



System 2000's Digital Energy Manager Exceeds All 2012 Temperature Reset Requirements

When John Marran integrated heat, hot water, low mass technology and energy recovery controls in the innovative System 2000, he was generations ahead of the existing heating equipment. In 2008, the Department of Energy published a Final Rule¹ that incorporates minimum Annual Fuel Utilization Efficiency (AFUE) with mandated design features.

Over 30 years ago, in 1979, the System 2000 Energy Manager incorporated more advanced energy saving features than this Final Rule requires, and it complied decades in advance of the September 1, 2012 effective date. The System 2000 Energy Recovery Cycle (or thermal purge cycle) exceeds all DOE mandated features:

(iii) *Automatic means for adjusting water temperature.*

(A) The automatic means for adjusting water temperature as required under paragraph (e)(2)(ii) of this section must automatically adjust the temperature of the water supplied by the boiler to ensure that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of water supplied. **See the exception in item (B) below**

(B) For boilers that fire at a single input rate, the automatic means for adjusting water temperature requirement may be satisfied by providing an automatic means that allows the burner or heating element to fire only when the means has determined that the inferred heat load cannot be met by the residual heat of the water in the system. **The System 2000 burner only fires during a heat demand and when the inferred heat load requires additional heat energy.**

(C) When there is no inferred heat load with respect to a hot water boiler, the automatic means described in this paragraph shall limit the temperature of the water in the boiler to not more than 140 degrees Fahrenheit. **System 2000 controls never run the burner unless there is an actual (or inferred) heat load.**

(D) A boiler for which an automatic means for adjusting water temperature is required shall be operable only when the automatic means is installed.

Removal of the Digital Energy Manager disables system operation.

Further, the Energy Recovery Cycle recovers energy left wasted in the system and greatly reduces off cycle losses found in typical temperature reset control operation. This unique control eliminates penalties for system oversizing and optimizes hot water efficiency, delivering the best of both heat and hot water functions.

With System 2000, today's controls far exceed future DOE minimum efficiency requirements. And System 2000 is manufactured with power from Solar Energy.

SYSTEM 2000
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¹DEPARTMENT OF ENERGY, 10 CFR Part 430, [Docket No. EE-RM/STD-01-350], RIN 1904-AA78; Energy Conservation Program for Consumer Products: Energy Conservation Standards for Residential Furnaces and Boilers as published in the Federal Register / Vol. 73, No. 145 / Monday, July 28, 2008 / Rules and Regulations