ABB industrial drives
ACS880 regenerative drives, 2.2 to 3200 kW

ACS880 regenerative drives are suitable for applications with cyclic or continuous braking. Regenerative drives are capable of recovering braking energy and feeding it back to the network. The drive package includes everything needed for regenerative operation.

Capture energy instead of wasting it

- **Energy savings**
  With regenerative functionality, braking energy is fed back to the supply network so that it can be utilized by other equipment. Compared to mechanical or resistor braking, which waste braking energy as heat, regenerative operation offers significant savings in energy consumption and cooling.

- **Minimized downtime**
  Regenerative drives ensure reliable operation in unstable supply network conditions. The drive’s active supply unit is able to boost output to guarantee full motor voltage even when the supply voltage is below nominal.

- **Optimized cost and space**
  Everything needed for regenerative operation, such as an active supply unit and a line filter, is included with the drive. As no external braking devices are needed, the installation footprint is reduced, as well as the time needed for engineering and assembly.

- **Maximized motor performance and efficiency**
  ABB’s direct torque control (DTC) provides precise speed and torque control for maximum motor performance and efficiency. The drive’s voltage boost capability also improves motor efficiency – with a higher voltage, the same power is achieved with less current.
Key features

- Possibility to regenerate 100% of power continuously
- Everything for regenerative operation included in a compact package
  Designed for easy installation.
- Easy commissioning
  No need to set extra parameters for the active supply unit.
- Low harmonic content
  Total harmonic current distortion is typically <3% in nominal situation and undistorted network.
  Fulfills harmonic recommendations, such as IEEE 519, IEC 61000-3-2, IEC 61000-3-12 and G5/4.
- Unity power factor
  Possibility also for network power factor correction.
- Voltage boost
  Guarantees full motor voltage in all conditions and can also be utilized to overcome a voltage drop caused by long supply or motor cables or output filters. Voltage boost capability may allow a smaller motor to be used.
- Nine-year maintenance interval
- Factory-tested solution for high reliability
  All ACS880 drives are tested at maximum temperature with nominal loads.

Technical data

### ACS880-11 wall-mounted regenerative drives
- **Power range**: 2.2 to 110 kW
- **Voltage range**: 3-phase, 380 to 500 V
- **Enclosure**: IP20, IP21 (as standard) and IP55. Flange mounting with IP55 back side protection as an option.

### ACS880-14 regenerative drive modules
- **Power range**: 110 to 400 kW
- **Voltage range**: 3-phase, 380 to 690 V
- **Enclosure**: IP20

### ACS880-14 regenerative drive module packages
- **Power range**: 160 to 2200 kW
- **Voltage range**: 3-phase, 380 to 690 V
- **Enclosure**: IP20

### ACS880-17 cabinet-built regenerative drives
- **Power range**: 45 to 3200 kW
- **Voltage range**: 3-phase, 380 to 690 V
- **Enclosure**: IP22 (as standard), IP42 and IP54

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### Speed and power curves in cyclic operation

**Speed**

**Power**

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Video playlist:

ACS880 how-to videos

Regenerative drive animation

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For more information please contact your local ABB representative or visit:

www.abb.com/drives

www.abb.com/drivespartners

new.abb.com/drives/regenerativedrives

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