

Extech Tools Get the Job Done

Extech meters help you ensure uptime, maximize productivity and verify compliance. Whether used as a component of an effective predictive maintenance program or as a key tool for a rapid response repair team, Extech offers the tools of choice for HVAC professionals who need to solve problems fast and minimize disruptions.

Solutions for HVAC/INDOOR AIR QUALITY (IAQ)

Clamp Meters



Used for

- Circuit loads up to 3,000 A
- Voltage, resistance, capacitance, contact and non-contact temperature measurements

Applications in HVAC

- Checking current load of HVAC and refrigeration units
- Troubleshooting electrical distribution systems
- Test flame rod rectification

Multimeters



Used for

- Essential electrical testing
- Identifying inrush, spikes and sags

Applications in HVAC

- System-wide electrical testing
- Building automation system (BAS) troubleshooting
- Repair chiller plant motor & pump electrical systems

Thermometers



Used for

- Contact or non-contact temperature measurements
- Differential temperature calculations
- Monitoring moving components

Applications in HVAC and IAQ

- Inspecting food refrigerators
- Reading vent temperatures
- Employee/customer screening for infectious disease symptoms

Insulation Testers



Used for

- Testing insulation resistance
- Voltage measurement

Applications in HVAC

- Test compressors & pump motors for insulation leaks
- Heating element resistance tests
- Failed capacitors, open fuses

Tachometers/Vibration Meters



Used for

- Measuring motors and conveyor and belt speed
- Alignment-related vibration testing

Applications in HVAC

- Measure RPM of blower motors and fans
- Tower fan vibration testing
- Chiller pump vibration testing

Environmental Meters



Used for

- Monitoring humidity, temperature, and airflow
- Measuring light, noise levels
- Monitoring CO and CO₂ levels

Applications in HVAC

- Ensure Indoor Air Quality
- Front-line diagnostics for occupant/worker complaints
- Monitor air quality before and after repairs

Electrical Testers



Used for

- Tracing outlets to breakers
- Testing continuity in circuits
- Identifying rotary field indication
- Non-contact voltage checks

Applications in HVAC

- Verify thermostat installation
- Test phase rotation of new pump motor installations
- Voltage checks

Inspection Tools



Used for

- Inspection & photo-documentation of concealed equipment
- Dust particle count

Applications in HVAC

- Boiler tube inspections
- Heat exchanger inspections
- Dust particle testing for air quality



- Ensure energy efficient operation & rapid repairs
- Optimize occupant comfort & reduce complaints
- Improve IAQ for more productivity and less downtime

HVAC & IAQ Challenges

Heating

Problem: Frequent boiler tube leaks & blockages



Solution: Investigate corrosion/deposits with FLIR thermal imagers & Extech borescopes

Problem: Hard to find steam trap failures



Solution: Quickly scan for plugged or stuck steam traps with Extech Laser Video IR Thermometer

Problem: Carbon monoxide alarms go off repeatedly



Solution: Measure CO leaks in furnaces & heat exchangers with Extech meters and inspect with Extech borescopes

Ventilation

Problem: Complaints of stale or poorly-conditioned air



Solution: Accurately test airflow & temperature with Extech hot-wire anemometer

Problem: Costly, premature air filter replacement schedule



Solution: Test filter pressure drop & flow rates with Extech anemometers & manometers

Problem: Empty office zone is colder than other zones



Solution: Troubleshoot reheat with Extech electrical & temperature meters

Air Conditioning

Problem: Diminished cooling during peak load periods



Solution: Diagnose controllers, sensors, and motors with Extech electrical testers, meters, and kits

Problem: Conflicting complaints of stuffy rooms



Solution: Track temperature & humidity trends with Extech digital chart recorders

Problem: Unbalanced cooling in building



Solution: Precisely measure airflow imbalances with Extech anemometers

Refrigeration

Problem: Compressor is shortcycling



Solution: Test controls with Extech 5-in-1 HVAC/R meter

Problem: Frosted evaporator coils



Solution: Diagnose problems with defrost time clock with Extech True RMS DMMs

Problem: Ice machine failure



Solution: Troubleshoot cuber pump/auger gear/fan motors, valves & controls with Extech meters

Air & Environmental Quality

Problem: Stuffy meeting areas



Solution: Monitor & optimize fresh air systems with IAQ meters for CO₂

Problem: High particulate counts affect employee health



Solution: Identify water leaks with FLIR building thermal imagers

Problem: Condensation caused by chilled beams



Solution: Measure moisture & condensation risks with an Extech 8-in-1 environmental meter

Cold Chain Maintenance

Problem: Refrigerated truck system not freezing



Solution: Troubleshoot components with Extech HVAC/R meters

Problem: Hot and cold spots in refrigerated building



Solution: Identify variations with Extech temperature dataloggers

Problem: Mold & draft complaints at older warehouse



Solution: Scan facility for energy leaks and condensation hazards