

# Indoor Air Quality Meters

## TSI IAQ-Calc™ Models 7515, 7525, and 7545

TSI's IAQ-Calc Meters are outstanding instruments for investigating and monitoring indoor air quality (IAQ). The Model 7515 is a cost-effective meter for carbon dioxide (CO<sub>2</sub>) measurements. The Models 7525 and 7545 simultaneously measures and data logs multiple parameters. The Model 7525 measures CO<sub>2</sub>, temperature, humidity, calculates dew point, wet bulb temperature, and % outside air. The Model 7545 adds carbon monoxide (CO).

### FEATURES

- Low-drift NDIR CO<sub>2</sub> sensor for stable, accurate readings
- Sampling function records multiple point measurements
- Ergonomic, over-molded case design

#### Model 7515

- For basic CO<sub>2</sub> measurements indoors

#### Models 7525 & 7545 Add:

- Temperature and relative humidity measurements help determine thermal comfort
- Calculates % outside air from either CO<sub>2</sub> or temperature
- Directly calculates dew point and wet bulb temperatures
- Electrochemical sensor measures CO (Model 7545)

#### Data Logging – Models 7525 and 7545

- TSI LogDat2™ software permits easy transfer of data to a computer
- Data can be reviewed on-screen, or downloaded to a computer for easy report generation
- Statistics function displays average, maximum and minimum values, and the number of recorded samples

### APPLICATIONS

- Conduct IAQ evaluations
- Verify building HVAC system performance
- Examine building IAQ conditions to optimize worker productivity
- Comply with regulations and guidelines

Model 7545



**CALL GEOTECH TODAY (800) 833-7958**

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## TSI IAQ-Calc™ Models 7515, 7525, and 7545

### SPECIFICATIONS

#### CO<sub>2</sub>

|                       |   |
|-----------------------|---|
| Sensor Type           | Dual-wavelength NDIR (non-dispersive infrared)    |
| Range                 | 0 to 5000 ppm                                     |
| Accuracy <sup>1</sup> | ±3.0% of reading or ±50 ppm, whichever is greater |
| Resolution            | 1 ppm   |
| Response Time         | 20 seconds  |

#### Models 7525 & 7545

##### Temperature:

|               |   |
|---------------|---|
| Sensor Type   | Thermistor  |
| Range         | 32° to 140°F (0° to 60°C)   |
| Accuracy      | ±1.0°F (±0.6°C)   |
| Resolution    | 0.1°F (0.1°C)   |
| Response Time | 30 seconds<br>(90% of final value, air velocity at 400 ft./min [2 m/s]) |

##### Relative Humidity:

|                       |  |
|-----------------------|--|
| Sensor Type           | Thin-film capacitive                   |
| Range                 | 5% to 95% RH                           |
| Accuracy <sup>2</sup> | ±3.0% RH                               |
| Resolution            | 0.1% RH                                |
| Response Time         | 20 seconds<br>(for 63% of final value) |

##### % Outside Air:

|            |           |
|------------|-----------|
| Range      | 0 to 100% |
| Resolution | 0.1%      |

#### Model 7545 CO

|               |  |
|---------------|--|
| Sensor Type   | Electro-chemical                                 |
| Range         | 0 to 500 ppm                                     |
| Accuracy      | ±3.0% of reading or ±3 ppm, whichever is greater |
| Resolution    | 0.1 ppm  |
| Response Time | <60 seconds to 90% step change                   |

#### Temperature Environment

|                       |                             |
|-----------------------|-----------------------------|
| Operating Temperature | 40° to 113°F (5° to 45°C)   |
| Storage Temperature   | -4° to 140°F (-20° to 60°C) |

#### Models 7525 and 7545 Logging Capability

##### Ranges:

|            |  |
|------------|--|
| Model 7525 | Logs up to 30,300 data points with key (3) measured parameters enabled |
| Model 7545 | Logs up to 26,900 data points with key (4) measured parameters enabled |

**Time Constant:** 1 sec, 5 sec, 10 sec, 20 sec, 30 sec (user selectable)

**Log Intervals:** 1 second up to 1 hour (user selectable)

#### Dimensions

**Meter (All models):** 3.3" x 7.0" x 1.8"  
(8.4 cm x 17.8 cm x 4.4 cm)

##### Model 7515 Probe:

|          |                |
|----------|----------------|
| Length   | 2.75" (7.0 cm) |
| Diameter | 0.75" (1.9 cm) |

##### Models 7525 & 7545 Probe:

|          |                |
|----------|----------------|
| Length   | 7.0" (17.8 cm) |
| Diameter | 0.75" (1.9 cm) |

**Weight with Batteries** 0.6 lbs. (0.27 kg)

#### Power Requirements

|                   |                                      |
|-------------------|--------------------------------------|
| Model 7515        | Four AA-size batteries               |
| Models 7525, 7545 | Four AA-size batteries or AC adapter |

<sup>1</sup> At 77°F (25°C). Add uncertainty of ±0.2%/°F (±0.36%/°C) away from calibrated temperature.

<sup>2</sup> At 77°F (25°C). Add uncertainty of ±0.03% RH/°F (±0.05% RH/°C) away from calibrated temperature.

Specifications subject to change without notice.

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