



ABB drives and softstarters



Global product offering

ABB is a world leader in automation technologies, with an extensive portfolio of drives, softstarters and programmable logic controllers. From micro and machinery drives for machine building to industrial drives for processing lines, we have the optimum products for a broad range of requirements.



MICRO DRIVES

Product / Offering	Benefits and features	Suggested applications
ACS55 0.18 to 2.2 kW (0.25 to 3 hp) 	Easy to set up and commission, the design focus of the ACS55 is on easy integration into machines, with flexible mounting alternatives.	Pumps, fans, conveyors, automated gate control, solar trackers, exercise equipment, whirlpools, and food & beverage machinery
ACS150 0.37 to 4.0 kW (0.5 to 5 hp) 	Available for both single- and three-phase supplies, the ACS150 includes many functions as standard, including PID control and a built-in brake chopper and EMC filter.	Conveyors, mixers, material handling machinery, fans, pumps, automated gate control and printing machines


MACHINERY DRIVES

Product / Offering	Benefits and features	Suggested applications
ACS355 0.37 to 22 kW (0.5 to 30 hp) 	Designed for the fastest installation, parameter setting and commissioning, these drives are also highly compact and cost-effective. They have been developed to meet the production and performance needs of system integrators, OEMs and panel builders, as well as the requirements of end users in a broad range of applications.	Conveyors, material handling machinery, exercise equipment, compressors, extruders, mixers, centrifuges and processing lines
ACS380 0.25 to 22 kW (0.37 to 30 hp) 	A preconfigured drive variant for fast installation and commissioning, featuring an integrated, icon-based user interface for faster usability and adaptive programming for fine-tuning the application. The drive is designed to be used in applications requiring accurate speed and torque control.	Mixers, centrifuges, conveyors, cranes and other constant-torque applications in machine building





MACHINERY DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>ACS880-M04 0.37 to 45 kW (0.5 to 60 hp)</p> 	<p>Designed for machine builders and system integrators, the ACS880-M04 is a modular, high-performance drive enabling the most compact and cost-effective enclosure layout.</p> <p>Part of the ACS880 product family, the ACS880-M04 has the same firmware, connectivity, user interface and tools as the rest of ACS880 variants and other products in the ABB all-compatible platform. This means that it can easily be used together with higher-powered ACS880 drives or e.g. ACS380 machinery drives.</p>	<p>For almost any demanding speed, torque or position control application in industries like rubber and plastics, material handling, and metal forming</p>
<p>ACS880 with position control 0.55 to 5600 kW (0.75 to 7500 hp)</p> 	<p>The position-controlled version of the ACS880 uses the same hardware, user interface and tools as the speed- and torque-controlled versions. This means possibly the widest power and voltage range for position-controlled drives. It also enables the use of one product family for the whole production line, regardless of whether the application requires speed, torque or position control. Furthermore, using the ACS880 platform means having access to a wide selection of variants and features, like common DC bus drives, standard and regenerative single drives, modules for cabinet building, and high-enclosure drives.</p> <p>The ACS880 position-controlled drive has ready-made, embedded control functions that can be commissioned with simple parameter settings. The embedded solution makes the system cost-effective, boosted by the possibility for encoderless positioning and enclosure-free installation. Commissioning can be done with simple parameter settings, and IEC programming using PLC Open blocks offers additional flexibility.</p>	<p>Simple to medium motion performance like material handling, textile, rubber and plastics, metal forming and cutting</p>





STANDARD DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>DCS550 20 to 1000 A_{DC} 10 to 545 kW</p> 	<p>Ideal DC drive solutions for machine manufacturers – in new installations or as replacements for older analog devices. Control panel and PC assistant provide ease of use.</p>	<p>Meat cutters, extruders, mixers, centrifuges, conveyors, printing and main drives of machine tools</p>


GENERAL PURPOSE DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>ACS310 0.37 to 22 kW (0.5 to 30 hp)</p> 	<p>A drive dedicated to optimizing variable-torque applications, like booster pumps and centrifugal fans. Designed with a powerful set of features, this drive helps you save on operating costs, increase energy efficiency and reduce CO₂ emissions.</p>	<p>Booster pumps, irrigation systems, level control and centrifugal fans</p>
<p>ACS480 0.75 to 22 kW (1 to 30 hp)</p> 	<p>An easy-to-use drive for a broad range of applications. The ACS480 has an easy-to-use assistant control panel to help you set up the drive quickly, and all essential components are built in, such as vector control, an EMC C2 filter, STO, and special pump and fan features. Simplicity and efficiency in a small, cabinet-optimized size.</p>	<p>Pumps, fans, agitators, compressors, belt conveyors and other basic light industry applications</p>
<p>ACS580 0.75 to 500 kW (1 to 700 hp)</p> 	<p>Built-in features and compact design provide effortless energy efficiency for a wide range of variable- and constant-torque applications. The drive scales to different customer requirements, from basic to advanced applications, with the state-of-the-art control panel, embedded assistants and adaptive programming.</p>	<p>Pumps, fans, conveyors, compressors, extruders, mixers and centrifuges</p>
<p>ACS580MV 6 to 11 kV 200 kW to 6.3 MW (268 to 8445 hp)</p> 	<p>The ACS580MV medium-voltage converter turns complicated into simple while ensuring the highest reliability. The straightforward settings menu and assistants help you to commission the variable-speed drive quickly and get it into action. All the essential features are built-in as standard, which reduces the need for additional hardware and facilitates drive selection. The drive is easy to use in terms of energy efficiency applications, e.g. controlling pumps or fans, and many other applications.</p>	<p>Pumps, fans, compressors</p>


INDUSTRIAL DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>ACS880 0.55 to 5600 kW (0.75 to 7500 hp)</p> 	<p>ACS880 industrial drives are designed to tackle any motor-driven applications, in any industry, in a wide power and voltage range. They represent the highest standard of drive design in terms of motor control, functional safety, programmability, robustness, flexibility and other features.</p> <p>These drives are compatible with virtually all of your processes, automation systems, users and business requirements. The ACS880 range includes complete drives as well as modules that can be built into customer enclosures, and it offers many variants from standard, six-pulse drives to regenerative and ultra-low harmonic versions. The ACS880 is also available in a position-controlled version.</p> <p>(See the machinery drives section).</p>	<p>Almost any application, from pumps, fans and blowers, to demanding, high-performance applications like rolling mills, hoists, cranes, drilling and propulsion, as well as applications requiring positioning and synchronizing. (See “ACS880 with position control” in the machinery drives section.)</p>
<p>ACS2000 250-3200 kW (300 to 3000 hp)</p> 	<p>Versatile medium voltage AC drives that suit a wide variety of industrial applications. Highly flexible, allowing you to configure the drives to meet your specific process needs, while reliable motor control ensures high productivity, availability, and efficiency.</p>	<p>Pumps, fans, conveyors, compressors, test stands, mills, mine hoists, extruders, mixers and blowers</p>
<p>DCS800 20 to 20000 A_{DC} 10 kW to 18 MW (13.6 to 24500 hp)</p> 	<p>Tough industrial applications require equally tough products. These DC drives give you the day-to-day reliability and performance you expect with the flexibility to meet your unique process requirements. The DCS800-A cabinet drive has options to comply with customer's safety regulations (e.g. STO/E-STOP).</p>	<p>Kilns, winders, extruders, pumps, fans, blowers, mixers, rolling mills, hoists, cranes, battery chargers, electromagnets, electrolysis, drilling and propulsion</p>
<p>DCS880 20 to 20000 A_{DC} 10 kW to 18 MW (13.6 to 24500 hp)</p> 	<p>The all-compatible DCS880 industrial drives are designed to ensure all ABB variable speed drives (VSDs) share common features and tools. The drive integrates certified Safe Torque Off (STO) safety functionality as standard. Support for all common fieldbuses including PROFINET and Ethernet.</p>	<p>Kilns, extruders, pumps, fans, blowers, mixers, rolling mills, drilling and propulsion</p>



POWER CONTROLLERS

Product / Offering	Benefits and features	Suggested applications
<p>DCT880 20 to 4160 A_{DC} 14 kW to 5 MW</p> 	<p>Ideal for controlling electro-thermal processes. Suitable for all resistive and inductive loads and infrared heaters. Integrated temperature controller and free process controllers. Power optimizer function reduces energy costs. Programmable (IEC 61131-3). Support for all common fieldbuses including PROFINET and Ethernet.</p>	<p>Annealing, drying, melting and heating in glass, plastic and metal industries</p>





SPECIAL PURPOSE DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>ACS1000 315 kW to 5 MW (420 to 6710 hp)</p> 	<p>Whatever your industry, the medium voltage ACS1000 drive is an all-rounder to control your standard applications and optimize your processes. With its motor-friendly output sine filter and a constant power factor, the ACS1000 can be easily integrated into your existing or new systems. Tailor the drive to your specific application by selecting from an extended choice of pre-engineered options. Extensive versatility makes the ACS1000 suitable for operations in different conditions and environments, even hazardous areas. High reliability in your daily business is ensured by the drive's simple design and robust control platform that has proven itself over many years.</p>	<p>High-performance applications, kilns, winders, extruders, pumps, fans, blowers, mixers, rolling mills, hoists</p>


INDUSTRY SPECIFIC DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>ACH580 0.75 to 500 kW (1 to 700 hp)</p> 	<p>The ACH580, designed specifically for HVAC applications, works with virtually any type of HVAC motor, including induction, permanent magnet and synchronous reluctance (SynRM) motors; providing guaranteed energy-efficient operation. A streamlined HVAC-specific settings menu and control panel assistants allow quick and easy commissioning. HVAC industry needs, such as PID loop controllers, BACnet communication and motor heating capabilities, are built-in, standard features.</p>	<p>Supply, return, extract and exhaust fans, booster and circulation pumps, air handling units, cooling towers, condensers and compressors</p>
<p>ACQ580 0.75 to 500 kW (1 to 700 hp)</p> 	<p>Designed specifically for the water and wastewater business. The built-in pump application software in the ACQ580 drives is designed to enhance the usability, reliability and durability of the water and wastewater application in which it is used. The dedicated functions like multi-pump control, soft pipe fill, and pump cleaning, protect the system and secure its optimal functionality, increasing the cost efficiency. And everything is controlled with the extremely intuitive Hand-Off-Auto control panel.</p>	<p>Water and wastewater pumps, blowers, mixers, centrifuges, fans, compressors and irrigation pumps</p>

MOTION CONTROL DRIVES

Product / Offering	Benefits and features	Suggested applications
MotiFlex e180 2 to 50 A with 200% overload 	With its versatile motion control performance, the MotiFlex e180 delivers the capability and dependability to power machine innovations. Flexible connectivity with Ethernet and motor feedback technologies is highly integrated and optimized for demanding motion applications.	Metal cutting and forming, printing and converting, laser/water-jet/textile cutting, rubber and plastics, and packaging
MicroFlex e190 1.6, 3, 6 and 9A rms with 200% overload 	The MicroFlex e190 servo drive combines multiple Ethernet protocols, advanced multitasking software and single-phase operation in a compact package.	Cutting & forming, pick & place, packaging (form-fill-seal, labelling, etc.), laser/water-jet/textile cutting machines
e Series Motors (eSM) 0.32 to 48Nm in 5 frame sizes 	e-SM motors from 100 W to 7.5 kW in 40 mm, 60 mm, 80 mm, 130 mm and 180 mm frame sizes. IP65 as standard. High-performance encoder as standard.	Matched with e190 and e180 drives and their target applications
NextMove e100 / Next Move ESB-2 	Motion controllers are available as standalone units with USB, CANopen, serial interfaces, with real-time Ethernet available on NextMove e100, and as intelligent programmable drives for use in single- or multi-axis systems.	High-speed motion, labelling, printing, filling and sealing, packaging, cutting, extrusion, molding, palletizers

SOFTSTARTERS

Product / Offering	Benefits and features	Suggested applications
PSTX 15 to 710 kW (20-1000 hp)	ABB's complete softstarter offering covers every need in full-speed applications.	Pumps, fans, compressors, conveyors, crushers, mixers
PSE 7.5 to 200 kW (10-300 hp)	Secure motor reliability - current peaks are eliminated and the starting current is reduced. The load and voltage protections keep your motor protected from load and network irregularities.	
PSR 1.5 to 55 kW (2-75 hp) 	Improve installation efficiency - the built-in bypass and the detachable HMI (IP66, 4x) saves installation time and space inside the panels. Increase application productivity - the softstarting features reduce mechanical wear and tear, but also increase uptime with the advanced functionality, such as pump cleaning and motor brake.	

CONTROL PANELS

Product / Offering	Benefits and features	Suggested applications
CP600-eCo CP600 CP600-Pro	CP600-eCo, CP600 and CP600-Pro HMI control panels offer a wide range of features and functionalities for maximum operability. ABB control panels are distinguished by their robustness and easy usability, providing all the relevant information from production plants and machines at one single touch.	



PROGRAMMABLE LOGIC CONTROLLERS

Product / Offering	Benefits and features	Suggested applications
AC500-eCo	Compact PLC offering optimally suited flexible and economical configurations for automation solutions in smaller applications. ABB's AC500-eCo has been designed to integrate seamlessly into the broader AC500 PLC platform.	Mixers, refrigeration, compressors, conveyors, pumps, fans and HVAC
AC500	Powerful PLC featuring a wide range of performance, communications and I/O capabilities for industrial applications. The ideal choice for complex, high-speed machinery and networking solutions.	High-speed motion, labelling, printing, filling and sealing, extrusion, molding, palletizers, data centers, HVAC and tunnels
AC500-XC	Extreme condition PLC variant of the AC500 platform. With extended operating temperature, immunity to vibration and hazardous gases, and suitable for use at high altitudes and in humid environments.	For extreme indoor and outdoor conditions
AC500-S	Integrated safety PLC (SIL3, PL e) designed for safety applications involved in factory, machinery or process automation area. For simple and complex safety solutions. The AC500-S safety PLC is also available in a version for extreme conditions.	Cranes, hoists, wind turbines, palletizers, welding, laser cutting, robot cells, automated guided vehicles and material handling
Automation Builder	Automation Builder connects the engineering tools for PLC, safety, control panels, SCADA, drives and motion. Automation Builder combines the tools required for configuring, programming, debugging and maintaining automation projects from one common intuitive interface.	



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