Camera for RCx. BET Temp Documentation Thermal Camera must be owned.</div><div>*9</div><div>Sound level meters with vibration integrators are <i>NOT</i> acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.</div><div>*10</div><div>Vibration meters, which ONLY acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation. These types of meters may only be used if the contract documents specifically allow for their usage.</div></div>																				



<div>Discipline</div> <div>Function</div>	CPT Required Instrumentation (Effective January 1, 2026)					
		RANGE	ACCURACY	RESOLUTION	Notes	Calibration Requirements
<div>General Note:</div> <div>Some local jurisdictions require qualified electrician for any electrical readings</div>						
<div>Calibration Requirement:</div> <div>Instruments require a 3-point calibration, traceable to National Institute of Standards and Technology (NIST) or National Metrology Institute (NMI) unless otherwise noted.</div>						

Discipline  Function		FHT Required Instrumentation (Effective January 1, 2026)																			
			RANGE					ACCURACY					RESOLUTION					Notes	Calibration Requirements		
Air	FHT Air Velocity (Thermal Anemometer)		25	fpm	to	2500	fpm	±	3%	of reading	±	3	fpm	1	fpm						12 Months
			0.10	m/s	to	12.7	m/s	±	3%	of reading	±	0.02	m/s	0.01	m/s						
FHT Instruments	Tracer Gas Detector		Minimum detection range: 0.01 PPM. Minimum response time: 1 second. The units shall be configured to measure sulfur hexafluoride (SF6), or other approved tracer gas, and display in concentration measurement units. (PPM)					±	10%	of reading	or	0.025	ppm	0.01	ppm						12 Months
	Detection Calibrator		Device used to calibrate the detection instrument in accordance with the manufacturer's specifications.					Not Applicable					Not Applicable						12 Months When Required		
	Local Challenge Source		Device that can generate a small relatively neutrally buoyant smoke, discharging with minimal velocity.					Not Applicable					Not Applicable						Not Required		
	Large Challenge Source		Device that can generate a large relatively neutrally buoyant smoke, discharging with minimal velocity.					Not Applicable					Not Applicable						Not Required		
	Ejector w/critical orifice		Shall conform to the requirements as indicated in the current edition of NEBB FHT PS. See appendix D for instrument specifications.					Not Applicable					Not Applicable						Not Required		
	Orifice Calibrator	Flow Meter	0	l/m	to	10	l/m	±	3%					0.1	l/m				*2	Calibrate to appropriate tracer gas	
		Mechanical Device	0	l/m	to	15	l/m	±	0.1	l/m				0.1	l/m					12 Months	
	Tracer Gas		Sulfur Hexafluoride Commercial grade (Minimum purity of 99%) or approved replacement gas.					Not Applicable					Not Applicable						SDS Required		
Mannequin		A three dimensional mannequin (torso) with arms and shall be of reasonable human proportions and be clothed with a lab coat. The height must be adjustable to meet the height requirements of the various hood configurations; i.e. standard bench hood, ADA height, floor mounted, etc. Probe shall be placed in the normal breathing zone based on the various heights.										Not Applicable						Not Required			

#### NOTES

- \*1 CPT Option - choose only Option 1 OR Option 2 - along with required instrument for CPT certification (All instruments in any of the chosen is required)
- \*2 FHT Orifice Calibrator - Choose only one.
- \*3 Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)
- \*4 Firms may own or rent vibration equipment instrumentation for vibration certification
- \*5 Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced
- \*6 Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.
- \*7 Calibrated per Industry/Manufacturer standards.
- \*8 Firms may own or rent Temp Documentation Thermal Camera for RCx. BET Temp Documentation Thermal Camera must be owned.
- \*9 Sound level meters with vibration integrators are NOT acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.
- \*10 Vibration meters, which ONLY acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation. These types of meters may only be used if the contract documents specifically allow for their usage.

**General Note:** Some local jurisdictions require qualified electrician for any electrical readings

<div>Discipline</div> <div>Function</div>	FHT Required Instrumentation (Effective January 1, 2026)					
		RANGE	ACCURACY	RESOLUTION	Notes	Calibration Requirements
<div>Calibration Requirement:</div> <div>Instruments require a 3-point calibration, traceable to National Institute of Standards and Technology (NIST) or National Metrology Institute (NMI) unless otherwise noted.</div>						

Discipline  Function		RCx Required Instrumentation (Effective January 1, 2026)																		
			RANGE				ACCURACY				RESOLUTION				Notes	Calibration Requirements				
Air	Air Pressure		0	in wg	to	10	in wg		2%	of reading	±	0.001	in wg	0.001	in wg	<	1	in wg		12 Months
			0	Pa	to	2500	Pa		2%	of reading	±	0.25	Pa	0.10	Pa	<	250	Pa		
	Air Velocity Instrument for Pitot Traverse		100	fpm	to	3500	fpm	±	5%	of reading	±	7	fpm	1	fpm					12 Months
			0.50	m/s	to	20	m/s	±	5%	of reading	±	0.04	m/s	0.01	m/s					
	Digital Direct Reading Hood			100	cfm	to	2000	cfm	±	5%	of reading	±	7	cfm	1	cfm				
			50	l/s	to	944	l/s	±	5%	of reading	±	4	l/s	1	l/s					
Temperature	Air Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F					12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C					
	Immersion Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F					12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C					
Humidity	Humidity Meter with detachable probe		10	% RH	to	90	% RH		3%	RH				1%						12 Months
Electrical	Amperage Measurement		0.1	AC Ampere	to	100	AC Amperes		2%	of reading	±	5	digits	0.1	AC Ampere					12 Months
	Voltage Meter - True RMS		1	VAC	to	600	VAC		2%	of reading	±	5	digits	1	Volt					12 Months
Rotation	Rotation Measurement		60	rpm	to	5000	rpm		2%	of reading	±	2	rpm	1	rpm					12 Months
Hydronic	Pressure Measurement		0.4	psi	to	200	psi		2%	of reading	±	1	psi	0.1	psi					12 Months
			3	kPa	to	1400	kPa		2%	of reading	±	7	kPa	1	kPa					
	Δ Pressure measurement		0.4	psi	to	75	psi		2%	of reading	±	0.5	psi	0.01	psi					12 Months
			3	kPa	to	500	kPa		2%	of reading	±	3.5	kPa	0.1	kPa					
RCx Instruments	Receptacle Circuit Tester		125	VAC				Not Applicable				Not Applicable								Not Required
	Voltage Detector		50	VAC	to	1000	VAC	Not Applicable				Not Applicable								Not Required
	Light Level Measurement		0	FC	to	4000	FC	±	3%	of reading	+	5.0%	full scale	0.1	FC					Per Manufacturer's Requirements
			0	lx	to	40000	lx	±	3%	of reading	+	5.0%	full scale	1.0	lx					
BET / RCx Instruments	Temp Documentation Thermal Camera		32	°F	to	212	°F	±	3%		or	5.5	°F	0.1 @ 86 °F		&	160 x 120		*8	Per Manufacturer's Requirements
			0	°C	to	100	°C	±	3%		or	3	°C	0.1 @ 30 °C		&	160 x 120			

Discipline  Function		RCx Required Instrumentation (Effective January 1, 2026)																		
			RANGE				ACCURACY				RESOLUTION				Notes	Calibration Requirements				
Data Loggers	Carbon Dioxide CO2		0	ppm	to	2500	ppm	±	5%	of reading	±	50	ppm	1	ppm				Qty = 1	Per Manufacturer's Requirements
	Carbon Monoxide CO		3	ppm	to	1000	ppm	±	10%	of reading	±	7	ppm	1	ppm				Qty = 1	Per Manufacturer's Requirements
	Lighting Levels		0	FC	to	3000	FC	±	10	FC				2	FC				Qty = 1	See Note 5
			0	lx	to	30000	lx	±	100	lx				0	lx					
	Electrical		0	VAC	to	600	VAC	0	2%	of reading			VAC	1.0	VAC				Qty = 2	See Note 5
			0	Amperes	to	100	Amperes	0	4%	of reading			Ampere	0.1	Ampere					
	Static Pressure - Low		0	in wc	to	0.25	in wc	±	1%	full scale				0.01	in wc	<	1	in wc	Qty = 1	See Note 5
			0	Pa	to	60	Pa	±	1%	full scale				2.5	Pa	<	250	Pa		
	Static Pressure - High		0	in wc	to	6.00	in wc	±	1%	full scale				0.01	in wc	<	1	in wc	Qty = 1	See Note 5
			0	pa	to	1500	Pa	±	1%	full scale				2.5	Pa	<	250	Pa		
	Water Pressure		0	psi	to	100	psi	±	1%	of reading	psi			1.0	psi				Qty = 1	See Note 5
			0	kPa	to	700	kPa	±	1%	of reading	kPa			0.1	kPa					
	Temperature		-4	°F	to	150	°F	±	1	°F	@	32-122	°F	0.05	°F	@	77	°F	Qty = 8	See Note 5
-20			°C	to	65	°C	±	0.35	°C	@	0-50	°C	0.03	°C	@	25	°C			
Humidity		10	% RH	to	90	% RH	0	2.5%	RH				1%	RH				Qty = 8	See Note 5	
Event		Not Applicable				Not Applicable				Not Applicable				Qty = 2	Not required					

Discipline  Function		RCx Required Instrumentation (Effective January 1, 2026)																			
			RANGE				ACCURACY				RESOLUTION				Notes	Calibration Requirements					
RCx Instruments	Thermal Infrared Thermometer		-4	°F	to	500	°F	±	2%	of reading	±	4	°F	0.5	°F						Per Manufacturer's Requirements
			-20	°C	to	260	°C	±	2%	of reading	±	2	°C	0.2	°C						
	TDS Meter		0	μ	to	1000	μ	±	2%	full scale				1.0%							Per Manufacturer's Requirements
			0	ppm	to	1000	ppm	±	2%	full scale											
	Capacitance Moisture Meter			0%	0	to	100%		±	5%					0.75	inches	Penetration				Per Manufacturer's Requirements

#### NOTES

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- \*2 FHT Orifice Calibrator - Choose only one.
- \*3 Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)
- \*4 Firms may own or rent vibration equipment instrumentation for vibration certification
- \*5 Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced
- \*6 Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.
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- \*9 Sound level meters with vibration integrators are *NOT* acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.
- \*10 Vibration meters, which *ONLY* acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation.

Discipline  Function		SM Required Instrumentation (Effective January 1, 2026)								
			RANGE		ACCURACY		RESOLUTION	Notes	Calibration Requirements	
Sound Instruments	Sound Level Meter & Octave Band Analyzer		Sound Level Meters (SLM's) with time averaging and full octave band filters (optional)	As listed in Table 3-1.2.1, 3-1.2.2 and 3-1.2.3 which conforms to Type 1 or Type 2 requirements specified in ANSI S1.4	which conforms Appendix A of the NEBB Instrument List			*3	12 Months	
			Full Octave Filters	As listed in table 3-1.2.2 and 3-1.2.3 (which conforms with ANSI S1.11 Specification for Octave-Band and Fractional-Octave-Band Analog & Digital Filters	which conforms Appendix A of the NEBB Instrument List				12 Months	
	Acoustic Calibrator		As listed in Table 3-1.1 (which conforms to ANSI S1.40 Specification for Acoustical Calibrators					*3	12 Months	
NOTES										
<div><div>*1</div><div>CPT Option - choose only Option 1 <u>OR</u> Option 2 - along with required instrument for CPT certification (All instruments in any of the chosen is required)</div><div>*2</div><div>FHT Orifice Calibrator - Choose only one.</div><div>*3</div><div>Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)</div><div>*4</div><div>Firms may own or rent vibration equipment instrumentation for vibration certification</div><div>*5</div><div>Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced</div><div>*6</div><div>Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.</div><div>*7</div><div>Calibrated per Industry/Manufacturer standards.</div><div>*8</div><div>Firms may own or rent Temp Documentation Thermal Camera for RCx. BET Temp Documentation Thermal Camera must be owned.</div><div>*9</div><div>Sound level meters with vibration integrators are <i>NOT</i> acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.</div><div>*10</div><div>Vibration meters, which <i>ONLY</i> acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation. These types of meters may only be used if the contract documents specifically allow for their usage.</div></div>										
<div>General Note:</div> <div>Some local jurisdictions require qualified electrician for any electrical readings</div> <div>Calibration Requirement:</div> <div>Instruments require a 3-point calibration, traceable to National Institute of Standards and Technology (NIST) or National Metrology Institute (NMI) unless otherwise noted.</div>										

Discipline  Function		TAB Required Instrumentation (Effective January 1, 2026)																		
		RANGE						ACCURACY						RESOLUTION						Notes
Air	Air Pressure		0	in wg	to	10	in wg		2%	of reading	±	0.001	in wg	0.001	in wg	<	1	in wg		12 Months
														0.01	in wg	>	1	in wg		
			0	Pa	to	2500	Pa		2%	of reading	±	0.25	Pa	0.10	Pa	<	250	Pa		
														1.0	Pa	>	250	Pa		
	Air Velocity Instrument for Pitot Traverse		100	fpm	to	3500	fpm	±	5%	of reading	±	7	fpm	1	fpm					12 Months
			0.50	m/s	to	20	m/s	±	5%	of reading	±	0.04	m/s	0.01	m/s					
	Digital Direct Reading Hood		100	cfm	to	2000	cfm	±	5%	of reading	±	7	cfm	1	cfm					12 Months
			50	l/s	to	944	l/s	±	5%	of reading	±	4	l/s	1	l/s					
Temperature	Air Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F					12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C					
	Immersion Meter with detachable probe		0	°F	to	200	°F	±	0.5%	of reading	+	2.0	°F	0.1	°F					12 Months
			-20	°C	to	100	°C	±	0.5%	of reading	+	1.0	°C	0.1	°C					
Humidity	Humidity Meter with detachable probe		10	% RH	to	90	% RH	±	3%	RH				1%					12 Months	
Electrical	Amperage Measurement		0.1	AC Ampere	to	100	AC Amperes		2%	of reading	±	5	digits	0.1	AC Ampere					12 Months
	Voltage Meter - True RMS		1	VAC	to	600	VAC		2%	of reading	±	5	digits	1	Volt					12 Months
Rotation	Rotation Measurement		60	rpm	to	5000	rpm		2%	of reading	±	2	rpm	1	rpm					12 Months
Hydronic	Pressure Measurement		0.4	psi	to	200	psi		2%	of reading	±	1	psi	0.1	psi					12 Months
			3	kPa	to	1400	kPa		2%	of reading	±	7	kPa	1.0	kPa					
	Δ Pressure measurement		0.4	psi	to	75	psi		2%	of reading	±	0.5	psi	0.01	psi					12 Months
			3	kPa	to	500	kPa		2%	of reading	±	3.5	kPa	0.1	kPa					
NOTES																				
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Discipline  Function		VM Required Instrumentation (Effective January 1, 2026)					
			RANGE	ACCURACY	RESOLUTION	Notes	Calibration Requirements
Vibration Instruments	Vibration Analyzer / Meter, Real Time Analyzer & Spectrum Analyzer		Shall meet the minimum requirements as specified below: Displacement – 0.1 to 100 mils (0.0001 to 0.1 inches) Velocity – 0.0005 to 10 in/sec Acceleration – 0.0001 to 30 G’s Frequency Range – at least 1 to 1000 Hz (60 to 60,000 RPM) Frequency Resolution – at least 1.25 Hz (1 / 75 RPM) Minimum Lines of resolution ≥ 800 Detection - Peak, Peak-to-Peak, RMS FFT Windowing- Hanning at least Averaging – exponential or time and selectable to at least four averages			*4	12 Months
	Accelerometers / Transducer		Shall have the following minimum specifications: Sensitivity (± 20%) ≥ 100 mV/G typical Measurement Range = ± 20 G peak or greater Frequency Range = 2 to 3000 Hz at ± 3dB				12 Months
NOTES							
<p>*1 CPT Option - choose only Option 1 OR Option 2 - along with required instrument for CPT certification (All instruments in any of the chosen is required)</p> <p>*2 FHT Orifice Calibrator - Choose only one.</p> <p>*3 Refer to Appendix A for complete instrumentation requirements for Sound Measurement (SM)</p> <p>*4 Firms may own or rent vibration equipment instrumentation for vibration certification</p> <p>*5 Calibration Requirement: Data logger calibration may be verified from a calibrated instrument with an associated calibration form showing calibration readings from both the calibrated instrument and the data logger. If a data logger is out of calibration and cannot be adjusted, the logger must be sent back to the factory for re-calibration or be replaced</p> <p>*6 Accuracy of an instrument is either stated as a percentage of full scale or as a percentage of the reading. NEBB has chosen percentage of reading due to it being a more accurate reading. Since a % of reading error becomes smaller as you read near the lowest part of the scale the instrument resolution and accuracy must be very small to maintain the accuracy of the reading. To overcome this the manufactures add a standard offset to the % of reading to maintain a reasonable accuracy at all locations on the scale. Normally for TAB readings we are never operating at the extreme ends of the scale so this has no impact on our work.</p> <p>*7 Calibrated per Industry/Manufacturer standards.</p> <p>*8 Firms may own or rent Temp Documentation Thermal Camera for RCx. BET Temp Documentation Thermal Camera must be owned.</p> <p>*9 Sound level meters with vibration integrators are <i>NOT</i> acceptable for NEBB approved instrumentation for making vibration measurements. That is, 1/3 octave or full octave vibration readings are not sufficient for NEBB Sound and Vibration work.</p> <p>*10 Vibration meters, which ONLY acquire and display the overall vibration level, displacement, velocity, and/or acceleration DO NOT meet NEBB minimum requirements for Vibration instrumentation. These types of meters may only be used if the contract documents specifically allow for their usage.</p>							
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