

Compliance Forms

Compliance forms are provided in the User's Manual to assist in understanding and documenting compliance with the HVAC requirements. Copies of the forms are provided both in printed and electronic form. The electronic versions are contained on the CD distributed with the manual. The HVAC system forms are organized in three parts and on five pages.

- Part I is used with the Simplified Approach Option (§ 6.1.3). This is the only form required with this compliance option.

- Part II, the Mandatory Provisions, consists of two pages and should be used with either the Prescriptive Path (§ 6.3) or Energy Cost Budget (§ 11) compliance methods. The first page contains header information, tables for entering equipment efficiencies for heating and cooling equipment, and checklists of general and special mandatory requirements. The second page contains the HVAC System Worksheet. Multiple copies of each page may be required to list all central heating and cooling equipment and all HVAC systems.

- Part III should only be used for the Prescriptive Path (§ 6.3) compliance method. Page one is a checklist of the prescriptive requirements and needs to be completed only once for each building. Page two addresses the fan power requirements.

Part I Simplified Approach

This compliance approach may be used for small buildings with two or fewer floors and single, zone systems.

Header Information

Project Name. Enter the name of the project. This should agree with the name that is used on the plans and specifications or the common name used to refer to the project.

Project Address. Enter the street address of the project, for instance "142 Minna Street."

Date. Enter the date when the compliance documentation was completed.

City. The name of the city where the project is located.

Zip/Postal Code. Enter the zip or postal code of the project site.

HVAC Designer of Record/Telephone. Enter the name and the telephone number of the designer of record for the project. This will generally be the mechanical engineer or contractor.

Contact Person/Telephone. Enter the name and telephone number of the person who should be contacted if there are questions about the compliance documentation.

Checklist Qualification

Only small buildings less than 25,000 ft² and with two or fewer stories may use the Simplified Approach.

Requirements

This section of the form summarizes the Simplified Approach requirements. Each form is separated into two sections.

The upper part of the form contains a list of the requirements. Check each box to indicate that the requirement applies to the HVAC system and that the system complies with the requirement. If the requirement is not applicable, then leave the box unchecked.

The lower part of the form contains a table for entering heating and cooling capacities and efficiencies for comparison against the Standard. The rated capacity and efficiency for heating and cooling should be taken from manufacturers specifications.

The Minimum Efficiency columns should include values taken from Tables 6.2.1 and 6.1.3. The last column "Econ. Min. Efficiency" need only be completed if an exception to the economizer requirement is being taken, based on greater equipment efficiency (See Table 6.1.3).

Part II – Mandatory Provisions

This section of the compliance documentation summarizes the Mandatory Provisions. These apply with either the Prescriptive Path or Energy Cost Budget Method of compliance. The two pages of mandatory requirements are organized into three sections:

- The efficiency tables on Page 1 document that heating and cooling equipment meets or exceeds the efficiency requirements.

- The check boxes in the lower part of Page 1 demonstrate compliance with the general and special provisions of the Mandatory Provisions.

- The Systems Worksheet on Page 2 summarizes the requirements specific to air-handling systems.

Equipment Efficiency Tables

Enter the requested data for each piece of mechanical heating or cooling equipment using one entry per row. Identical pieces of equipment can be entered as a group on a single line. For each row, enter data from the mechanical equipment schedules and Tables 6.2.1 (A through G). For each row, enter data from the mechanical equipment schedules and Tables 6.2.1 (H through M).

Nonstandard chillers are water-cooled centrifugal chillers that cannot operate at the ARI Standard 550/590 test Conditions of 44°F chilled water supply and 85°F condenser water supply. Use the lower worksheet for these chillers (if any exist in the building).

General and Specific Mandatory Provisions

The lower part of the Page 1 form contains the general and special system requirements. Check the box to indicate that the requirement applies to the HVAC system and that the system complies with the

requirement. If the requirement is not applicable, then leave the box unchecked.

Systems Worksheet

Page 2 contains the mandatory requirements for HVAC systems. Data for each system or group of identical systems should be entered in the columns. The first five rows are data that can be obtained from the mechanical equipment schedules (system tag, supply airflow, supply external static pressure, supply fan motor rated horsepower, and outside air airflow). The remaining 11 rows contain the mandatory requirements. For each requirement enter the appropriate code from the notes below the table. For example, for the Automatic Shutdown requirement (§ 6.2.3.2.1), if a complying time clock with manual override is provided on the system the user should enter the code "C1."

Part III – Prescriptive Requirements

This section of the compliance documentation summarizes the prescriptive requirements. The first page has a checklist of the prescriptive requirements.

Prescriptive Economizer Requirements

Check all of the boxes that apply for HVAC systems in this project. Note: if systems are exempt from the economizer requirement, mark the basis for the exception in the

space provided. If a requirement is not applicable, then leave the box unchecked.

Prescriptive Air-System Requirements

The next section contains the air-system requirements. Check all of the boxes that apply to HVAC systems in this project. If a requirement is not applicable, then leave the box unchecked.

Prescriptive Water-System Requirements

The next section contains the water-system requirements. Check all of the boxes that apply to HVAC systems in this project. If a requirement is not applicable, then leave the box unchecked.

Prescriptive Special System Requirements

Check all of the boxes that apply to HVAC systems in this project. If a requirement is not applicable, then leave the box unchecked. If none of the requirements are applicable, the form may be omitted.

Fan Power Limitations

Fill out the worksheet on Page 2 for each fan system with greater than 5 nameplate-rated horsepower. Groups of identical systems may be combined into a single worksheet. The table has 10 columns. The first three are for the tag, supply airflow and nameplate-rated horsepower for each of the supply fans in the system. There are two

columns each for the tag and nameplate rated horsepower for the return and exhaust fans and a pair for each of the series-style fan-powered boxes (if appropriate). Sum the motor horsepower for each row and enter the total in the "total system motor (hp)" column on the far right. Enter the sum of the supply fan airflow and total system motor horsepower for all the rows in the boxes, the table, and in the worksheet where indicated by the arrows. The first value in the worksheet is entered from Table 6.3.3.1 in the Standard. This value depends on the total supply airflow and the type of system (constant volume or variable volume). The total system horsepower allowance is calculated from the following equation:

$$HP.Allowance = \frac{Table\ 6.3.3.1\ Value \times Total\ Supply\ Airflow}{1,000} \tag{Eq. 6-G}$$

There are corrections for the horsepower allowance for low temperature supply, high pressure filters, pressure drop for evaporative cooling or heat recovery equipment, and relief fans that operate during peak cooling. To use these corrections, the user must attach calculations using the equations from § 6.3.3.1 of the Standard.