



**BSR/ASHRAE Standard 84-2013R**

**Public Review Draft**

# **Method of Testing Air-to-Air Heat/Energy Exchangers**

**Second Public Review (October 2019)**

**(Draft shows proposed Independent Substantive Changes to previous Public Review Draft)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at [www.ashrae.org/standards-research--technology/public-review-drafts](http://www.ashrae.org/standards-research--technology/public-review-drafts) and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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**This is a review of Independent Substantive Changes** that were made since the last (First) Public Review. Areas where substantive changes have been made are **highlighted in gray**. In these areas, text that was removed from the previous Public Review is provided for reference but is shown in **strikeout** and text that has been added is shown with **underlines**.

Only the changes highlighted in gray are open to comment at this time. All other material is provided for context only and is not open for Public Review comment except as it relates to the proposed changes.

### **4.3 Apparatus.**

The test apparatus shall consist of four measurement stations. Three measurements shall be taken at each measurement station as follows:

- Station 1*-Supply Inlet: Temperature 1, Humidity 1, Dry Air Mass Flow Rate 1
- Station 2*-Supply Outlet: Temperature 2, Humidity 2, Dry Air Mass Flow Rate 2
- Station 3*-Exhaust Inlet: Temperature 3, Humidity 3, Dry Air Mass Flow Rate 3
- Station 4*-Exhaust Outlet: Temperature 4, Humidity 4, Dry Air Mass Flow Rate 4

**4.3.1 Equipment Installation.** ~~The equipment to be tested shall be installed in accordance with the manufacturer's standard installation instructions using recommended installation procedures and accessories. The casing shall be sealed to prevent any infiltration or exfiltration of air.~~

**4.3.2<sup>1</sup> Test Duct Leakage Requirements.** ~~Prior to the performance tests, the ducts across the test section~~ Prior to first use of the system and periodically thereafter, the duct system, with no exchanger installed, shall be tested under the maximum negative pressure and flow rate that will be encountered under test or operating conditions. Flow rates shall be determined and must satisfy the ~~inequality limits~~ mass flow inequality (20) in Section 6.

**4.3.2 Equipment Installation.** ~~The equipment to be tested shall be installed in accordance with the manufacturer's standard installation instructions using recommended installation procedures and accessories. The casing shall be sealed to prevent any infiltration or exfiltration of air.~~