

HAP v4.40 replaces HAP v4.34

UPDATE DESCRIPTION

HAP v4.40. This update to the Hourly Analysis Program (HAP) provides feature enhancements which relate to two major themes:

- 1. Theme 1 - Making HAP Easier to use for LEED® Energy and Atmosphere Credit 1 Analysis.** : HAP has been modified to streamline steps needed to perform a LEED® EA Credit 1 analysis so the analysis is faster and easier to perform. Specific modifications include:
 - LEED® NC 2.2 EA Credit 1 Summary Report.
 - "Duplicate Building with Spaces and HVAC Eqpt" option.
 - "Perform LEED (90.1 PRM) Rotations" option.
 - Autosizing for DX and plant equipment.
 - Input DX equipment performance as EER or COP.
 - "All Terminal Units Use Same Settings" option.
 - Baseline fan kW calculated per ASHRAE 90.1 Appendix G section G3.1.2.9.
 - ASHRAE 90.1 Appendix G VAV fan part-load curve option
 - Fan performance defined as W/CFM or W/L/s.
 - Water flow rate inputs as gpm/Ton, L/s/kW or Delta-T.
 - Water pump performance as W/gpm, W/L/s or kW.
- 2. Theme 2 - Adding Features for Preliminary or Schematic Design.** To make HAP more efficient for performing screening studies in the preliminary or schematic design phase of a project, new Wizard features have been added to allow users to rapidly generate building and HVAC equipment input data. This work builds on the Building Wizard feature offered in HAP v4.3. Specific enhancements include:
 - New Wizards Menu.
 - Upgraded Building Wizard.
 - New "Equipment Wizard" for rapidly generating HVAC design scenarios.
 - New "Full Wizard Session" option allows you to run the Building Wizard and Equipment Wizard in tandem. In a single Full Wizard session you can generate space data and data for multiple HVAC design alternatives. This creates 95% of the input data for an energy cost study in minutes.

Further information on enhancements in HAP v4.40 can be found in section 1.2 ("What's New in HAP?") in the program's on-line help system.

INSTALLATION PROCEDURES

To install HAP v4.40 please use the procedures listed below. When installing to a network server, please refer to the Network_Primer PDF document in the \Document folder of the CD-ROM for additional guidelines.

Make sure your computer meets the minimum requirements:

- Hard Disk Space: Maximum 100 megabytes. Typical 25-30 MB.
- Random Access Memory: At least 64 megabytes
- Display Monitor: At least VGA with 800x600 resolution and 256 colors.
- Operating System: Windows 98, 2000, XP, Vista or Windows NT (with service pack 4 or later).
- X Builder Framework v1.03h or later.

Use the following procedure to install software from the HAP v4.40 CD:

- From the Windows desktop, press the Start button and choose the "Run" item on the Start Menu.
- In the Run dialog type `d:\SETUP.EXE` where "d:" is the drive letter for your CD-ROM drive. Example: If your CD-ROM drive is E:, the run command is `E:\SETUP.EXE`
- Installation of the software will begin. Follow the instructions which appear on your screen.

INSTALLATION PROCEDURES (continued)

Use the following procedure to run HAP v4.40:

- From the Windows Desktop, press the Start button and choose the “Programs” option.
- Choose the “Carrier E-CAT and E20-II Programs” group on the Programs Menu and then double click on the “Hourly Analysis Program v4.40” item in this group.

Use the following procedure to install HAP simulation weather data for energy simulations:

- Note that installing simulation weather files used in energy simulations is optional. The files can be loaded into your projects directly from the CD-ROM if you wish. However, users may find it efficient to install files on their hard disk before running HAP as described below.
- Run Windows Explorer.
- Navigate to the \Weather folder on the HAP CD-ROM.
- Copy the desired city weather files to the \E20-II\Weather folder on your hard disk.

PREVIOUS VERSION INFORMATION

1. Data from HAP versions v4.0 thru v4.3 can be converted for use in HAP v4.4 using the “Convert HAP v4.x Data” option on the Project Menu. The data from an earlier version can be an active project or an archive file. Please refer to the on-line help system for details (see section 1.5 of the help system).
2. Data from HAP v3.2 (DOS) can be converted for use in HAP v4.4 using the “Convert HAP v3.2 Data” option on the Project Menu. Please refer to the on-line help system for details (see section 1.5).
3. HAP v4.4 will not replace HAP v4.3 when it is installed. Therefore, when it is no longer needed, HAP v4.3 can be uninstalled separately using the following procedure:
 - From the Windows desktop press Start and choose Settings.
 - On the Settings Menu choose Control Panel.
 - In the Control Panel, double-click on the “Add/Remove Programs” icon.
 - In the Add/Remove Programs dialog select “Hourly Analysis Program v4.34” and then press “Add/Remove”.
 - Wait for the first uninstall wizard window to appear. Choose the “automatic” option and then press the Next button. On the second wizard window press the Finish button. HAP v4.34 will then be uninstalled.

PROGRAM DOCUMENTATION

The *HAP Quick Reference Guide* has been updated. The new manual is dated 7/2008. This manual includes an overview of the program, tutorials, example problems and application advice. An electronic copy of this manual, in Adobe Acrobat PDF format, is also provided in the \Manual folder on the CD.

The program’s on-line help system provides complete documentation for the program. This includes a copy of the material from the manual plus detailed discussions of program inputs, reports and calculation procedures.