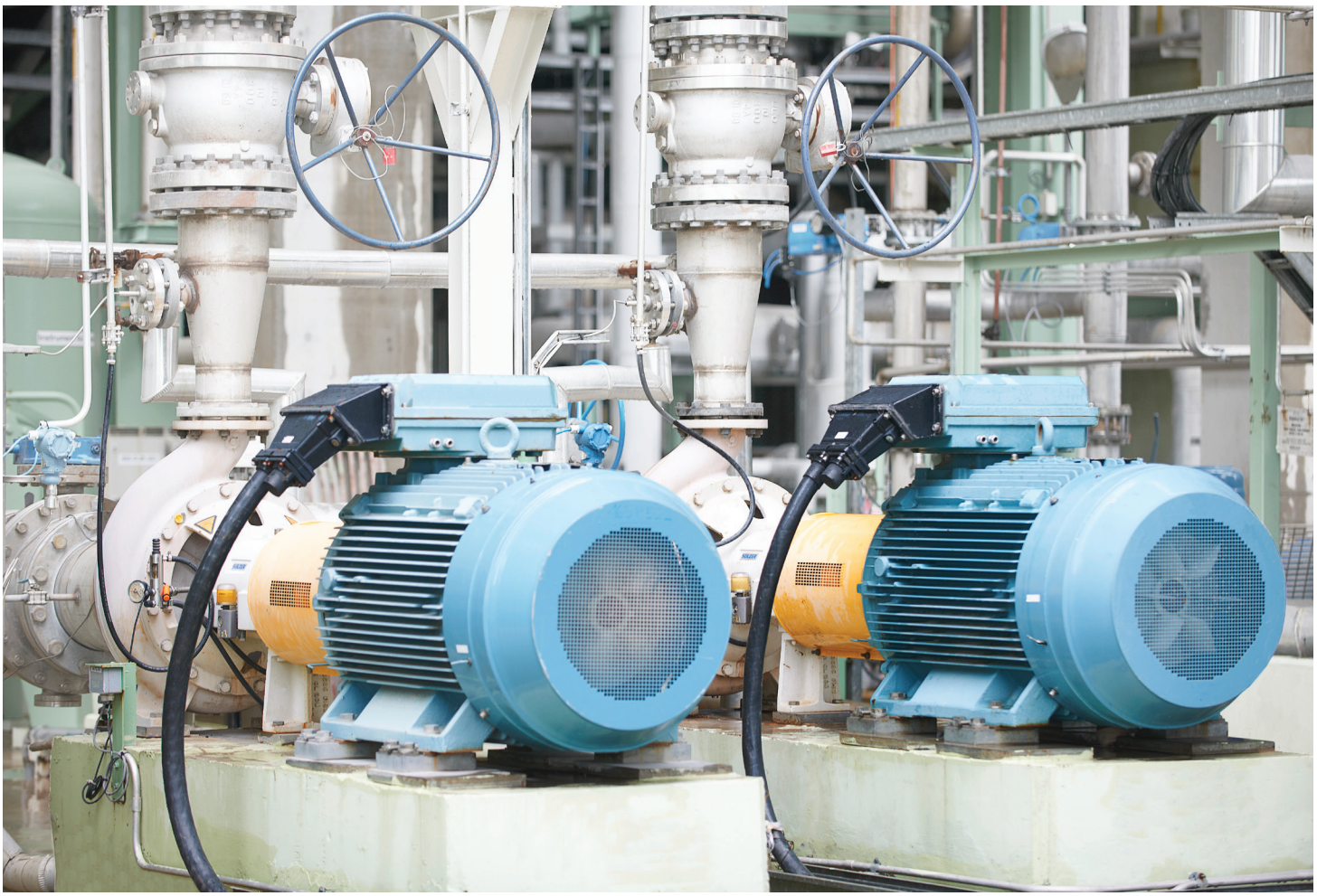
ABB micro drives
Product guide

Power and productivity
for a better world™

Smooth motor control and energy savings



What is an AC drive?

An AC drive is an electronic device that is used to adjust the rotating speed or torque of a standard, electric AC motor. The electric motor, in turn, drives a load such as a fan, pump or conveyor.

AC drives are also referred to as frequency converters, variable frequency drives (VFD), variable speed drives (VSD), adjustable frequency drives (AFD), adjustable speed drives (ASD) or inverters.

ABB - global market and technology leader in AC drives

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. ABB is the world's largest drives manufacturer. The ABB Group of companies operates in around 100 countries and employs more than 140,000 people.

ABB in North America

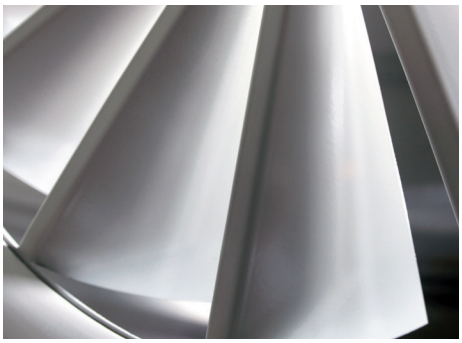
Our roots within North America begin with the Westinghouse Electric Corporation, founded by George Westinghouse in 1886. A tireless inventor and businessman, Westinghouse's promotion of an alternating current (AC) system revolutionized the power industry.

Continuing to embrace the spirit of American industrialism, mining pioneer Henry Harnischfeger joined the ABB family tree in 1981, opening a new controls manufacturing facility in the heart of the Midwest. Today, a cornerstone of ABB Automation Products' business area resides within a state of the art production facility in New Berlin, Wisconsin. The Drives and Controls operations are responsible for the product development, applications design, manufacture and servicing of AC and DC drives, engineered drives and control systems, motors, generators, and power conditioning and power quality systems.

Electric motors consume about 65% of all electricity used throughout industry. Yet, less than 10% of those motors are fitted with a variable speed drive.

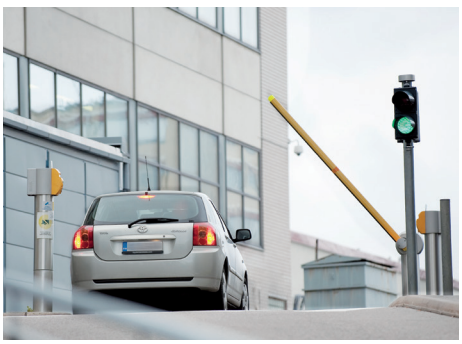
Benefits of using AC drives

Substantial energy savings
Rather than running an electric motor continuously at full speed regardless of the process, an electric drive allows the user to slow down or speed up the motor based on current demands.



Optimal process control
An electric drive enables the process to achieve the right speed and torque while maintaining its accuracy. This contributes to more consistent quality and throughput of the end product.

Reduced need for maintenance
Controlling the speed or torque of an electric motor means there is less wear and tear on the motor and the driven machine.



Efficient system upgrade
An AC drive allows for the removal of valves, gears and belts. It also ensures network dimensioning based on a lower starting current.

ABB drives common features

Easy to select
Selecting a drive can be as simple as choosing the power rating, voltage and current through to more complex and detailed dimensioning and the addition of various options. See our guide on page 5 to get started.

Easy to purchase
ABB drives are available from a large network of approved ABB partners. Please contact ABB for more details.

Easy to install
The drives are simple to install, featuring a variety of mounting options from wall-mounted to cabinet mounted.

Easy to operate
Once installed and commissioned, the drives are incredibly easy to operate. The user interface allows instant adjustments to speed or other more advanced parameters.

Introducing the most extensive drives portfolio in the world

ABB micro drives
Precise speed control and simple integration.
ABB micro drives are suitable for many low power applications such as pumps, fans, and conveyors. Designed to be integrated into your machinery, they offer flexible mounting alternatives and straightforward setup with easy user interfaces and tools.

ABB micro machinery drives
Premium motor control with hardware flexibility.
ABB machinery drives can be configured to meet the precise needs of industry with a wide power and voltage range and both standard and optional features, including integrated safety and ready-made control programs for different applications.

ABB micro general purpose drives
Simplified selection, installation and use.
ABB general purpose drives offer simplicity and intelligence in one plug-and-play box. It's designed to control a wide range of variable torque applications, including pump and fan.

Choosing the right drive for your application

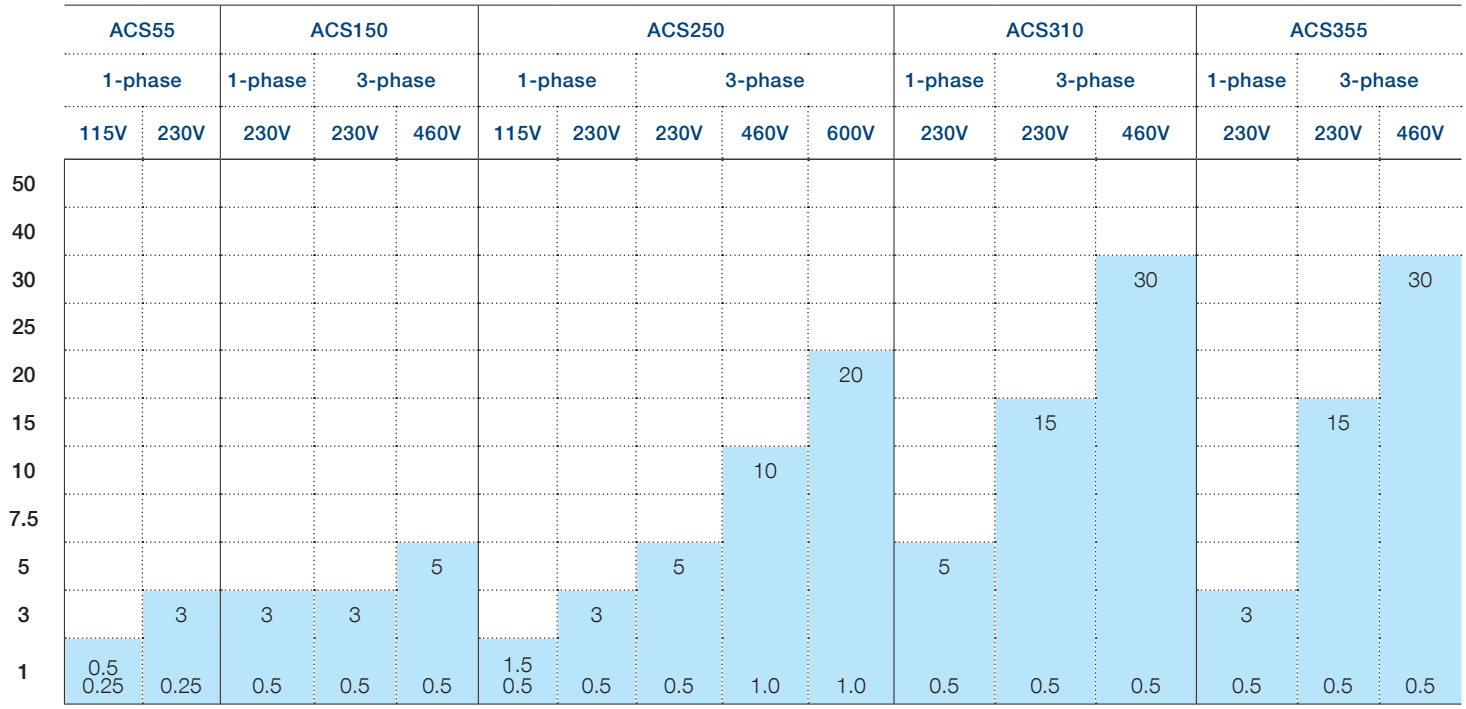
Step	Process	Action
1	**Identify the application** Identify the type of application and the likely demands of the drive.	Continue to step 2.
2	**Understand the load.** System inertia, required acceleration and deceleration rates, minimum and maximum speeds, overload requirements, etc. This information can often be determined by the performance of the existing motor.	Continue to step 3.
3	**Gather the motor nameplate data.** Power, Voltage, Current, Frequency(Hz), RPM, Insulation Class, etc.	Continue to step 4.
4	**Choose a drive** Match the data gathered in Steps 1 to 3 against the table of drive features on page 6 and 7. Select a drive that meets the motor requirements and has all the software features needed for the application.	Continue to step 5.
5	**Is the drive offered in the correct hp/amp rating?** The drive you choose must be able to supply the necessary current to the motor to produce the torque required. This includes normal and overload conditions. See selection table on page 6 and 7.	If yes, continue to step 6. If no, go to step 4.
6	**Is the drive offered in the correct enclosure and environmental ratings?** The drive you choose must be available in an enclosure style that will withstand the application's environment. It also must produce the required current at the application's altitude and ambient temperature. See selection table on page 6 and 7.	If yes, continue to step 7. If no, go to step 4.
7	**Does this drive have the features needed to meet the application's demands?** The drive you choose must have a feature set that matches the application. It also must have sufficient hardware (inputs and outputs, feedback, communications, etc.) to perform the application. See selection table on page 6 and 7.	If yes, continue to step 8. If no, go to step 4.
8	**Does this drive have the motor control performance to meet the application's demands?** The drive you choose must be able to produce the needed torque at the necessary speeds. It must also be able to control speed and torque depending on the application requirements.	If yes, continue to step 9. If no, go to step 4.
9	**Congratulations!** The ABB AC drive you have chosen has the features and performance needed for a successful application.	

ABB drive selection table

Specification		ACS55	ACS150	ACS250	ACS310	ACS355
Voltage and power ranges		1-phase, 100 to 120 V: 0.25 to 0.5 hp (0.18 to 0.37 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	1-phase, 110 to 120 V: 0.5 to 1.5 hp (0.37 to 1.1 kW)	1-phase, 200 to 240 V: 0.5 to 5 hp (0.37 to 2.2 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)
		1-phase, 200 to 240 V: 0.25 to 3 hp (0.18 to 2.2 kW)	3-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)[1]	3-phase, 200 to 240 V: 0.5 to 15 hp (0.37 to 11 kW)	3-phase, 200 to 240 V: 0.5 to 15 hp (0.37 to 11 kW)
			3-phase, 380 to 480 V: 0.5 to 5 hp (0.37 to 4 kW)	3-phase, 200 to 240 V: 0.5 to 5 hp (0.37 to 4 kW)[8]	3-phase, 380 to 480 V: 0.5 to 30 hp (0.37 to 22 kW)	3-phase, 380 to 480 V: 0.5 to 30 hp (0.37 to 22 kW)
				3-phase, 380 to 480 V: 1 to 10 hp (0.37 to 7.5 kW)[1]		
				3-phase, 500 to 600 V: 1 to 15 hp (0.75 to 11 kW)[1] 1 to 20 hp (0.75 to 15 kW)[1]		
Protection classes	UL type 0/IP20	●	●	●[8]	●	●
	UL type 1/IP21	–	–	–	○	○
	UL Type 12/IP54/IP55	–	–	–	–	–
	UL Type 4X/IP66/IP67	–	–	●[1]	–	●[1]
	UL type 3R	–	–	–	–	–
Mounting arrangements	Optimal for cabinet mounting	●	●	●[8]	●	●
	Optimal for wall mounting	–	○	●[1]	○	○
Programming	Parameter programming	●	●	●	●	●
	Sequence programming	–	–	–	–	●
Human-Machine interface	Basic control panel	–	–	–	○	○
	Assistant control panel	–	–	–	○	○/●[1]
	Integrated control panel	●	●	●	–	–
Motor Control		Scalar (V/Hz) selectable for linear (CT) or square function (VT)	Scalar (V/Hz) selectable for linear (CT) or square function (VT)	Scalar (V/Hz), enhanced V/Hz or open loop vector	Scalar (V/Hz) - Linear (CT), squared (VT), or user defined curve	Open loop vector, Scalar (V/Hz) and Closed loop control
Supply Option		–	–	–	–	–
Ambient temperature		-20 to 40 °C (-4 to 104 °F), 50 °C (122 °F) with 15% derate, 55°C (131°C) with 25% derate No frost allowed.	14 to 104 °F (-10 to +40 °C), 122 °F (+50 °C) No frost allowed.	**UL Type 0:** 14 to 104 °F (-10 to 40 °C), 122 °F (50 °C) with derate **UL type 4X:** 14 to 104 °F (-10 to 40 °C), No frost allowed.	14 to 104 °F (-10 to +40 °C), up to 50°C with 10% derate No frost allowed.	14 to 104 °F (-10 to 40 °C), 122 °F (50 °C) No frost allowed.
Inputs and outputs	Digital inputs/outputs	3/0	5/0	4/0	5/1	5/1
	Relay outputs	1	1	1 (+1 as option)	1	1
	Analog inputs/outputs	1/0	2/1	2/1	2/1	2/1
	Encoder feedback	–	–	–	–	○
Supported fieldbus protocols	Modbus RTU	–	–	●	●	○
	Profibus DP	–	–	–	–	○
	DeviceNet™	–	–	–	–	○
	ControlNet	–	–	–	–	○
	CANopen®	–	–	–	–	○
	Ethernet (Modbus/TCP)	–	–	–	–	○
	Ethernet (EtherNet/IP™)	–	–	–	–	○
	Ethernet (EtherCAT®)	–	–	–	–	○
	Ethernet (PROFINET IO)	–	–	–	–	○
	Ethernet (PowerLink)	–	–	–	–	–
EMC compliance (EN 61800-3)	C3, industrial use	○	●	○	●	●
	C2, commercial use (installation by EMC experts)	○	○	○	○	○
	C1, commercial use	○ (conductive emissions)	○ (conductive emissions)	○	○ (conductive emissions)	○ (conductive emissions)
	Input reactors	–	○	○	○	○
	Output reactors	–	○	○	○	○
Brake chopper		–	●	Sizes 2 & 3 only	–	●
Suggested maximum motor cable length		98.5 to 164 ft (30 to 50 m)	98.5 to 196.9 ft (30 to 60 m)	328 ft (100 m)	98.5 to 196.9 ft (30 to 60 m)	98.5 to 196,9 ft (30 to 60 m)
Switching frequency		up to 16 kHz	up to 16 kHz	up to 32 kHz	up to 16 kHz	up to 16 kHz
Output frequency		0-130Hz (0/250Hz) [10]	0 to 500 Hz	0 to 500 Hz	0 to 500 Hz	0 to 599 Hz
Overload capacity		150% for 60 s, 180% for 2s at start	150% for 60 s, 180% for 2 s	150% for 60 s, 175% for 2 s	110% for 60 s, 180% for 2 s	150% for 60 s, 180% for 2 s
Number of preset speeds		1 [10]	3	4	7	7
PC tools	Drive commissioning tool	○	–	–	○	○
	Drive offline programming tool	–	○	–	○	○
	Drive dimensioning tool	–	–	–	–	–
Approvals	UL, cUL, CE, C-Tick, EAC	●	●	●	●	●
RoHS compliance		●	●	●	●	●

● Standard
○ Option
– Not Available
[1] IP66 product variants
[2] up to R2 as standard
[3] G1/G2 frames IP00
[4] Application Programming
[5] DO are DIO and can be used as DI
[6] Frame dependant
[7] CC, PC, and PD product variants
[8] IP20 variant
[9] IP54 variant
[10] Greater range when programmed with DriveConfig software
[11] I/O can be expanded with optional modules
[12] Eight digital outputs can be configured to be DI or DO

Horsepower Comparison Chart



Applications
Overview

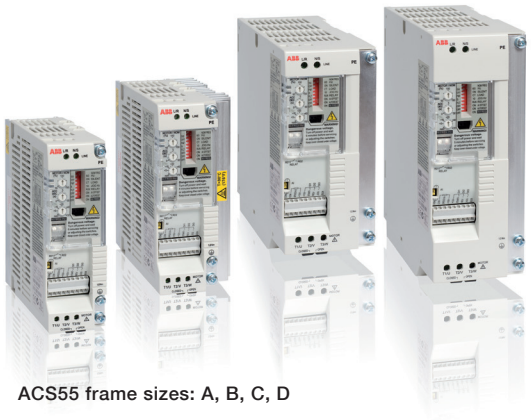
Applications where to use	ACS55	ACS150	ACS250	ACS310	ACS355
Pumps	●	●	●	●	●
Fans	●	●	●	●	●
Conveyors	●	●	●		●
Material handling machines	●	●	●		●
Exercise equipment	●	●	●		
Home appliances	●	●	●		
Gates, doors, barriers	●	●	●		●
Compressors				●	●
Cutting machines, shears, saws					●
Extruders					●
Machine tools, mixers, stirrers		●	●		●
Spinning machines		●			●
Centrifuges					●
Processing lines		●	●		
Kilns					

ABB micro drives
ACS55, 0.25 to 3 hp (0.18 to 2.2 kW)

What is it?

The ACS55 drive has a compact and slim design that can be integrated easily into existing panels, replacing contactors and motor starters. Its compact size is ideal for new installations or whenever speed control of AC induction motors is needed. For users new to drives, it is programmed using simple DIP switches and rotary dials.

The ACS55 drive meets the requirements of industrial end users, installers, machine builders and panel builders.



ACS55 frame sizes: A, B, C, D

Feature	Benefit	Result
Single phase supply	Suitable for single phase residential and commercial applications	Avoids cabling and installation costs associated with three-phase supplies
Slim design	Fits easily into a variety of cabinet designs	Cabinet size can be smaller or greater packing density can be achieved
Flexible installation alternatives	Screw or DIN rail mounting, sideways or side-by-side	One drive type can be used in various designs, saving installation costs and time
High switching frequency	Reduced motor noise	Does not disturb occupants of buildings
Integrated EMC filter as standard	High electromagnetic compatibility	Low EMC emissions in all environments
Easy configuration	Quick setup with DIP switches and trimmers	Substantial time savings. Minimal expertise needed.
DriveConfig kit PC tool	DriveConfig kit PC tool is used to set drive parameters and to upload the parameter set to a drive in seconds, even without a power connection to the drive. The DIP switches and trimmers on the front panel of the drive are disabled after using the DriveConfig kit. This prevents the end users from altering the drive configuration.	Time savings with multiple drives. Drive configuration protected from end user alterations.

For additional technical information, see the ACS55 Technical Catalog (3AUA0000163305)

ABB micro drives
ACS150, 0.5 to 5 hp (0.37 to 4 kW)

What is it?

The ACS150 drive has a compact footprint that can be incorporated into a wide variety of machines. It includes, as standard, all necessary functions and interfaces for typical applications with AC induction motors.

The ACS150 drive meets the requirements of new drive users, installers, machine builders and panel builders.

ACS150 frame sizes: R0, R1, R2

Feature	Benefit	Result
User-friendly LCD control panel	Clear alphanumeric display Easy setup and use	Time savings
Flexible mounting alternatives	Screw or DIN rail mounting, sideways or side-by-side	One drive type can be used in various designs, saving installation costs and time
Integrated EMC filter	High electromagnetic compatibility	Low EMC emissions in selected environments
Built-in brake chopper as standard	No need for an external brake chopper	Space savings, reduced installation cost
Embedded potentiometer	Easy to adjust output frequency	Time savings
PID control	Simple integration to process control	Cost savings as a result of less cabling
FlashDrop tool	FlashDrop is a hand held tool that is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS150 Technical Catalog (3AUA0000085631)

ABB micro drives
ACS250, 0.5 to 20 hp

What is it?

The ACS250 micro drive offers easy to use and compact solutions for general purpose low power applications, such as: mixers, pumps, fans, conveyors, food and beverage. All variants include a built-in Modbus RTU serial communication to provide straightforward integration with control and monitoring systems. The drive's design and ease of setup benefit a broad range of industries.

Available in IP20 and IP66/NEMA4x enclosures.

ACS250, IP20 and IP66 enclosures

Feature	Benefit	Result
User-friendly LCD control panel	Clear alphanumeric display Easy setup and use	Time savings with programming and monitoring
Optional front mounted operator controls (IP66 variant)	Allows the drive to be mounted on the machine close to the operator	Cost savings with operator controls already mounted on the drive – no need for custom panels
Flexible mounting alternatives (IP20 variant)	Wall or DIN rail mounting without extra accessory kits	One drive type can be used in various designs, saving installation costs and time
PI control	Simple integration to process control	Cost savings with PLC functionality built into the drive
Slide-out help card (IP20 variant)	Ready reference, right on the drive	Time savings with setup and programming
Epoxy coated heatsink (IP66 variant)	Protects the heatsink from harsh washdown chemicals	Cost savings with extended life in the harshest environments
Integrated control panel	Quick setup, easy configuration and commissioning, rapid fault diagnosis	Substantial time savings locating faults and implementing repairs, thereby reducing maintenance costs
Enhanced V/Hz control for variable or constant torque applications	Optimized performance and energy savings for all applications	Limited inventory of one drive that can efficiently power both VT or CT applications
Flow through wiring (IP20 variant)	Facilitates panel layout, or contactor replacement, with power leads in at the top and motor cables out at the bottom	Time and cost savings for panel builders
Separate terminal cover (IP66 variant)	No need to expose sensitive electronics to the environment when connecting and commissioning the drive	Time savings with easy access to connection terminals
Built-in brake chopper as standard (sizes 2 & 3)	No need for an external brake chopper	Space savings, reduced installation cost
Safe torque off function (SIL2) as standard (600V only)	Built-in and certified function that is used for prevention of an unexpected startup and other stopping related functions	Reduces the need for external safety components. Helps machine builders to fulfill the requirements of Machinery Directive 2006/42/EC
Open loop vector speed control (600V only)	Precise speed control and automatic motor setup	Time and cost savings
High protection class variant (IP20 variant, up to 20 hp) (IP66 variant, up to 15 hp)	No need to design special enclosure for applications that require high ingress protection	Time and cost savings
CopyStick tool	CopyStick is used to quickly and easily set drive parameters. The tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS250 product flyers (3AUA0000151036, 3AUA0000139676 or 3AUA0000139675)

ABB general purpose drives
ACS310, 0.5 to 30 hp (0.37 to 22 kW)

What is it?

The ACS310 drive is designed for variable torque applications, such as booster pumps and centrifugal fans. The drive contains a powerful set of features including built-in PID controllers and pump and fan control (PFC) that varies the drive's performance in response to changes in pressure, flow or other external data.

The ACS310 drive meets the requirements of new drive users, installers, machine builders, system integrators and panel builders.

ACS310 frame sizes: R0, R1, R2, R3, R4

Feature	Benefit	Result
Same height and depth across power range	Effective space usage	Less engineering and installation time
Commissioning assistants	Easy set up of parameters for PID controllers, real-time clock, serial communication, drive optimizer and drive startup	Time savings. Ensures all required parameters are set.
Pump and fan control (PFC)	One drive controls several pumps or fans. Auxiliary motors are driven according to the needed pump/fan capacity. One motor can be disengaged from the mains supply while others continue operating in parallel.	Saves cost of additional drives and external PLC. Longer life for pump or fan system while reducing maintenance time and costs. Maintenance can be carried out safely without stopping the process.
Pump protection functions	Pre-programmed features such as pipe cleaning, pipefill, inlet/outlet pressure supervision and detection of under- or overload	Reduces maintenance costs. Longer life for pump and fan system.
PID controllers	Varies the drive's performance according to the need of the application	Enhances production output, stability and accuracy
Energy efficiency counters	Illustrates saved energy, CO2 emissions and energy cost in local currency using a baseline determined from the energy consumed when the fan or pump is used directly online	Shows direct impact on energy bill and helps control operational expenditure (OPEX)
Embedded Modbus EIA-485 fieldbus interface	No need for external fieldbus options. Integrated and compact design.	Saves cost of an external fieldbus device. Increases reliability
FlashDrop tool	FlashDrop is a hand held tool that is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS310 Technical Catalog (3AUA0000159910)

ABB machinery drives
ACS355, 0.5 to 30 hp (0.37 to 22 kW)

What is it?

The ACS355 drive is user-friendly, with a wide range of built-in technology such as the safe torque off functionality and sequence programming, which reduce the need for additional control electronics. The product offers options and diverse functionality to cater to the needs set for speed and torque control of AC induction and permanent magnet motors.

The ACS355 drive meets the requirements of new drive users, installers, machine builders, system integrators and panel builders.

ACS355 frame sizes: R0, R1, R2, R3, R4 and IP66 variants

Feature	Benefit	Result
Same height and depth across power range	Effective space usage	Less engineering and installation time
Assistant control panel with Help functions	Quick setup, easy configuration and commissioning, rapid fault diagnosis	Substantial time savings locating faults and implementing repairs, thereby reducing maintenance costs
Scalar and vector control	Optimum performance depending on application	Ensures the end-product is produced cost efficienctly
Sequence programming	Logic programming included as standard with PLC-like functions	Reduces components and wiring in control system
Integrated EMC filter	High electromagnetic compatibility	Low EMC emissions in selected environments
Built-in brake chopper as standard	No need for an external brake chopper	Space savings, reduced installation cost
Safe torque off function (SIL3) as standard	Built-in and certified function that is used for prevention of an unexpected startup and other stopping related functions.	Reduces the need for external safety components. Helps machine builders to fulfill the requirements of Machinery Directive 2006/42/EC.
Product variant for demanding environments with IP66/69K, UL Type 4X protection classes	No need to design special enclosure for applications that require high ingress protection. NSF certified.	Time and cost savings
Product variant for solar pumps	Drive converts PV energy from solar panels to AC current, it can be operated independent from the grid.	Long life time and reduced maintenance costs, energy use and pollution. Improved reliability in electricity supply.
FlashDrop tool	FlashDrop is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS355 Technical Catalog (3AUA0000081917)

Options
Overview

Fieldbus communications
Fieldbus adapter modules enable communication between drives, systems, devices and software. Our drives are compatible with a wide range of fieldbus protocols. The plug-in fieldbus adapter module can easily be mounted inside the drive.

- CANopen
- ControlNet
- DeviceNet
- EtherCAT
- Ethernet IP
- Ethernet Powerlink
- Modbus RTU
- Modbus TCP
- Profibus DP
- Profinet I/O
- PROFIsafe

Driveware options and PC tools
ABB offers a variety of options that allow you to enhance your experience with our drives. These include various levels of control panels, parameter selecting/copy tools, engineering/optimization calculators, powerful integration/programming software, and helpful start-up/maintenance software.

- Automation Builder
- DriveBrowser
- DrivePM
- DriveWindow Light
- EnergySave calculator
- FanSave / PumpSave calculator
- Energy Calculator App

Flexible product configurations
ABB understands every situation is unique. That is why we offer a wide range of options for our drives such as EMC filters, braking, enclosure, mounting, and cabling options.

Enclosure Options
- UL type 0 (IP00)
- UL type 1 (IP21)
- UL type 4X (IP66)

EMC Filters
- 1st Environment, Cat 1
- 1st Environment, Cat 2
- 2nd Environment, Cat 3

Operator interface
Control panels feature intuitive use and easy navigation. Regardless of which control panel you choose, you are able to control the drive, set parameter values, copy settings from one drive to another, and more. The panel saves on commissioning and learning time by means of different assistants, making the drive simple to set up and use.

- Basic Control Panel
- Assistant control Panel
- Integrated or remote mounting options
- Potentiometer

I/O options
Standard inputs and outputs can be extended by using optional analog and digital input/output extension modules. The modules are easily installed in the extension slots located on the control unit. The ACS355 product also offers TTL pulse encoder.

Safety features
Safe torque off (STO) is used to prevent unexpected startup and in stopping-related functions, enabling safe machine maintenance and operation. With safe torque off activated, the drive will not provide a rotational field. This prevents the motor from generating torque on the shaft. It is a cost-effective and certified solution for safe machine maintenance by fulfilling IEC 61508, EN 62061 and EN ISO 13849-1 standards.

Application control programs
ABB's industrial product family offers a range of ready-made programs to optimize application productivity and usabiltiy.

- Enhanced Sequence Programming
- High Speed Program
- Low Ambient Start w/ Motor Heating
- Solar Pump drive

Remote monitoring
With a built-in web server and standalone datalogger, available remote monitoring options enables worldwide and secure access to drives.

ABB automation products
Automation Builder

Automation builder integrates engineering and maintenance for PLC, Drives, Motion, HMI and Robotics. Automation Builder complies with the IEC 61131-3 standard offering all five IEC programming languages for PLC and drive configuration. One tool for your complete compact solution.

Stay in control of your project: Automation Builder integrates engineering tools for PLCs, safety, robots, motion, drives and control panels.

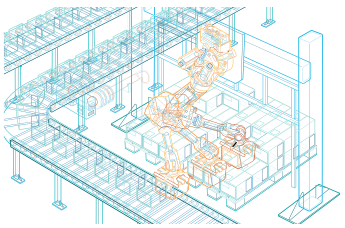
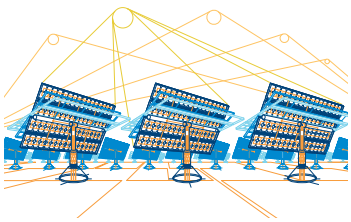
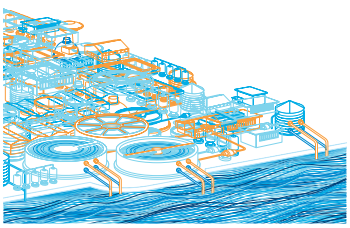
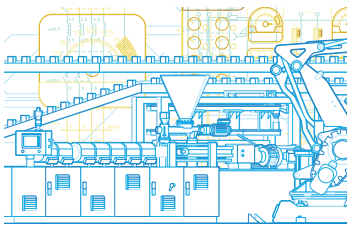
Reduce risk and save time: Automation Builder integrates products into solutions that create value for your customers.

Build your distinct solution: Automation Builder is open for your specific products and communication technology.

Connect to best in class tools: Automation Builder enables you to adapt the tool chain to your needs and workflows.

	Automation Builder Basic	Automation Builder Standard	Automation Builder Premium
Description	Basic system engineering for FREE	Integrated engineering of complex systems	Productivity and Collaboration for System Integrators and Machine Builders
Features	– AC500-eCo, AC500 with local I/O, TCP/IP, Modbus, CS-31, IEC60870-5 – All 5 IEC 61131-3 languages IL, LD, FBD, SFC, ST, plus CFC – Drive application programming (IEC 61131-3) – Mint WorkBench for motion applications – RobotStudio Basic – PLC firmware update, download and online change to single or several PLCs – PLC simulation and debugging – Language packs available for EN, DE, ES, FR, CN	Automation Builder Basic features plus – Integrated engineering for Panel, Drive, Motion, Robotics – AC500 PROFIBUS, PROFINET, EtherCAT, CAN, CMS – AC500 Safety (1) – Drive Manager	Automation Builder Standard features plus – C/ C++ application programming interface – ECAD Interface AC500/ AC500-eCo for EPLAN P8® and Zuken E3® – Advanced CSV data exchange – Project compare

Available software libraries to help with application solutions:

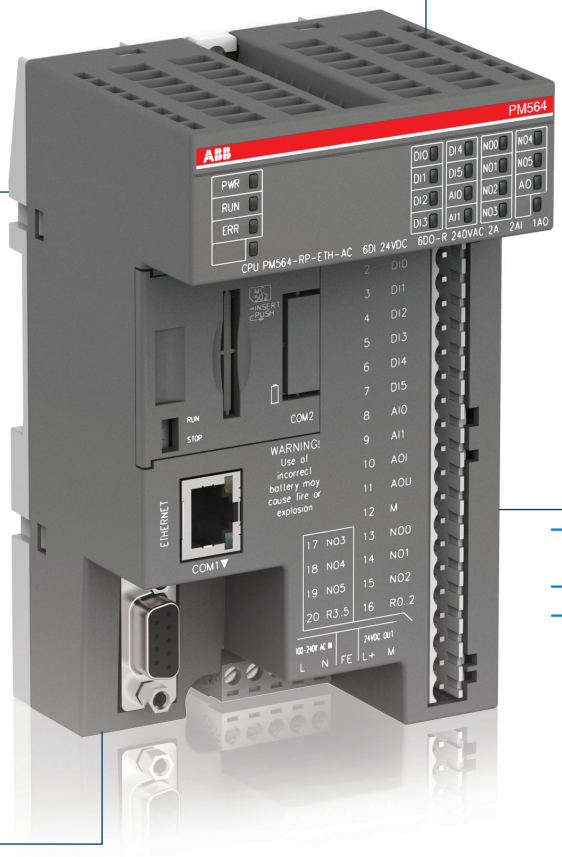
PS552-MC-E	PS562-SOLAR	PS563-WATER	PS564-TEMPCTRL
Motion control library	Solar tracker solution library	Water solution library	Temperature Control Library

ABB automation products
AC500-eCo

This compact PLC offers flexible and economical configurations for your modern control system. The ideal choice for smaller applications with micro drives.

High performance variant with large memory available

- Up to 10 I/O modules connected to the CPU
- Compatible with all standard I/O modules (S500 and S500-eCo)
- Digital I/O module with configurable I/O available



- Three different types of terminal blocks available
- Integrated onboard I/O
- AC versions with integrated power supply

Comprehensive communication options:

- Ethernet for communication and web server for user defined visualization
- Up to two serial ports for decentralized I/O and communication

ABB automation products
CP600-eCo

The economic control panel series offers touchscreen graphic displays from 4.3” up to 10.1”. The user-friendly configuration software PB610-B Panel Builder 600 Basic provides the most commonly used HMI functions. Comprehensive sets of graphic symbols are available to support the design of tailer-made HMI solutions. Great for a compact solution with the eCo PLC(s) and micro drives.

– Housing
  CP600-eCo: Plastic
  CP600: Aluminium
– Front protection IP66
– Engineering software Panel Builder 600 integrated in Automation Builder

– Improved flexibility and integration
– Two versions available:
  - CP600-eCo / CP600: Configuration with Panel Builder 600 for clear tailor made visualization.
  - CP600-WEB: visualization of AC500 web server with Automation Builder visualization. The Automation Builder debugging and diagnostics screens can be converted effortless for use with CP600-WEB control panels.

– Brilliant colored display
– Free reusable 3D graphic elements (Widgets)
– Import tags from PLC, drives, motion controller and robots configuration within Automation Builder

– Slim design for easily installation even in compact spaces

Type	CP604	CP607	CP610
Application	control panels for PB610-B Panel Builder 600 Basic applications		
Display			
Exact display size diameter	4.3" widescreen	7" widescreen	10.1" widescreen
Resolution	480 x 272 pixels	800 x 480 pixels	1024 x 600 pixels
Display type, colors	TFT-LCD, 65536 colors		
Touch screen material	glass covered by plastic film		
Touch screen type	analog restitive, 4 wires		
Backlight type, life	LED, 20 000 h typ at 25 °C		
Brightness	150 cd/m²	200 cd/m²	
Housing			
Protection class front, rear	IP66, IP20		

Life cycle services
Your choice, your future

You made the choice to invest in the future of your business by purchasing an ABB drive. Let us help you make another easy choice: ABB Drive Care.

From install, to commissioning, to end-of-life support our portfolio of options will help maintain or improve your drives' performance and maximize their lifespan.

Your choice, our business
Our business is helping you stay focused on your business. Whether your key concern is operational efficiency, life cycle management, rapid response, or all of the above, we have a service plan that will work for you throughout the entire lifetime of your drives.

Need help making the right choice? Let's talk about your future.

Service offerings for your business

Your needs in service usually depend on your operation, priorities, and life cycle phase of your equipment. Here are the most typical service needs with some of our service product options that satisfy them:

Is performance most critical to your operation?
Get optimal performance out of your machinery and systems.

Supporting services include:
– Training
– Inspections and Diagnostics
– Hardware and Control Upgrades
– Retrofits
– Workshop Repair
– Remote Care

Is uptime your priority?
Keep your drives running with precisely planned and executed maintenance.

Supporting services include:
– Life Cycle Assessment
– Installation and Commissioning
– Spare Parts
– Preventive Maintenance
– Reconditioning
– Remote Care

Need to extend your assets' lifetime?
Maximize your drive's lifetime with our services.

Supporting services include:
– Life Cycle Assessment
– Hardware and Control Upgrades
– Retrofits
– Replacement, Disposal and Recycling

Is rapid response a key consideration?
If your drives require immediate action, our global network is at your service.

Supporting services include:
– Technical Support
– Drive Exchange
– On-site repairs
– Remote Support