A New Concept in Automation.

AV-300i™
The AV-300i™ is an exceptional drive. A quick glance shows the sleek, ergonomic design that makes it stand out from the crowd. Taking a closer look at the AV-300i shows the impressive performance and flexibility in a compact package that suits your application.

With innovative modes of operation like sensorless flux vector control, closed loop flux vector control, and scalar V/Hz, the AV-300i is the perfect solution for any control system. And, the drive is easily programmed with our GE Control Systems Toolbox software providing a convincing combination of performance, elegance, functionality and cost effectiveness for your control solution.

Application breadth

The AV-300i covers a wide range of horsepower ratings—from 3/4 to 200 Hp to serve a broad range of applications. Whether its a stand-alone extruder or dual turret winder on a blown-film line, the AV300i provides the power for the application.
Outstanding performance.

But it’s more than just horsepower. It’s the wide range of I/O and communication bus interfaces to easily link the drive to a push-button operator station with a speed pot or an automated solution with PLC’s and HMI’s. It’s the embedded software parameters like droop and draw and advanced functions like link functions with mathematical blocks so the AV300i makes your process line co-ordinated. It’s the high-performance regulators that can do tension control on a nip or high speed accuracy for fiber spinning. It’s the ability to connect to the RS300 regenerative source for applications requiring regenerative braking, like a coordinated process line. It’s the Win+Drive configuration software and DGF card that allow easy programming for advanced applications and sophisticated processes like a turret winder or flying shear control. It’s the universal agency approvals like UL, cUL, and CE that covers applications around the globe. You do a myriad of applications with drives; finally, the AV300i, a drive that does a myriad of applications.
**PC-Based configuration and control**

The AV-300i includes the GE Control System Toolbox as a standard offering across the product line. What makes this CD-ROM based tool unique is its combination of configuration, trend recording, and operator interface. A real-time picture of signal flow, sequencing and regulator control in the AV-300i are provided by animated block diagrams. Standard ‘drag and drop’ techniques allow any block diagram value to be copied to the trend recorder for real-time monitoring and historical trending. Drive parameters can be checked and modified online directly from the toolbox and various drive configurations can be stored for future uploads. A virtual reality keypad allows operators to control the drive directly from the PC screen as if they were using the keypad mounted on the drive itself. The same programming tool also works with other GE products - the DV-300 and RS-300 - and is the same GE Control Systems Toolbox that works with Innovation series of low and medium voltage drives. We invented a creative programming tool so you can be creative with your applications.
Easy installation

An innovative drive makes installation effortless. No matter which horsepower rating you need, the AV300i offers easy installation because our integrated hardware, backlit keypad and option cards are standardized across the horsepower range. GE Control System Toolbox wizards make AV-300i installations a breeze. These revolutionary wizards guide the operator through a question and answer session for configuration and tune-up. The wizards use the answers to determine the appropriate next question. For example, when you answer that your application does not have an encoder, the wizard does not ask any questions about encoder parameters. Online help pages put the answers to questions right at an operator’s fingertips and are available at any time and any point during the set-up, start-up, or operation of the drive.

We’ve included graphic monitoring of drive variables to expedite start-up and show the operator the drive’s parameters and functions. Animated block diagrams provide real time graphical analysis of drive functions. An integrated trend window provides real time or capture buffer based trending. This functionality combined with built-in AV300i features like its powerful self-tune algorithms make start-up and configuration straightforward. And when you consider the AV300i’s small size, you’ll find that it makes space in the most crowded control cabinets. Simple and quick start-ups, an innovative feature of the AV300i.

Simple operation

The AV-300i is not only easy to install and quick to program but it’s easy to operate. We gave the AV-300i an ergonomic, removable keypad with a 2 line x 16 character display and RS485 serial communications as standard features. Then, we made the keypad adjustable with back lighting for easy viewing and access - no matter where the drive is installed.

The local keypad has operation functions that include:

- **Toggle between local and remote mode**
- **Jogging in the selected direction**
- **Forward/Reverse selection**
- **Start/Stop of the drive**
- **Increment/Decrement the configured speed of the drive**

For coordinated systems and process lines, the drive works with a wide-variety of popular communication buses, PLC’s and HMI’s so it can operate in your automation system.

Simple operation is basic, but simple operation the way you want it is innovative.
Open architecture

Our open architecture offers the ability to connect to popular communications protocols like Devicenet, Genius, Profibus, I-S Bus and Interbus-S and easily integrate with popular PLCs and Operator Interfaces. With the addition of a DGF programmable application card, you can develop customized control functions and execution blocks that can be directly incorporated into your AV-300i’s configuration. With our WIN+DRIVE graphical program editor, you have pre-designed code and a library of building blocks so you can “click-and-drag” and “point-and-click” to make the DGF card your application solution. Predeveloped programs such as winder control and electric line shaft are also available. And, the AV300i’s architecture knows no boundaries. The drive comes UL, cUL, and CE labeled so it has the agency approvals needed around the globe. The AV300i opens up your architecture.

The AV300i’s compact design fits into packed control cabinets. Up to 20 Hp, the drive can mount “bookshelf” style so space is not wasted due to clearance requirements for heating.
Outstanding OnSite Support

Succeed in any application

Flexibility is the key component of the AV-300i drive in a variety of industrial applications. Whether in stand alone or in integrated drive systems, these powerful units provide ready and accessible performance. The DGF card option puts interactive development, system control, and high level drive functionality at the user’s fingertips. The standard window based toolbox provides a virtual keypad, remote mounting, and on-line trending and diagnostics for easy operation and analysis.

Stand alone
- Synchronized speed control, tach followers
- Torque control and current followers
- Surface winders, centerwinders, max torque winders
- Multiple stop modes, speed set points, ramp rates
- Power dip ride through

Paper, converting & processing
- Outer loop PID control - accumulator, pressure, dancer, load cell.
- Draw control
- Slack take up & down
- Torque control, current followers
- Surface winders, centerwinders
- Tach followers, max torque winders
- Increase/decrease process setpoints
- Multiple stop modes
- Synchronization control

Plastic, rubber and processing
- Outer loop PID control - pressure, dancer, load cell.
- Draw control
- Torque control
- Centerwinders, current winders

Textiles, printing, metals and metal processing
- Outer loop PID control - accumulator, dancer, load cell.
- Draw/draft control
- Torque control
- Surface winders, centerwinders, max torque winders
- Increase/decrease speed push buttons
- Multiple stop modes
AV-300i Reliability and service

Behind the performance, easy operation, and open architecture of our drives is our relentless commitment to quality. We know you count on your drives to provide the power for your application day in and day out. We know that every minute of down-time impacts your business’s bottom line. That’s why we include the time-saving GE Control Systems Toolbox with each drive. Its help screens and trending not only solve problems but helps you avoid them so your process keeps running. We also make available a wide range of replacement parts and components, available through local suppliers. We also have a trained force of local service engineers and technicians as close as your phone. Just dial 1-800-533-5885. The service and support are there if you need it; the commitment to quality and reliability are there so you don’t.

Maximize uptime with OnSite Support

When operating GE installed equipment, the ability to use our OnSite Support™ Service is only a phone call away. This service gives you direct access to our engineers, 24 hours a day, 365 days a year, to help you reduce downtime and maximize production.

The connectivity of our system components allows the drives to become a system process diagnostic tool. Experience shows that over 92% of the problems are solved by the OnSite Support™ engineers online.

From technical training to our Rapid Response Program for parts and service, GE has what you need to maximize your process and reduce downtime. Ask your GE representative to go over the many benefits our OnSite Support System can bring to your process.

In real time, we can make a difference

We look at your problem and become a partner to:

- Troubleshoot
- Help resolve problems
- Perform drive system analysis
- Provide diagnostic information
- Trend key parameters
- Ensure preventative maintenance is performed
- Maximum system performance