CONTENTS

ANSI/ASHRAE Standard 184-2020
Method of Test for Field Performance of Liquid-Chilling Systems

NOTE

Approved addenda, errata, or interpretations for this standard can be downloaded free of charge from the ASHRAE website at www.ashrae.org/technology.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

ASHRAE Standard 184 prescribes methods for obtaining performance data relating to field-installed liquid-chilling systems. It is intended to provide the minimum requirements necessary to conduct field testing in accordance with test circumstances and conditions that the owner and test agency have agreed to prior to collecting test data, and are based on the actual obtainable conditions at the location of the field-installed system.

The standard provides a great deal of flexibility with regard to test conditions and instrumentation selection. Reporting the uncertainty of the measured and calculated performance data before and after testing is a requirement of the standard.

The standard does not define a set of conditions under which the system shall be operated during testing, nor does the standard address the comparison of measured and calculated performance data to any previously defined set of data or rating information.

A performance and uncertainty calculator in the form of a Microsoft® Excel® spreadsheet is available online, with guidance for its use, at www.ashrae.org/184-2020.

This is a revision of Standard 184. This standard was prepared under the auspices of ASHRAE. It may be used, in whole or in part, by an association or government agency with due credit to ASHRAE. Adherence is strictly on a voluntary basis and merely in the interests of obtaining uniform standards throughout the industry. Changes in the 2020 revision include updated normative and informative references and minor editorial changes.

1. PURPOSE

The purpose of this standard is to prescribe methods of field performance testing for *liquid-chilling systems*.

2. SCOPE

2.1 This standard includes the following types of *liquid-chilling systems*. These system types are further described in Section 5, "Equipment Types."

2.1.1 Vapor compression cycle.

2.1.2 Absorption cycle.

2.2 This standard does not include systems with a net refrigeration *capacity* less than 10 ton_R (35 kW).

2.3 This standard does not include a specification of standardized test conditions under which the *liquid-chilling system* must operate. Test conditions typically reflect the expected *operating conditions* and are customer specified.

3. USE OF STANDARD 184

The standard is intended to be used to measure the performance of *liquid-chilling systems* that are newly installed equipment or existing systems in any state of operation. The standard is intended to prescribe the testing process given existing site conditions. Additionally, the standard shall be used to determine and minimize the resultant level of measurement *uncertainty*. The standard shall be used by designers of new installations to minimize measurement *uncertainty* during field performance testing.

4. DEFINITIONS, ABBREVIATIONS, AND ACRONYMS

4.1 General. Certain terms, abbreviations, and acronyms are defined in this section for the purposes of this standard. These definitions are applicable to all sections of this standard. Terms that are not defined shall have their ordinarily accepted meanings within the context in which they are used. Ordinarily accepted meanings shall be based on definitions in the current edition of *ASHRAE Terminology*[1]. If not defined in *ASHRAE Terminology*, then ordinarily accepted meanings shall be based on American Standard English language usage as documented in an unabridged dictionary accepted by the adopting authority.