



# Air-Modulator V Retrofit HVAC Applications

## OVERVIEW

Supersedes: Nothing

Form 50.40-OV36 (599)

### Introduction

The Air-Modulator V is the latest in the Air-Modulator series of variable speed drives offered by York. They are specifically designed and constructed for HVAC applications. This overview will highlight the primary opportunities for retrofitting the Air-Modulator V drives to HVAC systems in existing buildings.

### Scope

The three HVAC components for which you will find the greatest application opportunities are:

- Air Handler Fans
- Condenser and Chilled Water Pumps
- Cooling Tower Fans

The standard Air-Modulator V line covers a wide power and voltage range to meet most HVAC applications with both 50 and 60 hz power. Special enclosures (NEMA 3R) and higher power ranges are available as special quotes. The standard drives cover the following ranges:

- ½ to 100 HP @ 208-230 V
- ½ to 200 HP @ 400-460 V
- 3 to 200 HP @ 575 V

### Customer Benefits

Energy Savings: The primary motivation for most retrofit VSD projects is the significant energy saving potential. Variable speed drives offer significant energy savings over other traditional means of varying air and water flow. Short payback periods from one to two years are common for many VSD retrofit projects.

Enhanced Reliability: The inherent soft-start and infinitely variable flow characteristics of the VSD greatly reduce or eliminate the following common problems: inlet guide vane malfunction, binding and noisy discharge dampers, mechanical failure of variable pitch fan blades, motor failure due to excessive cycling, and premature belt and gear drive failures.

York Experience: York has led the HVAC industry in variable speed drive (VSD) technology since 1979 when it successfully applied the Turbo-Modulator™ to centrifugal chillers. In 1983, York introduced the Air-Modulator line to expand York's application of VSD technology to include other HVAC equipment. The Air-Modulator V line of drives benefits from over 15 years of application experience in HVAC systems.

### Sales Strategy

York's best opportunity for a retrofit Air-Modulator sale occurs when we identify a customer need and provide the most competent and credible solution for meeting that need. In most cases, a well planned Air-Mod retrofit will make a compelling sales offer because it address system deficiencies, and in many cases it also offers a very short payback period.

Represent York as the Integration Experts. The proper application of the Air-Modulator requires a thorough understanding of the customer's HVAC system and controls. There are many drive manufacturers, but York is the only major HVAC manufacturer in the U.S. with a proven track record of supplying and applying its own drives.

York's Air-Modulator V provides these significant marketing advantages:

- Single source responsibility
- Broad application experience
- Comprehensive line of drives
- Compatibility with most BAS systems
- Competitive pricing
- Complete array of options and accessories
- Flexible delivery schedules

### Reference and Support Materials

The EP table of contents contains a list of the literature included with this offer. The literature is grouped into the three series described here:

- 50.40 series is targeted specifically to the retrofit application and marketing of the Air-Modulator V drives.
- 100.40 series is targeted for use by sales engineers, but is also directly applicable to retrofit applications
- 100.01 and 100.04 series contain useful generic application information on variable air volume (VAV) and variable volume pumping systems. Although somewhat dated, they explain the basic principles for applying the Air-Modulator to HVAC equipment and systems.



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