

ERRATA SHEET FOR ANSI/ASHRAE STANDARD 41.9-2011
Standard Methods for Volatile-Refrigerant
Mass Flow Measurements Using Calorimeters

April 18, 2017

The corrections listed in this errata sheet apply to ANSI/ASHRAE Standard 41.9-2011. The first printing is identified on the outside back cover as “Product Code: 86133 3/11”.

Page Erratum

7.1.8.2. Revise Section 7.1.8.2 and replace Equation 7-1 as shown below.

7.1.8.2 The heat leakage coefficient is ~~shall be determined using the following equation~~ Equation 7-1:

5
$$AU_a = \frac{q_r}{(t_s - t_a)} \quad (7-1)$$

$$AU_a = \frac{q_r}{(t_s - t_a)} \quad (7-1)$$

7.1.8.3. Revise Section 7.1.8.3 as shown below.

7.1.8.3 Heat leakage ~~measured during the test is~~ at each refrigerant mass flow rate test point shall be determined using Equation 7-2:

$$q_a = AU_a(t_a - t_s) \quad (7-2)$$

5 where

q_r = measured calorimeter heat input leakage out of the calorimeter during heat leakage testing, kW (Btu/h)

q_a = calculated heat leakage into the calorimeter during refrigerant mass flow rate testing, kW (Btu/h)

AU_a = heat leakage coefficient, kW/°C (Btu/h·°F)

t_s = secondary refrigerant saturated temperature, °C (°F)

t_a = mean ambient temperature around the calorimeter, °C (°F)

9.1.7.2. Revise Section 9.1.7.2 and replace Equation 9-1 as shown below.

9.1.7.2 The heat leakage coefficient is ~~defined as~~ shall be determined using Equation 9-1:

9
$$AU_a = \frac{q_r}{(t_s - t_a)} \quad (9-1)$$

$$AU_a = \frac{q_r}{(t_s - t_a)} \quad (9-1)$$

9 **9.1.7.3.** Revise Section 9.1.7.3 and replace Equation 9-2 as shown below.

9.1.7.3 Heat leakage at the time of the test is given by at each refrigerant mass flow rate test point shall be determined using Equation 9-2:

$$q_{\bar{a}} = AU_{\bar{a}}(t_s - t_{\bar{a}}) \quad (9-2)$$

$$q_a = AU_a(t_a - t_s) \quad (9-2)$$

where

q_r = measured heat leakage out of the calorimeter during heat leakage testing, kW (Btu/h)

q_a = calculated heat leakage into the calorimeter during refrigerant mass flow rate testing, kW (Btu/h)

AU_a = heat leakage coefficient, kW/°C (Btu/h·°F)

t_a = mean ambient temperature around the calorimeter, °C (°F)

t_s = mean surface temperature of the pressure vessel, °C (°F)