

## DISTRIBUTOR LINE CARD

# ABB drives and PLCs

## Global product offering

ABB is a world leader in automation technologies, with an extensive portfolio of drives 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
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



► For further information, see catalog "ABB micro drives, ACS150, 0.37 kW to 4 kW", code: [3AFE68596114 EN](#).

### MACHINERY DRIVES

Product / Offering	Benefits and features	Suggested applications
ACS180 0.25 kW to 22 kW (0.37 hp to 30 hp)	The ACS180 drive offers excellent performance and quality at its price level with all essential machinery application features embedded. Meanwhile, the built-in EMC filter and STO bring savings in cabinet size and cost. Heavy-duty use and light-duty use are rated in one drive, this will help users choose the optimal drive for each application.	Conveyors, mixers, food and beverage machinery, material handling machinery, textile machinery, blowers, pumps, fans




► For further information, see catalog "ABB machinery drives, ACS180, 0.25 to 22 kW", code: [3AXD10001181444 EN](#).

ACS355 0.37 kW to 22 kW (0.5 hp to 30 hp)	Designed for fast 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.	Mixers, conveyors, packaging, bottling machines, lifting, winders, dyeing, printing, extruders and solar pumps
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► For further information, see catalog "ABB machinery drives ACS355, 0.37 to 22 kW", code: [3AUA0000068569 EN](#).

## MACHINERY DRIVES

Product / Offering	Benefits and features	Suggested applications
ACS380 0.25 to 22 kW (0.37 to 30 hp) 	The ACS380 machinery drive is ideal for machine building thanks to its robust and compact design, good motor control performance, built-in safe torque off function and mechanical brake control. The drive can be adapted to various needs due to its adaptive programming and extensive selection of fieldbus communication, I/O and EMC options.	Crane and hoist applications, conveyors, mixers, grinders, food and beverage machinery, palletizers, material handling machinery, textile machinery, rubber and plastics machinery, pumps and fans

► For further information, see catalog “ABB machinery drives, ACS380, 0.25 to 22 kW”, code: [3AUA0000187460 EN](#).


ACS880-M04 0.37 to 45 kW (0.5 to 60 hp) 	<p>Designed for machine builders and system integrators, the ACS880-M04 is a modular, high-performance drive that meets demanding machinery requirements.</p> <p>The ACS880-M04 offers precise control for practically any application whether it requires speed, torque, synchronizing or position control. ACS880-M04 provides also extensive embedded functional safety offering at the highest machinery safety level. With its adaptive programming and support for all the major communication protocols and virtually all motor types, ACS880-M04 is configurable to meet various demands.</p>	Wire drawing, winding, bending, pressing, cranes, conveyors, extruders, blow molding, mixers and sawmill applications
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► <https://new.abb.com/drives/low-voltage-ac/machinery/acs880-m04>

ACS880 with position control 0.55 to 6000 kW (0.75 to 8000 hp) 	<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 using one product family across the whole production line, regardless of whether there is a need for positioning, speed or torque 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 protection class drives.</p> <p>The ACS880 position-controlled drive has ready-made, embedded positioning and synchronization 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. It is also possible to modify and extend the ready-made motion application, or to create an own application with PLC Open Motion blocks and IEC programming.</p>	Stacker cranes, sorting and packaging lines, rotary tables, metal forming and cutting, plastics molding and forming, web forming, drilling, grinding, polishing, and sawmill machinery
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► For further information, see flyer “ACS880 position control”, code: [3AUA0000232118 EN](#).  
(See also “ACS880” in the industrial drives section.)

## STANDARD DRIVES





Product / Offering	Benefits and features	Suggested applications
DCS550 20 to 1000 A <sub>DC</sub> 12 to 522 kW 	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.	Meat cutters, extruders, mixers, centrifuges, conveyors, printing and main drives of machine tools

► For further information, see catalog “ABB DC Drives, DCS550”, code: [3ADW000378R](#).

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**GENERAL PURPOSE DRIVES**


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Product / Offering	Benefits and features	Suggested applications
<b>ACS310</b> 0.37 to 22 kW (0.5 to 30 hp) 	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 CO <sub>2</sub> emissions.	Booster pumps, irrigation systems, level control and centrifugal fans
▶ For further information, see catalog “ABB general purpose drives, ACS310, 0.37 to 22 kW”, code: <a href="#">3AUA0000051082 EN</a> .		
<b>ACS480</b> 0.37 to 22 kW (0.5 to 30 hp) 	An easy-to-use drive for a broad range of applications in light industries. 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.	Pumps, fans, agitators, compressors, belt conveyors, blowers, ovens and other basic light industry applications
▶ For further information, see catalog “ABB general purpose drives ACS480, 0.75 to 22 kW”, code: <a href="#">3AUA0000204668 EN</a> . ▶ For further information, see catalog “ABB general purpose drives ACS580 and ACS480 Sales guide for ABB channel partners” code: <a href="#">3AUA0000232001EN</a> .		
<b>ACS580</b> 0.75 to 500 kW (1 to 700 hp) 	Get it fast. Use it everywhere. Grow together. Optimize your stock turnover with one drive for various applications covering the main market needs with all essentials inside. You can use ACS580 in wide range of industries such as food and beverage, plastics, textile and auxiliary applications in COG. We support your business growth with easy to use, flexible and scalable ACS580 and our global market and application knowledge.	Pumps, fans, conveyors, compressors, extruders, mixers and industrial washing machines
▶ For further information, see catalog “ABB general purpose drives ACS580, 0.75 to 500 kW”, code: <a href="#">3AUA0000145061 EN</a> . ▶ For further information, see catalog “ABB general purpose drives ACS580 and ACS480 Sales guide for ABB channel partners” code: <a href="#">3AUA0000145061 EN</a> .		
<b>ACS580MV</b> 3.3 to 11 kV 200 kW to 6.3 MW (268 to 8445 hp) 	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 controlling pumps, fans, compressors, conveyors, mills, extruders as well as many other variable and constant torque applications.	Pumps, fans, compressors, overland conveyors, mills, extruders, mixers, kilns, screw feeders
▶ For further information, see catalog “ACS580MV”, code: <a href="#">3BHT490775R0001</a> .		

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## INDUSTRIAL DRIVES

Product / Offering	Benefits and features	Suggested applications
<p>ACS880 0.55 to 6000 kW (0.75 to 8000 hp)</p> 	<p>ACS880 industrial drives are designed to tackle any motor-driven application in any industry with a wide power and voltage range. They represent the highest standard of drive design in terms of motor control, functional safety, programmability, robustness and flexibility. These drives are compatible with virtually all 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 as a position-controlled version.</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.</p>
<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>
<p>ACS2000 250-3680 kW (300 to 4935 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>DCS880-S 20 to 5200 A<sub>DC</sub> 10 kW to 5.5 MW (13.4 to 7375 hp)</p> 	<p>The all-compatible DCS880-S industrial drives family provide maximum performance in a variety of different applications. It features an easy to use start up assistant including auto-tuning functions and a multilingual assistant control panel.</p> <p>The DCS880-S integrates a certified Safe Torque Off (STO) safety functionality as standard. Furthermore, all common fieldbuses are available via fieldbus extension modules. Customer specific functions and features can be integrated with IEC 61131 programming.</p>	<p>Kilns, extruders, pumps, fans, blowers, mixers, rolling mills, hoists, cranes, battery chargers, electromagnets, electrolysis, drilling and propulsion</p>

► For further information, see catalog “ABB industrial drives, ACS880, single drives, 0.55 to 6000 kW”, code: [3AUA0000098111 EN](#). (See also “ACS880 with position control” in the machinery drives section.)

► For further information, see catalog “ACS1000”, code: [3BHT490400R0001 EN](#).

► For further information, see catalog “ACS2000”, code: [3BHT490640R0001 EN](#).

► For further information, see catalog “DCS880-S modules”, code: [3ADW000465R EN](#).

**INDUSTRIAL DRIVES**

Product / Offering	Benefits and features	Suggested applications
DCS880-A 80 to 19600 A <sub>DC</sub> 38 kW to 18 MW (51 to 24000 hp)	<p>The DCS880-A cabinet drives is the perfect solution for versatile industry segments that require DC power. Use cases are classic motoric applications and new modern non-motoric applications like electrolysis processes for hydrogen production. The offering benefits from the variety of customization to meet the user's expectations in the most demanding technical requirements and performance. Due to its modular and flexible design it is easily possible to scale current and voltage. Furthermore configurations like 6-pulse, 12-pulse parallel, serial, serial sequential, 18-pulse and 24-pulse are available.</p>	Kilns, extruders, pumps, fans, blowers, mixers, rolling mills, hoists, cranes, battery chargers, electromagnets, electrolysis, drilling and propulsion



► For further information, see catalog “DCS880-S modules”, code: [3ADW000531R EN](#).




**POWER CONTROLLERS**

Product / Offering	Benefits and features	Suggested applications
DCT880 20 to 4200 A 14 kW to 5.4 kW	<p>Effortlessly transform electric energy from conventional and renewable sources into industrial heating power. The DCT880 is suitable for all resistive and inductive loads (e.g., transformers), infrared heaters and ultraviolet lamps in all common load configurations, e.g., delta, star, (open) delta, single-phase with common or individual controls, transformer, multitap. The variety of control methods (phase control, full-wave burst control, half-wave control and I-, U-, P- and I<sup>2</sup> control) ensures that even the most demanding applications can be controlled accurately.</p> <p>A reduction of peak loads is possible by using optimized load balancing in parallel operation of multiple devices. The DCT880 allows communication with all major automation networks and thus simplifies its integration.</p>	Melting, tempering, annealing, wire rod heating, galvanization, coating, paint drying, boosting, electric boilers, trace and immersion heaters, carbonization (carbon fibre fabrication), material preheating, baking oven, pasteurization, downhole and pipe heating, photoresist coating (UV lamps), wafer fabrication



► For further information, see brochure “ABB Thyristor power controller DCT880”, code: [3ADW000429R EN](#).

## INDUSTRY SPECIFIC DRIVES


Product / Offering	Benefits and features	Suggested applications
<b>ACH480</b> 0.75 to 22 kW (1 to 30 hp) 	Compact, cabinet-optimized drive with complete HVACR functionality. Same enclosure height and depth in all power sizes ensure the installation uniformity and cost-effectiveness. DIN-rail mounting is available for easier installation in a tight space. The ability to operate at 50 °C without derating and small clearance for cooling make the drive a perfect fit for cabinets.	Supply, return, extract and exhaust fans, booster and circulation pumps, air handling units, cooling towers, condensers and compressors
▶ For further information, see catalog “ABB drives for HVACR, ACH580, 0.75 to 500 kW, 1 to 700 hp, ACH480, 0.75 to 22 kW, 1 to 30 hp”, code: <a href="#">3AUA0000231852 EN</a> .		
<b>ACH580</b> 0.75 to 500 kW (1 to 700 hp) 	<p>The ACH580, designed specifically for HVACR applications, works with virtually any type of HVACR motors, including induction, permanent magnet, synchronous reluctance (SynRM) motors and permanent magnet assistant synchronous reluctance motor (PMaSynRM - EC-Titanium) providing guaranteed energy-efficient operation.</p> <p>The ACH580 range includes both standard, six-pulse drives and ultra-low harmonic versions. A streamlined HVACR-specific settings menu and control panel assistants allow quick and easy commissioning. HVACR industry features, such as PID loop controllers, BACnet communication, override, resonance monitoring or motor heating capabilities, are built-in as standard.</p>	Supply, return, extract and exhaust fans, booster and circulation pumps, air handling units, cooling towers, condensers and compressors
▶ For further information, see catalog “ABB drives for HVACR, ACH580, 0.75 to 500 kW, 1 to 700 hp, ACH480, 0.75 to 22 kW, 1 to 30 hp”, code: <a href="#">3AUA0000231852 EN</a> .		
<b>ACQ580</b> 0.75 to 500 kW (1 to 700 hp) 	Designed specifically for the water and wastewater business. The ACQ580 range includes many variants from standard, six-pulse drives to ultra-low harmonic versions. 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, anti-cavitation, 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.	Water and wastewater pumps, blowers, mixers, centrifuges, fans, compressors and irrigation pumps
▶ For further information, see catalog “ABB drives for water and wastewater, ACQ580, 0.75 to 500 kW”, code: <a href="#">3AUA0000194172 EN</a> .		




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**SERVO PRODUCTS**

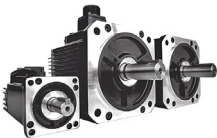

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Product / Offering	Benefits and features	Suggested applications
MotiFlex e180 2 to 50 A with 300% overload	 <p>With its versatile motion control performance, the MotiFlex e180 delivers the capability and dependability to power machine innovations. Flexible connectivity with Ethernet and motor feedback technologies is highly integrated and optimized for demanding motion applications.</p>	Metal cutting and forming, printing and converting, laser/water-jet/textile cutting, rubber and plastics, and packaging

► For further information, see catalog “ABB servo product – Servo drive and motor packages”. Code: [3AXD50000751464 EN](#).

MicroFlex e190 3, 6 and 9 A with 300% overload	 <p>MicroFlex e190 is a compact servo drive with flexible Ethernet communication protocol options. It can operate with one of the selectable built-in Ethernet protocols. A free Mint programming license is provided for the drive to realize easy positioning tasks. The drive supports various feedback types, allowing for flexible motor pairing options.</p>	Cutting and forming, pick and place, packaging (form-fill-seal, labelling, etc.), laser/water-jet/textile cutting machines
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► For further information, see catalog “ABB servo product – Servo drive and motor packages”. Code: [3AXD50000751464 EN](#).

e Series Motors (eSM) 0.32 to 48 Nm in 5 frame sizes	 <p>eSM servo motor is available in various flange sizes, with high torque density and quick dynamic response. The servo motors have a high reliable, low-maintenance, and energy efficient design. Combined with the MotiFlex e180 and MicroFlex e190 servo drives, the overall system reliability and efficiency are greatly improved. eSM motor encoder provides precise position information. An absolute encoder can eliminate homing cycles, reducing machine set-up time. All features make the motor meet the demands of higher productivity and product quality.</p>	Matched with e190 and e180 drives and their target applications
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► For further information, see catalog “ABB servo product – Servo drive and motor packages”. Code: [3AXD50000751464 EN](#).

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## ENGINEERING SUITE

### Product / Offering

Automation Builder



### Benefits and features

ABB Ability™ Automation Builder connects the engineering tools for PLC, safety, control panels, drives and servo products.

Automation Builder combines the tools required for configuring, programming, debugging and maintaining automation projects from one common intuitive interface.

► <https://new.abb.com/plc>

## PROGRAMMABLE LOGIC CONTROLLERS

### Product / Offering

AC500-eCo



### Benefits and features

Compact PLC for economical automation solutions and motion control in smaller applications.

Integrates seamlessly into the broader AC500 PLC platform.

### Suggested applications

Applications in building infrastructure (HVACR), food and beverage, water and wastewater, renewables, motion control and machinery OEMs

AC500



Powerful PLC featuring a wide range of performance, communications and I/O capabilities for industrial applications.

For complex, high-speed machinery, motion control and networking solutions.

More complex and demanding applications in building infrastructure (HVACR), food and beverage, water and wastewater, renewables, motion control and machinery OEMs

AC500-XC



Extreme condition PLC variant of the AC500 platform. With extended operating temperature, immunity to vibration and corrosive gases, for use at high altitudes and in humid environments.

For extreme indoor and outdoor conditions

AC500-S



Integrated safety PLC (SIL3, PL e) for safety applications 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, robot cells, automated guided vehicles and material handling

► <https://new.abb.com/plc>

## CONTROL PANELS

### Product / Offering

CP600-eCo



### Benefits and features

Economical control panel aimed for standard functions and high usability for clear interaction with the operation process.

### Suggested applications

Ideal choice for visualization of AC500 PLC platform and ABB drives automation solution.

CP600



Robust HMI with high visualization performance, versatile communication and representative design for machines and systems.

Ideal choice for visualization of AC500 PLC platform and ABB drives automation solution.

CP600-Pro



HMI with high end visualization performance, multi-touch operation, versatile communication and representative design, partly usable to trigger safety actions with AC500-S.

Ideal choice for visualization of AC500 PLC platform and ABB drives automation solution.

► <https://new.abb.com/plc>



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**SOFTWARE AND MOBILE TOOLS**


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**Product / Offering****Benefits and features****Learn more**

## Drive Composer



Drive Composer PC tool is the easy-to-use, reliable and secure tool for commissioning, monitoring and troubleshooting of ABB allcompatible drives.

► <https://new.abb.com/drives/software-tools/drive-composer>

## ABB Access



With the ABB Access you can find up-to-date product data online. Scan the QR code on your drive to access 24/7 self-services.

► <https://new.abb.com/drives/mobile-tools/abb-access>

## Drivetune mobile app



Drivetune mobile app for managing your drive via the intuitive, easy-to-use interface. Compatible with iOS and Android mobile devices.  
Available free from the Apple App Store and Google Play.

► <https://new.abb.com/drives/mobile-tools/drivetune>

► <https://apps.apple.com/us/app/drivetune/id1076930450>

► <https://play.google.com/store/apps/details?id=com.abb.spider&hl=en&gl=US&pli=1>

## ABB Ability™ Mobile Connect for drives



ABB Ability™ Mobile Connect for drives is a platform for remote drive support consisting of the Mobile Connect web portal and the Drivetune mobile app. Available under a subscription.

► <https://new.abb.com/drives/mobile-tools/mobile-connect>

## Drive control panels



ABB offers a wide range of drive HMI options with different value proposition for customers – from the low-cost, easy-to-use Basic control panel to the Drive Connectivity panel which is a plug-and-play solution for the ABB Ability™ Digital Powertrain for remote condition monitoring and expert support.

► <https://new.abb.com/drives/connectivity/user-interface-options>

## Bluetooth panel (ACS-AP-W and ACH-AP-W)



Enables wireless connection with the Drivetune app and with the entry-level Drive Composer PC tool for startup, commissioning, maintenance, and remote support.

► <https://new.abb.com/drives/connectivity/user-interface-options/bluetooth-control-panels>

## ABB Drive Connectivity panel (ACS-DCP-xx, ACH-DCP-xx).







Drive control panel variant with built-in Bluetooth and mobile radio for a secure and reliable wireless connection to the ABB Ability™ Cloud.

► <https://new.abb.com/drives/connectivity/user-interface-options/drive-connectivity-panel>

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## SOFTWARE AND MOBILE TOOLS

Product / Offering	Benefits and features	Learn more
Fieldbus and Industrial Ethernet solutions 	ABB all-compatible drives support all major fieldbus protocols – either as the standard or as options, giving you flexibility, compatibility, and security.	<a href="https://new.abb.com/drives/connectivity/fieldbus-connectivity">▶ https://new.abb.com/drives/connectivity/fieldbus-connectivity</a>
Functional safety offering 	ABB drive-based functional safety offering includes drives that come with integrated safety features and extended safety functionality. Safe connection between drive and PLC is established using safety communication protocols PROFI-safe or CIP Safety connectivity.	<a href="https://new.abb.com/drives/functional-safety">▶ https://new.abb.com/drives/functional-safety</a>
ABB Functional safety design tool 	ABB's functional safety design tool speeds up the design process when building safety solutions.	<a href="https://new.abb.com/drives/functional-safety/functional-safety-design-tool">▶ https://new.abb.com/drives/functional-safety/functional-safety-design-tool</a>
ABB Ability™ Condition Monitoring for powertrains 	ABB Ability™ Condition Monitoring for powertrains enables you to remotely monitor the health and performance of powertrains, including drives, motors, generators and applications, such as pumps and fans. The data collected from the digitally connected assets is analyzed, providing deeper insights that help you to make better decisions for more efficient, predictable and safe operations.	<a href="https://new.abb.com/service/motion/data-and-advisory-services/condition-monitoring-for-powertrains">▶ https://new.abb.com/service/motion/data-and-advisory-services/condition-monitoring-for-powertrains</a>



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