

READ AND SAVE THESE INSTRUCTIONS



Supplement for QEP Model

Flow Measurement Sensor QEP Calibration Data Sheet

Flow Sensor Input and Output:

Select output range so the fans operating point is within the sensors input range. Sensor is calibrated for all three ranges with a density = 0.075 lb/ft³ (square law device)
(Equations provided on back)

| Output: 0-25 inches wg. | |
|-------------------------|--------------|
| Unit Size | Input (SCFM) |
| 12 | 0-6,309 |
| 15 | 0-6,311 |
| 16 | 0-7,677 |
| 18 | 0-9,412 |
| 20 | 0-11,261 |
| 22 | 0-13,857 |
| 24 | 0-16,660 |
| 27 | 0-20,176 |
| 30 | 0-24,741 |
| 33 | 0-29,685 |
| 36 | 0-35,956 |
| 40 | 0-43,118 |
| 44 | 0-52,099 |
| 49 | 0-62,287 |
| 54 | 0-75,232 |
| 60 | 0-90,770 |
| 66 | 0-108,807 |
| 73 | 0-132,858 |

| Output: 0-50 inches wg. | |
|-------------------------|--------------|
| Unit Size | Input (SCFM) |
| 12 | 0-8,923 |
| 15 | 0-8,924 |
| 16 | 0-10,857 |
| 18 | 0-13,311 |
| 20 | 0-15,925 |
| 22 | 0-19,567 |
| 24 | 0-23,561 |
| 27 | 0-28,533 |
| 30 | 0-34,989 |
| 33 | 0-41,981 |
| 36 | 0-50,850 |
| 40 | 0-60,978 |
| 44 | 0-73,679 |
| 49 | 0-88,087 |
| 54 | 0-106,394 |
| 60 | 0-128,368 |
| 66 | 0-153,876 |
| 73 | 0-187,890 |

| Output: 0-100 inches wg. | |
|--------------------------|--------------|
| Unit Size | Input (SCFM) |
| 12 | |
| 15 | |
| 16 | |
| 18 | |
| 20 | |
| 22 | |
| 24 | 0-33,320 |
| 27 | 0-40,352 |
| 30 | 0-49,481 |
| 33 | 0-59,370 |
| 36 | 0-71,913 |
| 40 | 0-86,236 |
| 44 | 0-104,197 |
| 49 | 0-124,573 |
| 54 | 0-150,464 |
| 60 | 0-181,540 |
| 66 | 0-217,614 |
| 73 | 0-265,717 |

Connections:

- High Pressure: 1/8 inch NPT female
- Low Pressure: 1/8 inch NPT female

Installation Notes:

- Mount differential pressure transmitter above sensor elevation to eliminate condensation build-up in the differential pressure cell.
- Recommended tubing size is 1/4 inch for runs 25 feet or less. For longer runs, (maximum 100 feet) use 3/8 inch tubing or larger.

Sure-Aire™ Flow Equations:

| Unit Size | Fan Equation |
|-----------|--|
| QEP-12 | $cfm = 345.65 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-15 | $cfm = 345.65 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-16 | $cfm = 420.86 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-18 | $cfm = 515.35 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-20 | $cfm = 616.86 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-22 | $cfm = 759.37 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-24 | $cfm = 912.87 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-27 | $cfm = 1104.91 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-30 | $cfm = 1355.04 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-33 | $cfm = 1625.35 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-36 | $cfm = 1966.53 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-40 | $cfm = 2361.10 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-44 | $cfm = 2853.94 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-49 | $cfm = 3411.00 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-54 | $cfm = 4120.95 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-60 | $cfm = 4972.27 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-66 | $cfm = 5959.86 \cdot \sqrt{\Delta P / \text{density}}$ |
| QEP-73 | $cfm = 7275.79 \cdot \sqrt{\Delta P / \text{density}}$ |

ΔP = The differential static pressure between the Sure-Aire™ high and low taps.

Standard Density = 0.075 lb/ft³

Wiring Schematic for Optional Digital Readout and Transmitter:

