

HAP System Design Load v4.41 replaces v4.34

UPDATE DESCRIPTION

HAP System Design Load v4.41 includes the following changes:

- Increased limit on air systems per project from 250 to 5000 to accommodate larger projects.
- Increased limit on spaces per project from 5000 to 32000 to accommodate larger projects.
- Added option to set ventilation requirements based on ASHRAE Standard 62.1-2007.
- Changed initial default for ventilation preference in new projects to ASHRAE Standard 62.1-2004.
- Upgraded the Building Wizard feature, adding an option to set space ventilation requirements based on space usage types from ASHRAE Standards 62-2001, 62.1-2004 or 62.1-2007.
- Added air system types for Ground Water Source Heat Pump (GWSHP) and Ground Source Heat Pump (GSHP).
- Modified load calculations to include negative miscellaneous sensible loads (a space heat loss for refrigeration cases or industrial cooling processes, for example) in design heating calculations.
- Streamlined the global replace feature (accessed via the Replace option on the Edit Menu) to make adding internal heat gains and heat gain schedules easier.

In addition, the following problems in v4.34 were corrected:

- After a specific sequence of steps the outdoor air ventilation requirements in the space input window were shown as zeroes and could not be changed. The required sequence of steps was (a) specify ASHRAE Std 62-2001 or 62.1-2004 as the project ventilation preference, (b) use the Building Wizard to create spaces, (c) use the Edit/Replace option to change the "Space Usage" input for one or more of the spaces.
- When importing a gbXML file that contained improperly formatted data, an *Error 91 - Object Variable or With Block Variable Not Set* message appeared.
- After importing a gbXML file, the display of unit labels or unit of measure drop-down lists was sometimes incorrect. For example a drop down list for ventilation units of measure listed "BTU/hr/person" instead of "CFM/person".
- During system design calculations an *Error 0 in cDesignLoad fnVentilationSpec* occurred if the Building Wizard had been used to create spaces served by the air system and ventilation airflow was calculated per ASHRAE Std 62.1-2004.
- For a specific situation the minimum zone airflow for a VAV air system was incorrect and was larger than the correct value. The situation only occurred if a minimum zone airflow was specified with units of CFM (L/s) and one or more spaces in the system used a space multiplier.
- When using the User-Defined sizing option for a VAV system containing parallel fan powered mixing boxes (PFPMBX), the program would not allow the PFPMBX fan airflow value to exceed the primary supply airflow for the zone. This limit should not have been imposed.
- For a complex set of conditions the peak heating plant load reported on the Heating Plant Sizing Summary was incorrect. The plant load was larger than the correct value. Conditions required for this error were (a) air system equipment type is "Terminal Units", (b) air system type is Pkg DX Fan Coils, Split DX Fan Coils, 4-Pipe Fan Coils or 2-Pipe Fan Coils, (c) the fan coils provide heating, (d) a common ventilation unit is used, (e) the common ventilation unit includes a humidifier, AND (f) the humidifier is "Direct Steam Injection" or "Heated Pan, Steam HX" and the fan coil heat source is anything other than steam, OR the humidifier type is "Heated Pan, Hot Water HX" and the fan coil heat source is anything other than hot water.
- The default time zone value for Ankara and Istanbul, Turkey was incorrect. Default data shows a value of GMT minus 3 hours. The default should be GMT minus 2 hours.

More detailed explanations of program additions and problem corrections are provided in section 1.2 ("What's New in HAP?") in the program's on-line help system.

INSTALLATION PROCEDURES

Make sure your computer meets the minimum requirements:

- Hard Disk Space: Maximum 100 megabytes. Typical: 25-30 megabytes.
- 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 v1.03L or later.

To perform a full install, please use the following procedure:

- **Note:** When installing HAP System Design Load on a computer for the first time, you must install X Builder Framework first before installing HAP System Design Load. The X Builder Framework installer and installation instructions are provided on the same web page from which you downloaded System Design Load v4.41.
- Download the **e20-sdl441.exe** full install file from the internet site and save it to your hard disk.
- Run Windows Explorer and double-click the **e20-sdl441.exe** file to start the installation.
- During installation you will be required to enter your customer number and unlock code that you obtained from Carrier when you licensed the software.

Use the following procedure to run HAP System Design Load v4.41:

- 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 click on the “HAP System Design Load v4.41” item in this group.

PREVIOUS VERSION INFORMATION

1. Data from HAP System Design Load versions v4.0 thru v4.3 can be converted for use in 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 System Design Load 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 System Design Load v4.4 will not replace 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 “HAP System Design Load 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. Version 4.34 will then be uninstalled.

PROGRAM DOCUMENTATION

The *HAP Quick Reference Guide* has not been changed. The current edition has a publication date of 7/2008.

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