BROCHURE

ABB drives

Product guide

Ranging from 0.25 hp to 7500 hp, the ABB low voltage AC drive product portfolio has the widest available power offering from any manufacturer.

ABB drives are the global benchmark signifying reliability, simplicity, flexibility, and ingenuity throughout the entire life-cycle of the drive.

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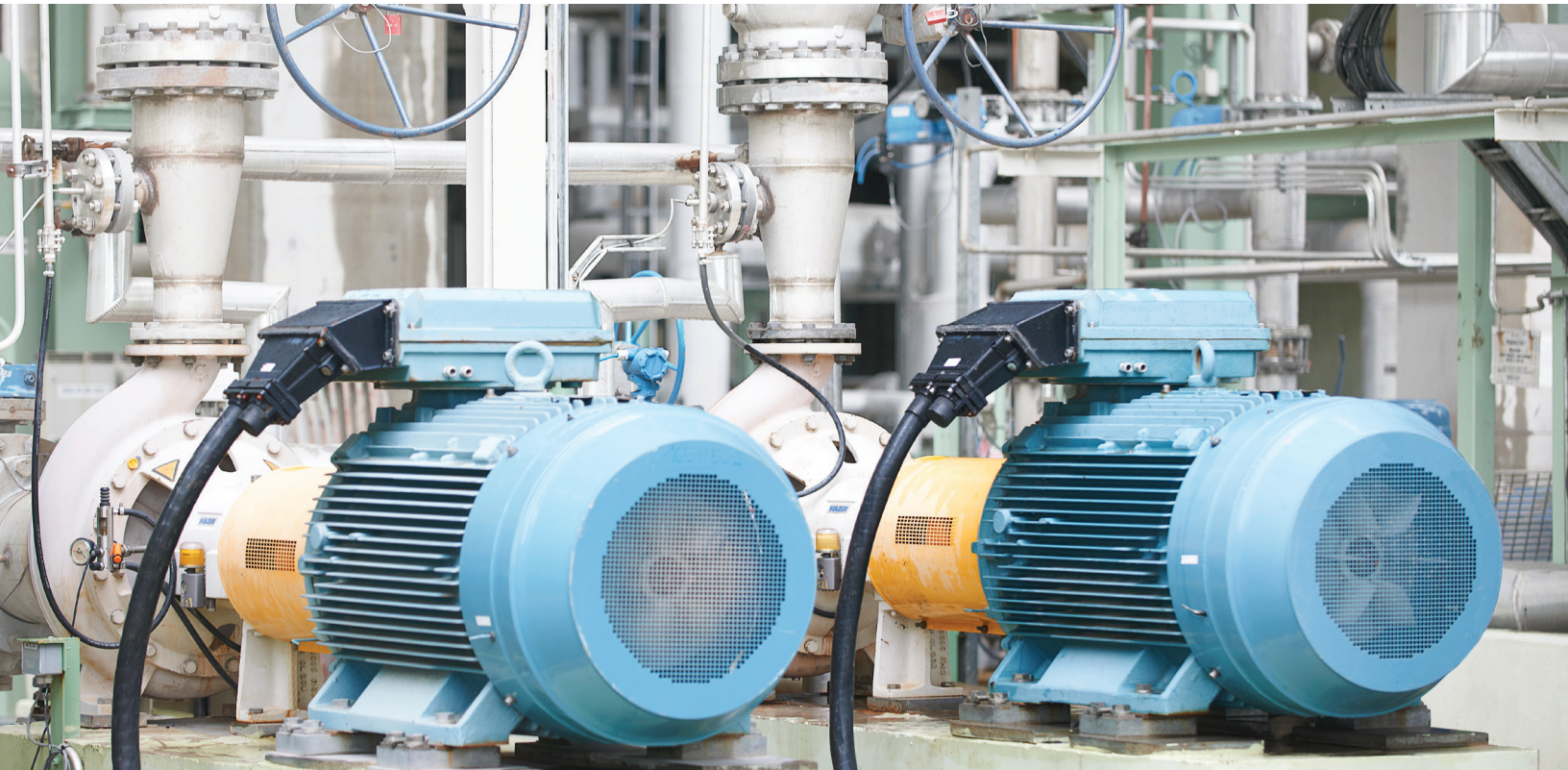
Smooth motor control and energy savings

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.

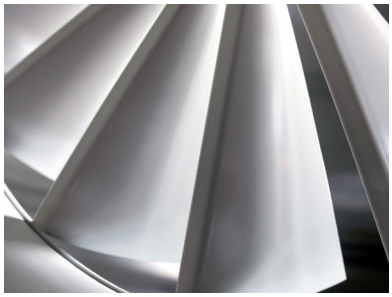
Continuing to embrace the spirit of American industrialism, mining pioneer Henry Harnischfeger joined the ABB family tree in 1981, opening a new controls manufacturing facility in the heart of the Midwest. Today, a cornerstone of ABB Automation Products' business area resides within a state of the art 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.

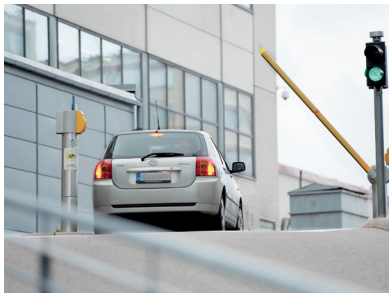
Benefits of using AC drives

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 7 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

Ranging from 0.25 hp to 7500 hp, the ABB low voltage AC drives product portfolio has the widest available power offering from any manufacturer. ABB drives are the global benchmark signifying reliability, simplicity, flexibility, and ingenuity throughout the entire life-cycle of the drive.

Several of our drives feature energy consumption data calculators, which can be used to further analyze and tune a process for even greater energy savings.

The entire portfolio is supported by a selection of PC tools, fieldbus and communication options, as well as our global service offerings.

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 simple user interfaces and tools.

ABB 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 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 standard drives applications, including pump, fan and constant torque use, such as conveyors.

ABB industrial drives
The benchmark of performance, expertise and quality.
ABB industrial drives offer scalability and performance to control a broad range of industrial applications with a range of options and features to fulfill even the most demanding requirements in the most extreme conditions. With a wide power and voltage range up to 5600 kW and 690 V, tune into precise performance and control no matter what industry you're in.

Industry specific drives
Our industry specific ABB drives provide our customers with dedicated drive solutions for AC motor control used in industries such as HVAC and water and wastewater. Working closely with these industries, we have developed targeted functionality to help you improve your overall operating performance while also helping to reduce energy use. Built-in application macros in the drives help you easily setup and tailor processes.

ABB DC drives
ABB's DC drive portfolio, from 5 to 24000 kW, provides the highest power-to-size ratio on the market. The drives are designed for most industries including metals, cement, mining, pulp and paper, printing, and food and beverage. ABB DC drives are available as complete cabinets, panel drives, modules for cabinet assembly, and as retrofit kits. With built-in field exciters and integrated PLC's, they are the best DC drives choice for all new and retrofit applications.

To find more information please visit:
www.abb.com/drives

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 8 and 9. 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 8 and 9.	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 8 and 9.	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 8 and 9.	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.	

Drive selection table

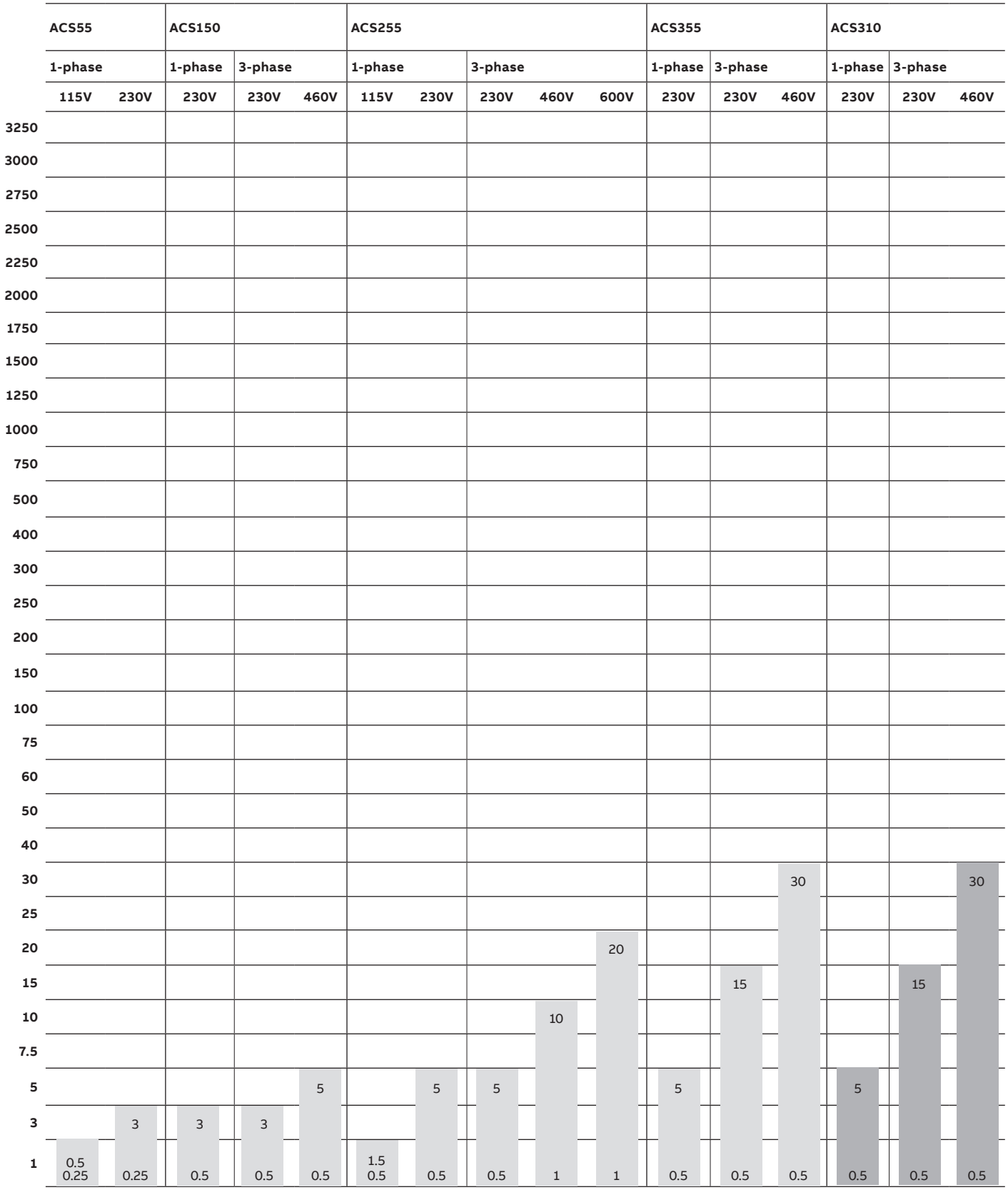
Specification		ACS55	ACS150	ACS255	ACS355	ACS310
Voltage and power ranges		1-phase, 100 to 120 V: 0.25 to 0.5 hp (0.18 to 0.37 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	1-phase, 110 to 120 V: 0.5 to 1.5 hp (0.37 to 1.1 kW)	1-phase, 200 to 240 V: 0.5 to 5 hp (0.37 to 4 kW)	1-phase, 200 to 240 V: 0.5 to 5 hp (0.37 to 4 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 5 hp (0.37 to 4 kW)	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)	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 (0.75 to 7.5 kW)		
				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	●	●	●	●	●
	UL type 1/IP21	–	–	–	o	o
	UL Type 12/IP54/IP55	–	–	–	–	–
	UL Type 4X/IP66/IP67	–	–	●	●[1]	–
	UL type 3R	–	–	–	–	–
Mounting arrangements	Optimal for cabinet mounting	●	●	●[8]	●	●
	Optimal for wall mounting	–	o	●[1]	o	o
Programming	Parameter programming	●	●	●	●	●
	Sequence programming	–	–	–	●	–
Human-Machine interface	Basic control panel	–	–	–	o	o
	Assistant control panel	–	–	–	o/●[1]	o
	Bluetooth-enabled panel	–	–	–	–	–
	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)	Open loop vector, Scalar (V/Hz), enhanced V/Hz or open loop vector	Open loop vector, Scalar (V/Hz) and Closed loop control	Scalar (V/Hz) - Linear (CT), squared (VT), or user defined curve
Supply Option		–	–	–	–	–
Ambient temperature		-4 to 104˚F (-20 to 40˚C), 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) with derating 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), 122˚F (50˚C) with derating No frost allowed.	14 to 104˚F (-10 to +40˚C), up to 50˚C with 10% derate 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 (+3 as option)	1 (+3 as option)
	Analog inputs/outputs	1/0	2/1	2/1	2/1	2/1
	Encoder feedback	–	–	–	o	–
Supported fieldbus protocols	Modbus RTU	–	–	●	o	●
	Profibus DP	–	–	–	o	–
	DeviceNetTM	–	–	–	o	–
	ControlNet	–	–	–	o	–
	CANopen®	–	–	–	o	–
	Ethernet (Modbus/TCP)	–	–	–	o	–
	Ethernet (EtherNet/IPTM)	–	–	–	o	–
	Ethernet (EtherCAT®)	–	–	–	o	–
	Ethernet (PROFINET IO)	–	–	–	o	–
	Ethernet (PowerLink)	–	–	–	–	–
EMC compliance (EN 61800-3)	C3, industrial use	o	●	o	●	●
	C2, commercial use (installation by EMC experts)	o	o	o	o	●
	C1, commercial use	o (conductive emissions)	o (conductive emissions)	o	o (conductive emissions)	o (conductive emissions)
	Input reactors	–	o	o	o	o
	Output reactors	–	o	o	o	o
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 599 Hz	0 to 500 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	150% for 60 s, 180% for 2 s	110% for 60 s, 180% for 2 s
Number of preset speeds		1[10]	3	4	7	7
PC tools	Drive commissioning tool	o	–	–	o	o
	Drive offline programming tool	–	o	–	o	o
	Drive dimensioning tool	–	–	–	–	–
Approvals	UL, cUL, CE, RMS, C-Tick, EAC	●	●	●	●	●
RoHS compliance		●	●	●	●	●

● Standard
O 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

Specification		ACS550	ACS380	ACS880-M04	ACS800	ACS880	DCS800
Voltage and power ranges		3-phase, 208 to 240 V: 0.75 to 100 hp (0.75 to 75 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	3-phase, 230 V: 0.5 to 30 hp (0.37 to 22 kW)	3-phase, 208to 240V: 7.5 to 60 hp (5.5 to 45 kW)	3-phase, 208 to 240V: 0.75 to 100 hp (0.75 to 75 kW)	3-phase, 230 to 525 V: 5 to 3000 hp (4 to 2250 kW)
		3-phase, 380 to 480 V: 1 to 550 hp (0.75 to 355 kW)	3-phase, 380 to 480 V: 0.5 to 10 hp (0.37 to 7.5 kW)	3-phase, 460 V: 1 to 60 hp (0.75 to 45 kW)	3-phase, 380 to 500 V: 15 to 2050 hp (15 to 1700 kW)	3-phase, 380 to 500 V: 0.75 to 1950 hp (0.75 to 1500 kW)	3-phase, 600 V: 200 to 3250 hp (150 to 1700 kW)
		3-phase, 500 to 600 V: 1.5 to 150 hp (1.1 to 110 kW)			3-phase, 525 to 690V: 40 to 2600 hp (37 to 2400 kw)	3-phase, 525 to 690V: 5 to 4250 hp (4 to 3200 kW)	3-phase, 700 V: 500 to 4000 hp (400 to 3000 kW)
							higher upon request
Protection classes	UL type 0/IP20	–	●	•	●	●	●
	UL type 1/IP21	●	–	–	●	●	–
	UL Type 12/IP54/IP55	●[1]	–	–	●	●	–
	UL Type 4X/IP66/IP67	–	–	–	–	–	–
	UL type 3R	●[7]	–	–	–	–	–
Mounting arrangements	Optimal for cabinet mounting	● Requires flange mount kit	•	•	● Requires flange mount kit	● Requires flange mount kit	●
	Optimal for wall mounting	●	–	–	●	●	–
Programming	Parameter programming	●	•	•	●	●	●
	Sequence programming	–	●[13]	–	–	–	–
Human-Machine interface	Basic control panel	o	–	O	–	–	–
	Assistant control panel	●	–	O	●	o	●
	Bluetooth-enabled panel	–	O	-	–	●	–
	Integrated control panel	–	●	–	–	–	–
Motor Control		Scalar (V/Hz), Open and Closed Vector: Speed, Vector:Torque	Open loop vector, Scalar (V/Hz) and Closed loop control - AC induction and PMAC motors	Direct Torque Control (DTC) or Scalar (V/Hz)	Direct Torque Control (DTC), Scalar (V/Hz)	Direct Torque Control (DTC), Scalar (V/Hz)	–
Supply Option		6-pulse diode	–	6-pulse diode	Ultra Low Harmonic, Regenerative	6-pulse diode, 12-pulse diode, Ultra Low Harmonic, Regenerative	–
Ambient temperature		5 to 122˚F (-15 to +50˚C) From 104 to 122˚F (+40 to +50˚C) with derating. No frost allowed.	14 to 122˚F (-10 to 50˚C), Up to 140˚F (60˚C) with derating No frost allowed.	14 to 131˚F (-10 to 55˚C), Up to 140˚F (60˚C) with derating No frost allowed.	5 to 122˚F (-15 to +50˚C) From 104 to 122˚F (+40 to +50˚C) with derating. No frost allowed.	5 to 131˚F (-15 to +55˚C) From 104 to 131˚F (40 to 55˚C) with derating. No frost allowed.	32 to 104˚F (0 to 40˚C) From 104 to 131˚F (40 to 55˚C) with derating. No frost allowed.
Inputs and outputs	Digital inputs/outputs	6/0	4/2[5]	6/2[5]	6/0[11]	6/8[11,12]	8/7
	Relay outputs	3 + (3 as option)	1 (+4 as option)	3	3[11]	3[11]	1
	Analog inputs/outputs	2/2	2	2/2	3/2[11]	2/2[11]	4/2
	Speed feedback	–	●	O	o	o	●
Supported fieldbus protocols	Modbus RTU	●	●	O	o	●/o	o
	Profibus DP	o	●	O	o	o	o
	DeviceNetTM	o	–	O	o	o	o
	ControlNet	o	–	O	o	o	o
	CANopen®	o	●	O	o	o	o
	Ethernet (Modbus/TCP)	o	●	O	o	o	o
	Ethernet (EtherNet/IPTM)	o	●	O	o	o	o
	Ethernet (EtherCAT®)	o	●	O	o	o	o
	Ethernet (PROFINET IO)	o	●	O	o	o	o
	Ethernet (PowerLink)	o	●	O	o	o	o
EMC compliance (EN 61800-3)	C3, industrial use	–	O	O	o	o	●
	C2, commercial use (installation by EMC experts)	●	O	O	o	o	o
	C1, commercial use	O(conductive emissions)	O	-	–	–	–
	Input reactors	●(built-in)	O	O	●(built-in)	●(built-in)	Required; supplied by others
	Output reactors	o	O	O	O(cabinets)	O(cabinets)	–
Brake chopper		●[2]	●	●	O(cabinets)	●/o[6]	Not applicable
Suggested maximum motor cable length		328.1 to 656.2 ft (100 to 200 m)	98.5 to 196.9 ft (30 to 60 m)	492 to 984 ft 150 to 300m	5000 ft / 1000 ft[6] (150m / 300m)[6]	5000 ft / 1000 ft[6] (150m / 300m)[6]	Not applicable
Switching frequency		up to 12 kHz	up to 12 kHz	3 kHz (default)	2 kHz (typical)	2.7 kHz (typical)	Not applicable
Output frequency		0 to 500 Hz	0 to 599 Hz	0 to 599 Hz	0 to 300 Hz	0 to 500 Hz	Not applicable
Overload capacity		150% for 60 s, 180% for 2 s	150% for 60 s, 180% for 2 s	110% for 60S 150% for 60S	110% for 60s, 150% for 60s	110% for 60s, 150% for 60s	150% for 60 s, 150% for 30 s, 110% for 60 s
Number of preset speeds		7	7	7	15	7	4
PC tools	Drive commissioning tool	o	●	O	o	o	●
	Drive offline programming tool	o	●	O	–	–	–
	Drive dimensioning tool	o	●	●	o	o	o
Approvals	UL, cUL, CE, RMS, C-Tick, EAC	●	●	UL, cUL, CE, EAC	●/–[7]	●	●
RoHS compliance		●	●	●	●	●	●

Horsepower comparison chart



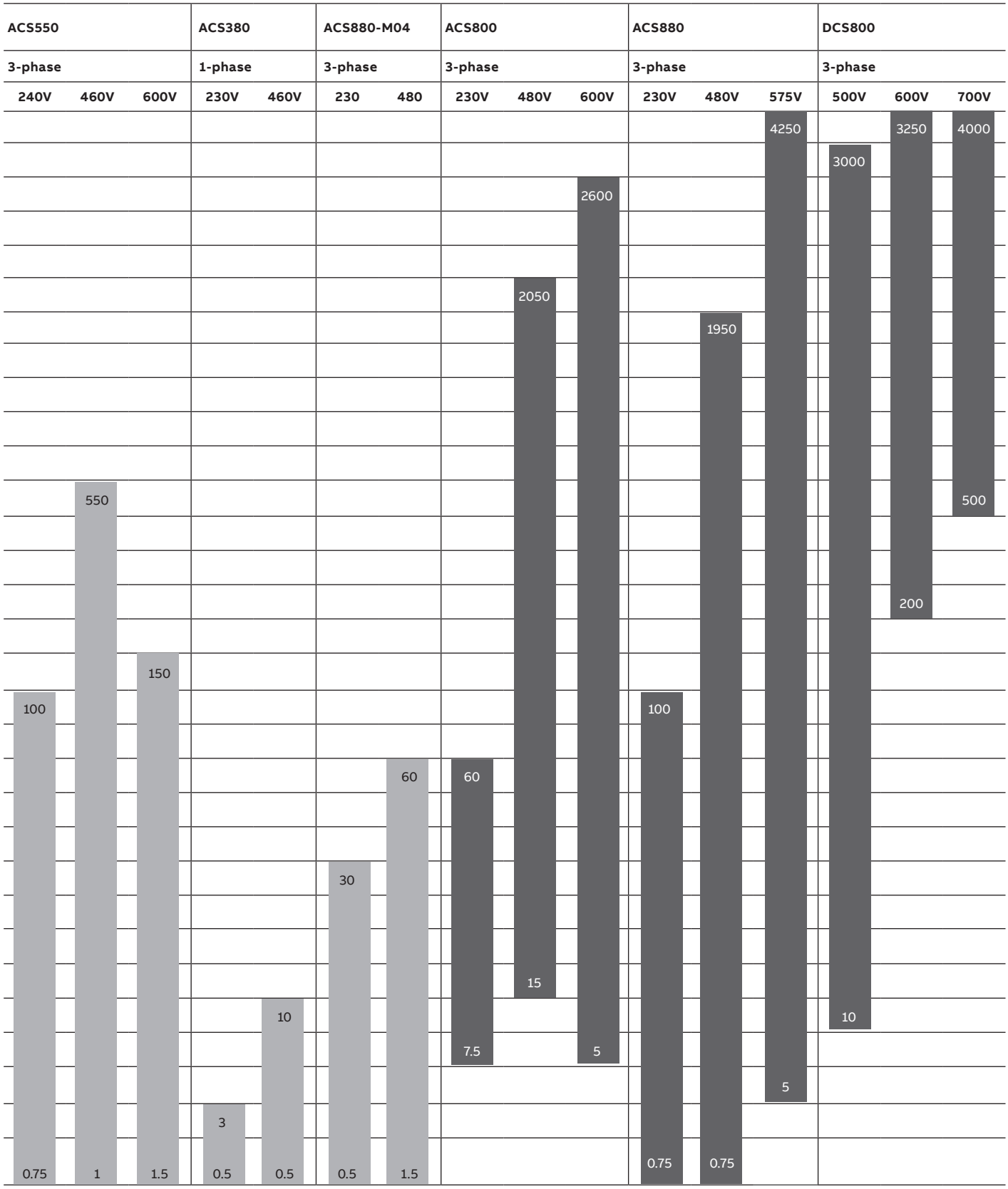

ACS550
3-phase
240V
460V
600V
0.75
100
1
550
1.5
150
ACS380
1-phase
230V
460V
0.5
3
0.5
10
ACS880-M04
3-phase
230
480
0.5
30
1.5
60
ACS800
3-phase
230V
480V
600V
7.5
60
15
2050
5
2600
ACS880
3-phase
230V
480V
575V
0.75
100
0.75
1950
5
4250
DCS800
3-phase
500V
600V
700V
10
3000
200
3250
500
4000

ABB ACS55
0.25 to 3 hp (0.18 to 2.2 kW)

What is it?
The ACS55 drive is a component 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.

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) or www.abb.com/drives.

ABB ACS150
0.25 to 3 hp (0.18 to 2.2 kW)

What is it?
The ACS150 drive is a component 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. In addition, the drives offer extensive range of parameters that help obtaining the best performance out of the application.

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) or www.abb.com/drives.

ABB ACS255
0.5 to 20 hp (0.37 to 15 kW)

What is it?
The ACS255 micro drive offers easy to use and compact solutions for general purpose, low power applications, including mixers, pumps, fans, conveyors. All variants include a built-in Modbus RTU serial communication to provide straightforward integration with control and monitoring systems.

Available in IP20 and IP66/NEMA4x 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	One drive 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 (SIL3) 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	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 ACS255 documentation (ACS255-PHPB01U-EN, ACS255-PHPB02U-EN, and ACS255-PHPB03U-EN) or www.abb.com/drives.

ABB ACS355

0.5 to 30 hp (0.37 to 22 kW)

What is it?
The ACS355 comes 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.

Application specific firmware variants available:
- High speed spindle
- Enhanced sequence programming
- Solar pump drive
- Low ambient start

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 efficiently
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) or www.abb.com/drives.

ABB 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.

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) or www.abb.com/drives.

ABB ACS550
1 to 550 hp (0.75 to 355 kW)

What is it?
The ACS550 drive comes with built-in features that make it simple to install, commission, and operate. Ideal for variable and constant torque applications from pumps and fans to conveyors and mixers, as well as many other variable and constant torque applications. Several programming tools are available for easy dimensioning, commissioning, and maintenance making this one of our most versatile drives.

ACS550 Packaged Drives
The ACS550 drive is also available in various enclosure options (UL type 1, 12, and 3R) with circuit breaker and fused disconnects.

Feature	Benefit	Result
Easy programming with parameter upload/download/ back-up function	Quick setup and commissioning, simple configuration	Substantial time savings
Scalar, Sensorless Vector, Torque Control and Closed Loop Speed Control	Optimum performance depending on application	Increased process speed. Increased production capacity ensures end-product is produced cost efficiently.
Advanced interface (user and machine) with integrated real-time clock, with battery back-up	Enables timed functions, ex day/night	Energy and labor cost savings, ex pump only runs when needed, no human intervention to start/stop drive
Integrated EMC filter	No need for an external EMC filter	Cost saving
Patented swinging choke as standard	Reduced harmonics by up to 25%	Losses caused by harmonics in the supply network and grid connected equipment are reduced. Energy consumption is reduced and equipment lifetime extended.
Built-in brake chopper as standard up to 15 hp	No need for external brake chopper	Space savings, and lower installation cost, no need for an external brake chopper
Energy efficiency counters	Illustrates saved energy, CO_2 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)
FlashDrop tool	FlashDrop is a handheld 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 ACS550 Technical Catalog (ACS550-PHTC01U-EN) or www.abb.com/drives.

ABB ACS380
0.5 to 10 hp (0.37 to 7.5kW)

What is it?
The ACS380 is a compact machinery drive and a part of the ABB family of all-compatible drives. It is designed to meet the needs of demanding constant torque applications in the food and beverage, material handling, and compact machinery industry segments.

It is the first compact industrial drive available with a graphical icon-based control panel to simplify setup, operation, and data gathering, while removing language barriers for a drive/control interface.

The ACS380 achieves a new level of high performance motor control with the ability to power AC induction, permanent magnet AC, and SynRM motors.

Feature	Benefit	Result
Optimized cooling configuration	Allows drive operation up to 50 °C at full rating and up to 60 °C with derating. Channels most of the cooling air over the heatsink and DC capacitors and less over the control board	Minimizes dust and dirt contamination of sensitive electronics, extending the drives lifespan and minimizing maintenance cost
Same height and depth across power range	More efficient panel layout and installation	Reduced design and installation time
Integrated graphic icon-based control panel	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	Optimizes motor performance for the application, saving energy in the customer's process
Adaptive programming with sequence programming	State machine programming with PLC-like functionality included as standard	Reduces cost for components and integration in the control system
Integrated EMC filter options	Standard or high electromagnetic compatibility	Low EMC emissions in the local environment extends the life and usability of sensitive components located near the drive.
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.
Pre-configured connectivity for all major machine automation fieldbus protocols	At power-up, the installed fieldbus module automatically configures drive parameters allowing drive programming directly from the PLC.	Time is saved by not having to configure drive parameters to enable PLC direct control
Three phase output current measurement	Greatly improves the detection of phase to ground short circuits and enhances motor control	Greater safety for machine operators and more accurate motor control reduces customer operating expenses
Cold Configuration Tool	The CCA-01 is used to connect a PC to an unpowered drive for loading or managing drive parameters using DriveComposer. Direct connection between the drive and PC is possible using the BCBL-01 cable and the RJ-25 panel port on the top of the ACS380.	Saves time for OEM's programming multiple drives for production or to send out as machine replacements

For additional technical information, see the ACS380 Technical Catalog (ACS380-PHTC01U-EN) or www.abb.com/drives.

ABB ACS880-M04

0.5 to 60 hp (0.37 to 45kW)*

What is it?
The ACS880-M04 drive replaces the ACS850 drive. It offers the powerful ACS880 control card and keypad features while still maintaining the compact size that large OEMs and machinery builders require for integration into their equipment.

Ideal for applications like cranes, extruders, conveyors, winders, pumps, fans, and mixers the ABB machinery drives family meets the production and performance needs of machine builders, system integrators, panel builders and end users. It has been designed specifically for the rubber and plastics, food and beverage, and packaging segments. It is designed to be mounted in panels.

Feature	Benefit	Result
Compact size, side-by-side mounting	Smallest frame size is only 4 in (93mm) wide. More drives can be placed in the same cabinet	Optimum installation layout and efficient cabinet space usage. Space and cost savings.
Modular design	Based on the ACS880 control card, the ACS880-M04 drive offers a wide range of options and allows for different system configurations.	Fits many application needs. Offers flexibility in system design.
Drive programming and configuration	Can replace relays and small PLCs with function block programming. IEC 61131-3 programming capability can replace the need for additional controllers	Lower investment and installation cost. Higher flexibility in system design.
Integrated safe torque off function (up to SIL 3)	High SIL class means high reliability of the safety function. Can also be used to implement Emergency Stop without contactors.	Cost-effective and certified solution for safe machine maintenance. Fulfills IEC 61508, EN 62061 and EN ISO 13849-1 standards.
Direct torque control	Accurate, dynamic and static speed and torque control. Excellent process control even without pulse encoder. High overload and high starting torque. Less noise during motor operation. Output frequency up to 599 Hz. Enhanced motor identification at standstill.	Improves product quality, productivity and reliability. Lower investment cost. Less maintenance. Suitable for use where audible noise is an issue. Applicable in high speed applications. Better process control due to more accurate identification. Motor identification without decoupling the load.
Extensive configurable standard I/Os including FSO 12/21 and FSE-31 safety function modules.	Optimized accessibility. Increased built-in safety for the most stringent machine requirements.	Lower cost. Fewer parts and installation work needed for cabinet assembly. May eliminate safe PLC and additional configuration software.
Motion Control Software offered as a Plus Code	Provides the same motion control as the ACSM1 for most machine operations.	Offers flexibility to meet direct needs of the application.
Advanced interface (user and machine) with Integrated real-time clock, with battery back-up	Bluetooth® capable control panel.	Allows monitoring and controlling drive without direct wired connection to the drive.

For additional technical information, see the ACS880-M04 Technical Catalog (3AXD50000028613) or www.abb.com/drives.

* ACS880-M04 horsepower can be increased by utilizing an ACS880-01/04 and Motion Control Software.

ABB ACS800
7.5 to 2600 hp (5.5 to 2400 kW)

What is it?
Our industrial drives are available both as complete AC drives and/or as modules to meet your requirements as a user, OEM or system integrator. Single Drive Module configurations contains a rectifier, DC link and an inverter in one single AC drive unit. They can be installed without any additional cabinet or enclosure and are available in wall-mounted, freestanding and cabinet-built constructions. They are specifically designed for industrial applications in process industries such as the pulp & paper, metals, mining, cement, power, chemical, and oil & gas.

The ACS800 series is available as wall-mount, cabinet-built, regenerative, low harmonic, air-cooled and liquid-cooled constructions.

Feature	Benefit
Built in harmonic filter in all ACS800 drives	Low harmonics, meaning less interference and less heating in cables and transformers. Filter also protects the drive from line side transients.
Wide range of options available	Standard solutions available from ABB to meet most customers application needs.
Versatile braking options	Optimal braking options are always available. No need for an external braking chopper thus reducing size and installation cost.
User friendly customer interface	Easy and fast commissioning and operation. Clear, alphanumeric display with start-up assistant that guides through the start-up procedure. Easy to use PC tools available for commissioning, maintenance, monitoring and programming.
Versatile connections and communications	Standard I/O covers most requirements. Connectable to commonly used fieldbuses.
Extensive programmability	Flexibility. Possible to replace relays or even a PLC in some applications. Two levels of programmability: 1. Parameter programming (standard) 2. Adaptive programming (free block programming) : standard feature, more blocks available as options, all I/Os are programmable
Wide power and voltage range	One product series can be used to meet all application needs, meaning less training and spare parts and standardized interface to drives.
Wide range of robust enclosures available	Industrial suitable solutions available for different environments including UL Type 1, UL Type 1 filtered, UL Type 12
Robust main circuit design	Suitable for heavy industrial use. Reliable. Long motor cables can be used without extra output filters. Advanced thermal model allows high overloadability.
Extensive protection features	Enhanced reliability, fewer process interruptions. Possibility to also protect motors and process. Several adjustable limits to protect other equipment included.
Galvanic isolation of I/O	Safe and reliable operation without separate isolators and relays.
All terminals designed for industrial use	Sufficient size even for large aluminum cables. No need for special tools in I/O cabling.
Worldwide approvals: CE, UL, cUL, CSA, RMS, EAC	Products that can be used everywhere in the world.

For additional technical information, see the ACS800 Technical Catalogs (ACS800-PHTC01U-EN, ACS800-PHTC02U-EN, 3AFE68248531) or www.abb.com/drives.

ABB ACS880

0.75 to 4250 hp (0.75 to 3200 kW)

What is it?

The all-compatible ACS880 industrial drives are designed to tackle any of your motor-driven applications, in any industries, whatever the power range. Compatible with virtually all of your processes, automation systems, users and business requirements, the innovation behind the ACS880 drives is our drives architecture that simplifies operation, optimizes energy efficiency and helps maximize process output. The ACS880 series consists of single drives, multidrives and drive modules.

Feature	Benefit	Result
Compact wall-mounted and cabinet-built drives and drives modules, with a wide power and voltage range	Designed to provide customers across industries and applications with unprecedented levels of compatibility and flexibility. Drives are built to order with a wide range of options such as EMC filters, braking options and different enclosure variants.	Simplifies configuration and ordering process. Reduces training costs. Reduces service and maintenance costs.
Drives built on ABB's common drives architecture	A common architecture across the ACS880 drive family and future ABB drive families will simplify operation.	Reduces training time and costs
Controls virtually any type of motor	Our robust industrial drives ensure an energy efficient and reliable motor controller with significant cost savings for the user.	Reduces costs by improving energy efficiency.
Enclosure classes (UL Type 0, 1 and 12)	Industrial suitable solutions available for different environments.	Saves time by providing a solution for every application and industry.
Direct torque control (DTC) as standard	Accurate, dynamic and static speed and torque control. Excellent process control even without pulse encoder. High overload and high starting torque. Less noise during motor operation. Output frequency up to 500 Hz. Enhanced motor identification at standstill.	Improves product quality, productivity and reliability. Reduces maintenance costs.
Integrated safety features including safe torque off (STO) as standard	Safe torque off is built-in as standard. An optional safety functions module provides extended safety functions.	Simplifies the configuration. Reduces product installation footprint. Reduces the need for additional external safety components.
Drive application programming and IEC 61131-3 programming environment	Makes programming of industry devices such as drives, PLC's, robots and human machine interfaces (HMI) easy using one Integrated engineering suite. Suitable for engineering individual industry devices and for putting together entire automation projects. Customizable to meet the precise application needs based on IEC 61131-3.	Reduces the time needed to configure and program. Eliminates the need to install and maintain separate programs
Primary control program – Identical software for the whole ACS880 series	Includes built-in pre-programmed application macros that help set parameters for various functions.	Saves time during configuration and commissioning. Reduces amount of training required, especially with multiple drives.
Removable memory unit	The removable memory unit stores the software that includes user settings, parameter settings and motor data.	Easy to install, update and replace.
Remote monitoring possibilities	With a built-in web server, NETA-21 enables worldwide access to the drive via the Internet or local Ethernet network.	Increases productivity and reduces downtime with instant access to drives
Communication with all major automation networks	Fieldbus adapters enable connectivity with all major automation networks. The plug-in fieldbus adapter module can easily be mounted inside the drive.	Reduces wiring costs compared to traditional I/O connections. Simplifies the installation and commissioning process

For additional technical information, see the ACS880 Technical Catalogs (3AUA0000139403, 3AUA0000139404, 3AUA0000164773) or www.abb.com/drives.

ABB DCS800
5 to 4000 hp (4 to 3000 kW)

What is it?
The DCS800 DC industrial drive from ABB combines a powerful controller with a thyristor power platform that has been proven in factories all over the world. The DCS800 boasts a wider power range than any other DC drive on the market. Special features make installation and configuration simple and allow you to customize the application to your needs. Both regenerative and non-regenerative drives are available. ABB also offers rebuild and upgrade kits specifically for retrofits to update the controls on existing DC drives. Panel drives are also available which include the DCS800 module and associated system components mounted and wired on a sub-panel.

Feature	Benefit	Result
20 - 20,000 A; up to 5200 A in a single module package	Widest available power range in the industry Highest power rating in the industry	The DCS800 will work regardless of the size of the load Saves the time and expense of paralleling drives
250 - 1500 Vdc	Widest supply voltage range in the industry	The DCS800 will work regardless of the size of the incoming voltage
Adaptive Programming	The user can easily customize the drive to their needs	The DCS800 will work in almost any application
Compact design	Highest power-to-size ratio in its class	Smaller enclosures; Makes system wiring faster and easier
Controls can be replaced without replacing the power section	Upgrade without replacing properly-functioning power components	Less costly upgrades
DriveWindow Light	Includes a commissioning wizard at no extra charge, making commissioning and adjustments easier	Faster commissioning; easier to make adjustments
Multi-lingual control panel	The DCS800 can be used in user's native language	Makes it easier to specify and order a drive
Wide range of high-speed fieldbus modules	The DCS800 can communicate with almost any PLC	Eliminates need to modify the PLC when retrofitting the drive, reducing cost
ControlBuilder / IEC 61131 Option	The drive is fully customizable	The DCS800 will work in highly unusual applications or when the customer needs some special firmware features
DCS800-EP drive module and system components pre-wired on a panel	System components are preselected, wired and tested	Less engineering, easier to implement, faster to commission
DCS800-EP directly replaces FlexPak® 3000	Same physical characteristics as the FlexPak® 3000. QuickStart commissioning assistant is similar to FlexPak® 3000. Detailed documentation provides information about replacement, potential issues, cross-references parameters and more.	Faster installation Faster commissioning; less downtime
DCS800-EP are designed so components are accessible for maintenance	Any part is able to be replaced quickly	Less down time
DCS800-PC/-A0 provide a complete DC cabinet solution	Integration is greatly simplified	Minimal engineering, easier to implement, faster to commission
DCS800-PC is built domestically up to 500 hp	Shorter lead time	Less time to wait for equipment to arrive
Standard DCS800-A0 cabinets now available up to 3000 hp	Included in the new catalog and price book	Faster and more efficient ordering process

For additional technical information, see the DCS800 Technical Catalog (DCS800-PHTC01U-EN) or www.abb.com/drives.
FlexPak® 3000 is a registered trademark of Rockwell Automation, Inc.

ABB ACS2000
300 to 3000 hp (250 to 2300 kW)

What is it?
The medium voltage ACS2000 drive is an industrial all-rounder that perfectly adapts to a wide variety of standard applications across all industries. Various options and drive configurations allow you to choose the perfect match to increase your process and systems efficiency. Boundless versatility makes the ACS2000 fit perfectly into different conditions and environments all over the world. Benefit from the drive's state-of-the-art design and robust control platform that ensures reliable operation every day, every where.

Feature	Benefit	Result
Direct-to-line capability	No transformer required Easy retrofit to fixed-speed motors Easy and fast commissioning	Reduced capital expenditure and overall cost of ownership
Market specific design (NEMA/IEC)	Market specific certifications (cUL, EAC) Compliance to local industry standards (IEC, NEMA, IEEE)	Drive configurations available for worldwide operations
Active Front End (AFE)	Power factor adjusted to compensate for reactive power Inherent low harmonic signature	Reduced energy loss in distribution system, avoiding the need for larger cables and utility penalites. Harmonic emissions compliant with all relevant standards.
Direct Torque Control (DTC)	Precise and reliable process control with superior performance	Increased productivity
Multilevel topology	Provides near sinusoidal current and voltage waveforms	Compatible with standard new or existing motors
Voltage Source Inverter (VSI) topology	Superior dynamic control performance	Safe ride through during supply voltage dips and better process control
Compact size	Requires less space in the electrical room	Frees up valuable floor space
Regenerative option	Maintain near unity power factor across the entire speed range	Reduces overall energy consumption
Modular design	Low parts count	Provides high reliability and low maintenance costs

For additional technical information, see the ACS2000 Technical Data Catalog (ACS2000-PNTB01U-EN) or www.abb.com/drives.

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
- Drive composer
- DriveAnalyzer
- DriveAP
- DriveBrowser
- DriveConfig
- DriveMonitor
- DrivePM
- DriveSize
- DriveStudio
- DriveWindow / 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 1 filtered (IP42)
- UL type 4X (IP66)
- UL type 12 (IP55)
- UL type 12 (IP54)
- EMC Filters
- 1st Environment, Cat 1
- 1st Environment, Cat 2
- 2nd Environment, Cat 3

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. Some ABB products also offer additional feedback devices, such as HTL pulse encoder, TTL pulse encoder, absolute encoder and resolver.

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

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. Additional safety features are available as options for our industrial drives family, including FSO-12, which includes six safety functions in one, easy to install module.

Safety functions include:
- Safe stop 1 (SS1)
- Safe stop emergency (SSE)
- Safe brake control (SBC)
- Safely-limited speed (SLS)
- Safe maximum speed (SMS)
- Prevention of unexpected startup (POUS)

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

- Center Winder/Unwind
- Centrifuge Control
- Crane Control
- Inline Control
- Permanent Magnet Synchronous Motor
- Position Control
- Progressive Cavity Pump
- Pump Control
- System Application Software

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

Applications
Overview

Applications where to use	ACS55	ACS150	ACS255	ACS355	ACS310	ACS550	ACS380	ACS880-M04	ACS880	DCS800
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		●	●				●	●	●	●
Grinders and mills									●	●
Cranes							●	●	●	●
Winches									●	●
Kilns									●	●

ABB automation products
Overview

Servo drives
ABB's servo drives range from simple analog, fieldbus controlled drives, indexing drives, fully programmable motion drives and real-time Ethernet solutions based on the open standard Ethernet PowerLink and EtherCAT®. ABB motion drives control rotary and linear AC servo motors, and are available from 1 A single phase through to 580A three phase.

Programmable Logic Controllers (PLC)
ABB's powerful flagship PLC offers a wide range of performance levels and scalability within a single simple concept where most competitors require multiple product ranges to deliver similar functionality. Web server integrated and IEC 60870-5-104 remote control protocol is available for all Ethernet versions. Additional products include PLCs customized for safety and extreme conditions.

Servo motors
ABB's BSM series servo motors offer a wide choice of medium or low inertia models with winding options, feedback devices and gearheads to match. All ABB servo motors are designed for durability and ability to handle harsh environments.

Motion controllers
ABB offers a wide range of motion control products to suit many different applications. Motion controllers are available in PCI format, as standalone units with USB, CANopen®, serial and Ethernet interfaces and as intelligent programmable drives for use in single or multiaxis systems.

Control panels
Our control panels offer a wide range of touchscreen graphical displays from 3.5" up to 15". They are provided with user-friendly configuration software that enables tailor-made customized Human Machine Interface (HMI) solutions. Rich sets of graphical symbols and the relevant drivers for ABB automation products are provided. Control panels for visualization of AC500 web server applications are available.

NEMA Low Voltage AC motors
Designed and built with reliability and lowest total cost of ownership at the forefront, motors meet or exceed NEMA energy-efficiency levels. Motors are available from stock or can be designed to fit specific applications ranging from general purpose to the harshest environments worldwide.

Drive Services
Your choice, your future

The future of your drives depends on the service you choose.
Whatever you choose, it should be a well-informed decision. No guesswork. We have the expertise and experience to help you find and implement the right service for your drive equipment. You can start by asking yourself these two critical questions:

- Why should my drive be serviced?
- What would my optimal service options be?

From here, you have our guidance and full support along the course you take, throughout the entire lifetime of your drives.

Your choice, your business efficiency
ABB Drive Care agreement lets you focus on your core business. A selection of predefined service options matching your needs provides optimal, more reliable performance, extended drive lifetime and improved cost control. So you can reduce the risk of unplanned downtime and find it easier to budget for maintenance.

We can help you more by knowing where you are! Register your drive at www.abb.com/drivereg for extended warranty options and other benefits.

Service to match your needs

Your service needs depend on your operation, life cycle of your equipment and business priorities. We have identified our customers' four most common needs and defined service options to satisfy them. What is your choice to keep your drives at peak performance?

Operational efficiency

Example services include:
- Drive Care Agreement
- Commissioning
- Spare Parts
- Preventive Maintenance
- Drive Exchange

Rapid response

Example services include:
- Technical Support
- Drive Exchange
- On-Site Repair
- Spare Parts
- Training

Life cycle management

Example services include:
- Preventive Maintenance
- Hardware Upgrades
- Control Upgrades
- Retrofits

Performance improvement

Example services include:
- Drive Care Agreement
- Training
- Preventive Maintenance
- Hardware Upgrades
- Control Upgrades
- Retrofits
- Workshop Repair

Additional resources

Micro drives website

Machinery drives website

General purpose drives website

Industrial AC drives website

Industrial DC drives website

Drives connectivity website

Medium Voltage Drives website

PLC website

Motion website

Motors website

Product-specific documentation

ACS55

ACS150

ACS255

ACS355

ACS310

ACS380

ACS550

ACS880

ACS800

DCS800

Notes

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