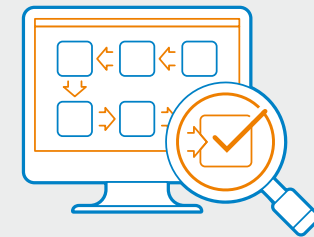
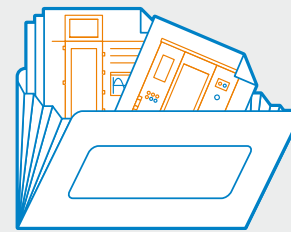


## High safety standards

Arc resistant design and integrated functional safety features ensure the highest safety in your day to day operations for your personnel and equipment.

## Broad product portfolio

We supply medium voltage variable speed drives for a wide range of applications in various industries in the power range from 250 kW to more than 100 MW.

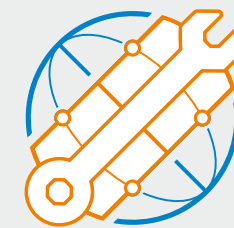


## Efficient process control

Control even your most demanding applications with ABB's direct torque control (DTC) technology for high dynamic performance of your processes and systems.

## Worldwide service network

An extensive global service network allows us to provide local service delivery whenever and wherever you need it.



## Contact us

For more information contact your local ABB representative or visit:

[www.abb.com/drives](http://www.abb.com/drives)



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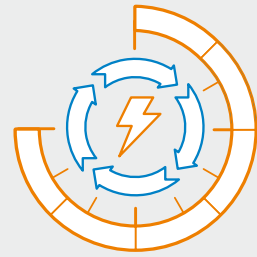
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## Medium voltage drives Product overview

# ABB medium voltage drives

## Drive solutions to support your business

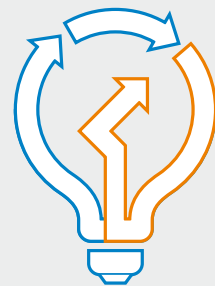
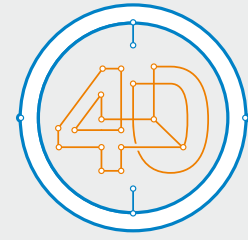


### Energy efficiency

Our medium voltage drives run your motors based on the demands of your process rather than running them at full speed and ensure optimized power consumption and process efficiency. In this way you can save energy and reduce CO<sub>2</sub> emissions.

### More than 40 years' experience

With more than 40 years of experience, we are a pioneer in the medium voltage drives business and offer you support with our professional expertise globally.

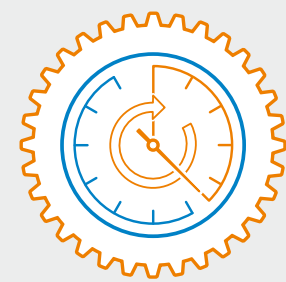


### Know how

Experts in the field of engineering, system design, system integration and project management develop customized solutions according to your specific requirements.

### High reliability

Thanks to the straightforward design with well-proven components and low parts count, we provide reliable and efficient medium voltage drives which ensure excellent availability and long lifetimes for the drives.



# General purpose and industrial drives

Our general purpose and industrial drives family comprises highly flexible medium voltage drives suitable for a wide variety of applications in many industries. These drives are industrial all-rounders that ensure energy-efficient and productive processes.

Product	ACS580MV general purpose drive	ACS1000 industrial drive	ACS2000 industrial drive
<b>Typical applications</b>	Pumps, fans, compressors	Pumps, fans, conveyors, extruders, mixers, compressors, mills, suitable for retrofit of existing motors	Pumps, fans, conveyors, extruders, mixers, compressors, mills, suitable for retrofit of existing motors
<b>Converter cooling</b>	Air	Air/water	Air
<b>Power range</b>	200 to 6,300 kW	A: 315 to 2,000 kW W: 1.8 to 5 MW	250 to 3,200 kW
<b>Output voltage</b>	6.0 to 11 kV	2.3 to 4.16 kV	4.0 to 6.9 kV
<b>Maximum output frequency</b>	120 Hz	82.5 Hz	75 Hz
<b>Typical system diagrams</b>			
<b>Topology</b>	VSI – Voltage Source Inverter 36/54 pulse diode rectifier Multilevel output	VSI – Voltage Source Inverter 12/24 pulse diode rectifier Sinusoidal output	VSI – Voltage Source Inverter 24 pulse diode rectifier or 6 pulse active front end Multilevel output
<b>Speed-torque quadrants</b>			
<b>Key benefits and features</b>	<p>Highest simplicity and intuitiveness</p> <ul style="list-style-type: none"> <li>Part of ABB's all-compatible portfolio</li> <li>All essential features built-in</li> <li>Simple to select, order, commission and use</li> </ul> <p>Performance-based reliability</p> <ul style="list-style-type: none"> <li>Free and simple to use PC tool for startup, configuration, monitoring and process tuning</li> <li>Advanced diagnostics and monitoring system</li> <li>Power loss ride-through and automatic restart</li> </ul> <p>Universal connectivity</p> <ul style="list-style-type: none"> <li>Fieldbus adaptors for all major automation networks</li> <li>Built-in USB connection to PC tool</li> </ul>	<p>Design flexibility for smooth integration</p> <ul style="list-style-type: none"> <li>Network connection with integrated or external transformer</li> <li>Wide range of pre-engineered solutions</li> </ul> <p>Maximum motor compatibility</p> <ul style="list-style-type: none"> <li>Standard output sine filter</li> <li>No motor derating, no voltage stress and no common mode voltages on the motor insulation</li> <li>Work with motors of all ages</li> <li>Available for very long motor cables</li> </ul> <p>High reliability and availability</p> <ul style="list-style-type: none"> <li>Low part count</li> <li>Fuseless design</li> <li>Power loss ride-through</li> </ul> <p>High personnel safety</p> <ul style="list-style-type: none"> <li>Arc resistant design</li> <li>Functional safety features</li> <li>Integrated DC grounding switch</li> </ul>	<p>Design flexibility for smooth integration</p> <ul style="list-style-type: none"> <li>Network connection with integrated, external or no transformer</li> <li>Regenerative capability</li> <li>Market-specific design, compliant to local industry standards and certifications</li> </ul> <p>Maximum motor compatibility</p> <ul style="list-style-type: none"> <li>Multilevel motor voltage waveform</li> <li>Optional output sine filter</li> </ul> <p>High reliability and availability</p> <ul style="list-style-type: none"> <li>Low part count</li> <li>Fuseless design</li> <li>Power loss ride-through</li> </ul> <p>High personnel safety</p> <ul style="list-style-type: none"> <li>Arc resistant design</li> <li>Functional safety features</li> <li>Integrated DC grounding switch</li> </ul>
<b>Type of motor</b>	Induction motor	Induction motor	Induction motor

# Special purpose drives

Our special purpose medium voltage drives are specifically suitable for your high power, high speed or high performance applications. Get a drive solution that adapts to your specific requirements and take your business forward with everything working like clockwork

Product	ACS5000 special purpose drive	ACS6000 special purpose drive	MEGADRIVE-LCI special purpose drive
<b>Typical applications</b>	Compressors, extruders, pumps, fans, mills, conveyors	Mills, marine propulsion, mine hoists, pumps, fans, compressors, extruders, conveyors	Compressors, pumps, fans, pump storage plants, gas turbine starting
<b>Converter cooling</b>	Air/Water	Water	Air/water
<b>Power range</b>	A: 2 to 7 MW W: 5 to 36 MW (higher on request)	5 to 36 MW	A: 2 to 41 MW W: 7 to 72 MW (higher on request)
<b>Output voltage</b>	6.0 to 13.8 kV	2.3 to 3.3 kV	2.1 to 10 kV
<b>Maximum output frequency</b>	250 Hz	75 Hz (higher on request)	120 Hz
<b>Typical system diagrams</b>			
<b>Topology</b>	VSI – Voltage Source Inverter 36 pulse diode rectifier Multilevel output	VSI – Voltage Source Inverter 6/12/24 pulse diode rectifier or 6/12/18 pulse active front end 5-level output waveform	LCI – Load Commutated Inverter 6/12/24 pulse thyristor rectifier 6/12/24 pulse thyristor inverter
<b>Speed-torque quadrants</b>			
<b>Special features and benefits</b>	<p>Highest level of personnel safety</p> <ul style="list-style-type: none"> <li>Arc resistant design with fast arc elimination</li> <li>Functional safety features</li> <li>Integrated DC grounding switch</li> </ul> <p>Industry-specific solutions for individual needs</p> <ul style="list-style-type: none"> <li>Control of high speed applications</li> <li>Softstarting with smooth transition to direct-on-line operation</li> <li>Flexible transformer integration</li> <li>Offshore application possible</li> </ul> <p>High reliability and availability</p> <ul style="list-style-type: none"> <li>Low part count</li> <li>Fuseless design</li> <li>Power loss ride-through</li> <li>IP54 solution guarantees independency of ambient condition</li> </ul>	<p>Tailor-made solutions thanks to modular design</p> <ul style="list-style-type: none"> <li>Single- and multi-motor operation</li> <li>Regenerative capability</li> </ul> <p>Industry-specific solutions for individual needs</p> <ul style="list-style-type: none"> <li>Industry-specific options</li> <li>Marine certification</li> <li>Dynamic control performance</li> <li>Suitable for motors with very low nominal frequency</li> </ul> <p>High reliability and availability</p> <ul style="list-style-type: none"> <li>Low part count</li> <li>Fuseless design</li> <li>Power loss ride-through</li> </ul> <p>Highest level of personnel safety</p> <ul style="list-style-type: none"> <li>Arc resistant design with fast arc elimination</li> <li>Functional safety features</li> <li>Integrated DC grounding switch</li> </ul>	<p>High availability due to robust drive design</p> <ul style="list-style-type: none"> <li>Well-proven solution</li> <li>Suitable for demanding environmental conditions</li> <li>Redundancy possibilities</li> </ul> <p>Simple design for maximum reliability</p> <ul style="list-style-type: none"> <li>Robust thyristor components</li> <li>Fuseless design</li> <li>High converter efficiency</li> </ul> <p>Industry-specific solutions for individual needs</p> <ul style="list-style-type: none"> <li>High power variable speed drive systems</li> <li>Softstarting of large synchronous generators</li> <li>Reduced torsional excitation</li> </ul> <p>High personnel safety</p> <ul style="list-style-type: none"> <li>Arc resistant design</li> <li>Functional safety features</li> </ul>
<b>Type of motor</b>	Induction, synchronous or permanent magnet motor	Induction, synchronous or permanent magnet motor	Synchronous motor