reducing operating pressure

The RF-8 retrofit kit was initially designed to replace the mechanical constant volume regulator (MCV) used in vintage Anemostat air terminals. The RF-8 kit can also be applied to other manufacturer's terminals with the appropriate adapters. This internal retrofit kit is designed to lower the minimum operating pressure requirements of the existing assembly while reducing refrigeration and heating costs. New controls and sequencing (often using the existing inlet dampers and actuators) eliminate or minimize mixing of hot and cold air flows without sacrificing thermal comfort.

Graph 12 shows the static pressure requirement for both the existing Anemostat MCV regulators and new RF-8 retrofit valves. The pressure reduction due to an RF-8 retrofit can be determined from this graph, and is explained by example:

Existing Air Terminal: Anemostat Model HVE-7
Internal Regulator: 18" MCV Regulator
Design Flow Rate: 700 CFM Constant Volume
Min Operating Ps (graph): .82" w.g.

Retrofitted HVE-7
New VAV Design Flows: 700 CFM/300 CFM
Retrofit Valve Size: 12" RF-8
12" RF-8 Air Flow Range: 240 – 805 CFM
Min Operating Ps (graph): .34" w.g.

Operating Pressure Reduction = .82" - .34" = .48" w.g. (12" RF-8)

An 18" RF-8 would provide an even greater pressure reduction = .82" - .18" = .64", but air flow range for 18" RF-8 is 1115-335 CFM. The minimum setpoint would have to be increased from 300 CFM to 335 CFM to use this size.

GRAPH 12