VENTILATION UNIT CALIBRATION APPARATUS, SYSTEM AND METHOD

PRIORITY CLAIMED

This international application claims priority to U.S. Patent Application No. 12/873,069 filed 31 August 2010, the contents of which is incorporated by reference in its entirety herein.

FIELD OF THE INVENTION

[0001] Embodiments of t~~T~~he present invention relate~~s~~ to ventilation unit performance, and more particularly, to an apparatus, system and method for calibrating a ventilation unit to achieve a desired flow rate in any of a variety of installation environments.

SUMMARY

[0002] According to a first aspect of the present invention, there is provided~~In some embodiments, the present invention provides~~ a ventilation unit for installation in a ventilation system. The ventilation unit can include a motor coupled to a fan element and a power source. The ventilation unit can also include a calibration module for adjusting an actual air flow rate of the ventilation unit altered by at least one physical characteristic of the ventilation system, the calibration module including a power regulator coupled to the motor and configured and arranged to provide power to the motor to alter the actual flow rate through the ventilation system such that the actual flow rate corresponds to a reference flow rate based on a performance rating of the unit~~coupled to the motor and having a power regulator for adjusting the performance of the ventilation unit based on at least one characteristic of the ventilation system~~.

[0003] According to a second aspect of the present invention, there is also provided~~The present invention also provides~~ a method of calibrating a performance rated ventilation unit including determining at least one physical characteristic of a ventilation system. The method can also include regulating a power supplied to a motor of the ventilation unit motor to alter an actual flow rate of the ventilation system such that the actual flow rate corresponds to a reference flow rate based on a performance rating of the ventilation unit~~the ventilation unit based on the at least one characteristic of the ventilation system determined to satisfy the performance rating of the ventilation unit~~.

[0004] According to a third aspect of the present invention, there is provided~~In some embodiments, the present invention provides~~ a method of installing a performance rated

ventilation unit including connecting a ventilation unit including a motor and a fan to a ventilation system; assessing at least one physical characteristic of a ventilation system; assessing at least one of a current and voltage supply capacity of a power source; and adjusting a power supplied to the motor to alter the actual flow rate of the ventilation system such that the actual flow rate corresponds to a reference flow rate based on a performance rating of the ventilation unit~~to a ventilation system and assessing at least one characteristic of a ventilation system and a power supply capacity of a power source. The method can also include adjusting a power supplied to the ventilation unit based on the at least one characteristic of the ventilation system determined to satisfy the performance rating of the ventilation unit~~.