

AC Drive Solutions

We Engineer Uptime



Nidec

INDUSTRIAL SOLUTIONS

Automation Systems



Our Organization

Nidec is a global corporation comprised of approximately 230 group companies with highly-reputed engineering capabilities in motor related fields. Nidec is the world's No. 1 comprehensive motor manufacturer handling "everything that spins and moves," from small precision to supersized motors and drives.

Nidec Industrial Solutions combines the products, services and application expertise of Nidec group companies in the control and automation sector. As part of Nidec Industrial Solutions we are able to offer a complete range of products from rugged stand-alone industrial motors and drives to turnkey mill-wide control systems. Our goal is to provide customers with the best technological solutions for their control system needs.

We Engineer Solutions That Deliver Uptime

- High reliability drives and encoders
- Industry proven engineering services
- Start-up and commissioning services
- Multi-level diagnostics
- Professional training
- 24/7/365 support
- Specialty service contracts

ACCEL500™ – the Reliable Choice

The ACCEL500 family of AC drives from Nidec Industrial Solutions brings you a combination of system level intelligence, ease of use, rugged design and reliability, all in one common platform.

We offer a wide range of system configurations including stand-alone general purpose and high performance inverters, DC fed inverters, non-regenerative 6 and 12 pulse converters, active front-ends and brake choppers.

Flexibility is Our Hallmark

Whether a new installation or an upgrade, we design systems to work the way you do. Decades of experience with industry standard controls and communications protocols means we deliver a drive system built around your specifications, not ours.



ACCEL500™



Wall-Mounted AC Drives

- General purpose and high performance, air-cooled, compact AC drives
- Power range from 1-250 HP
- All necessary components integrated in a single frame, including internal EMC filter
- Available packaged to NEMA 1/IP21 or NEMA 12/IP54 standards
- High switching frequency, low noise
- Low torque ripple
- Suitable for multi-motor application



High-Power AC Drive Modules

- Air-cooled, modular AC drive designed for demanding applications
- Power range from 250-2000 HP
- Available as both 6 or 12 pulse supply versions
- IP00 rated modules are designed to be mounted in separate enclosures
- Includes external AC chokes
- Optional 150% or 200% overload capacity



Common DC Bus Products

- Flexible system configuration
- DC fed inverters available from 1-2500 HP
- Improved tolerance to voltage dips/sags
- Reduced power cabling
- Smaller overall system footprint
- Standard non-regenerative front-ends
- Low harmonic Active Front End (AFE) solutions
- Optional brake chopper units



Liquid Cooled AC Drives

- Quiet, compact and high power density
- Power range from 10-7000 HP
- Exclusively designed for liquid cooling
- Less than 5% of the drive's losses are transferred to surrounding air
- Available as both 6 or 12 pulse supply versions
- Standard, self-contained liquid-to-liquid cooling systems
- Extensive marine approvals

FLEXI



Application Specific Software

- Standard, industry specific software allows users to quickly and efficiently configure a drive for almost any industrial application
- Speed/tension control for paper, steel, plastic web lines
- Surface and center-driven winding control
- Absolute position control
- Fan & pump control
- Industrial and dock side crane control
- Marine applications: propulsion, thrusters and winches
- Start-up wizards allow for 15 minute or less commissioning



Built to Last

- A full 2 year warranty backs up our “build it rugged and reliable” design philosophy
- Onboard DC-DC power supplies provide isolated, reliable power for control electronics
- DC cooling fans increase lifetime and reduce fan losses
- Conformal coated circuit boards give reliable protection from dust and moisture
- Metal constructed power modules incorporate all plated copper bus work and are built tough for the long run



Connectivity

- SystemBus offers high speed drive-to-drive fiber optic network
- Multi-protocol Ethernet for PLC connectivity and diagnostics:
Ethernet IP | Ethernet Global Data (EGD) | Modbus TCP
- Field Bus support for interfacing with smart sensors and other automation controllers:
Profibus DP | DeviceNet | Modbus RTU | CANopen
- Serial port included on all units for local/remote keypad or local PC interface



BILITY



User-Friendly Keypad

- Removable panel can be remote mounted on enclosure door
- Parameter backup and copy using panel's internal memory
- Graphical keypad with multi-language support
- Parameter monitoring and editing using text display



Option Boards

- All ACCEL500 drives feature 5 plug-in expansion slots
- Option boards can be selected to customize the ACCEL500 drive to an application
- Supported option boards include:
 - Incremental and absolute encoders
 - Smart sensor interfaces
 - AC and DC digital I/O
 - Analog I/O
 - Communications channel controllers



Common Control

- All ACCEL500 drives utilize a common control platform reducing required spares
- Support for induction and permanent magnet motors in both open and closed loop control modes is standard
- ADDapt™ & FLASH™ ACC programming software provided with each unit allows uploading, downloading and editing of parameter files and troubleshooting through our real-time monitoring window
- PerformanceView™ diagnostic interface is supported via Ethernet

Connectivity

Distributed Control

ACCEL500 based drive systems utilize Ethernet communications to integrate our intelligent drives with industry standard PLCs and HMIs.

Whether a new installation or an upgrade, we build systems to your specifications. With Nidec Industrial Solutions drive systems, the choice of PLC and HMI brand is always yours.

Multi-Vendor Support		
Rockwell Automation	General Electric	Modicon / Schneider
Ethernet IP™	Ethernet Global Data®	Modbus® TCP

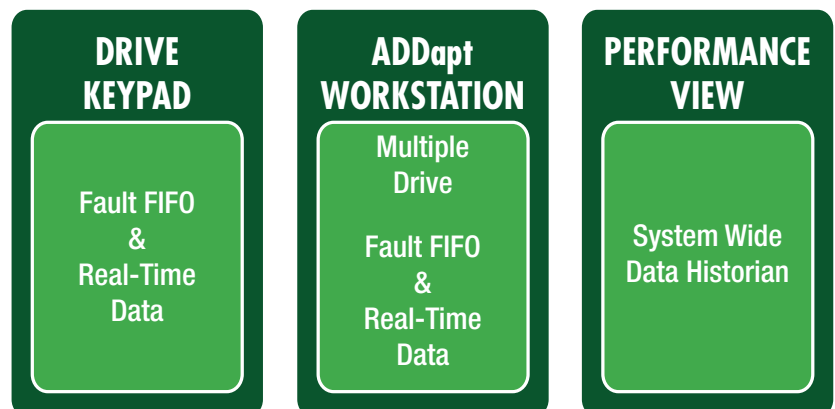
Our vendor independent open architecture allows our drive systems to blend into your existing control strategy.

- Reduces troubleshooting time
- Minimizes required system spares
- Reduces overall training cost
- Maximizes your investment in programming tools
- Reduces operator learning curve

Monitoring and Diagnostics

Locate and Classify Problems in Minutes

When faults occur and machines stop running, every minute means lost productivity. Our monitoring and diagnostic tools provide rapid determination of fault location and severity so your team can take immediate corrective action.



PerformanceView™ Ties It All Together

Scalable Diagnostic System

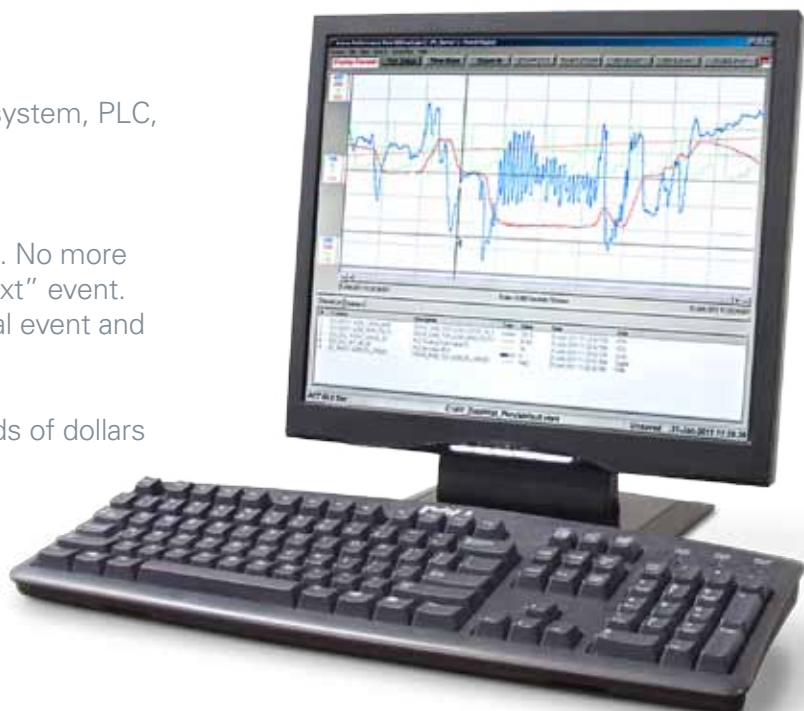
Gather data simultaneously from your drive system, PLC, HMI and process equipment.

More Efficient Troubleshooting

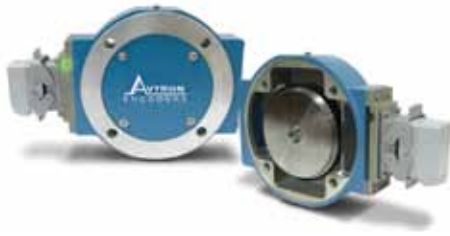
PerformanceView is your 24/7/365 watchdog. No more setting up recording devices to catch the “next” event. Instead, identify the root cause after the initial event and avoid costly reoccurrences of problems.

PerformanceView customers save thousands of dollars

- Maximize production
- Improve performance
- Increase availability



Mill Duty Magnetic Encoders



AV850 Features

- High power outputs with short circuit protection
- Wide gap technology
- Replaceable sensors to maximize uptime
- Diagnostic LED & alarm contact
- No bearings or couplings
- Fits shafts up to 4 1/2" [115mm], metric or US
- Fits 8 1/2" C-Face



AV685 Features

- High power outputs with short circuit protection
- Diagnostic LED & alarm contact
- Replaceable sensors to maximize uptime
- Fits shafts with diameter of 1 1/8"
- Auto-centering spline shaft system for perfect fit every time



HS45 Features

- Field resizeable by changing inserts
- Diagnostic LED & alarm contact
- Heavy duty bearings for rugged applications
- Fits shafts from 5/8" to 1 1/8" [16mm to 30mm]
- Clamp and center-bolt mounting styles



AV30 ABSOLUTE Encoder Features

- Perfect drop-in upgrade for many light duty absolute encoder models
- Huge variety of flanges: IEC B10, 58mm clamp and servo, US NEMA, 2.5" square
- 4096 or 8192 counts per turn
- 0 - 32768 turns counting
- Analog or digital output
- No gears, no optical disks, no batteries
- Bearings over 20X larger than light duty models

AC Machines

The U.S. MOTORS® brand of high performance commercial and industrial motors is designed to help industry reduce energy consumption and comply with EISA regulations. The line includes upgraded Open Drip-Proof and Totally Enclosed motors that meet or exceed NEMA Premium® requirements.



TITAN® Horizontal

- Three Phase, ODP, WPI, WPPI, TEFC and Hazardous Location
- 150 – 4000 HP
- 3600, 1800, 1200, 900, 720 and 600 RPM
- 449 – 9608 Frame
- 460 – 6900 Volts



ACCU-Torq® 2000:1
Constant Torque

Vector Duty

- Three Phase, TENV and TEFC
- 1 – 300 HP
- 143 – 449 Frame
- 3600 and 1800 RPM
- Constant torque near zero RPM



Inverter Duty

- Three Phase, ODP and TEFC
- 1 – 200 HP
- 3600, 1800 and 1200 RPM
- 143 – 447 Frame
- Meets NEMA® MG1 Part 31 requirements for inverter duty



Vertical Pump Motors

- Three Phase, WPI, WPPI, TEFC and Hazardous Location
- 3 – 4000 HP
- 3600, 1800, 1200, 900, 720, 600 and 514 RPM
- 182 – 9608 Frame
- Designed for high or normal thrust
- Available in Vertical HOLLOSHAFT® and Vertical Solid Shaft

Nidec

INDUSTRIAL SOLUTIONS

All for dreams



Product brands manufactured by the Nidec Industrial Solutions group:



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