

ACQ580 LV AC DRIVES

Drives for water and wastewater

0.75 to 500 kW



The ACQ580 drive for water is part of ABB's all-compatible drives portfolio. This robust, compact and energy efficient drive is designed for securing the flow of water and wastewater in your pumping system.

• Lowers your energy bill

The drive ensures low energy consumption and optimal motor control when pumping water. It has the built-in energy optimizer control mode to ensure maximum torque per ampere, reducing energy drawn from the supply. The built-in energy calculators help the user monitor and fine-tune processes to ensure optimal energy use.

• Speaks your pump's language

The drive offers built-in water application functionalities for optimal operation of the pump. These include intelligent multi-pump control, sensorless flow calculation, soft pipe fill, pump protection and cleaning functions. Usability is enhanced with the intuitive Hand-Off-Auto control panel including Bluetooth functionality for wireless access to the drive.

• A robust and reliable performer

With coated boards and enclosure class up to IP55, the drive requires less space as there is no need to install it into cabinets. Built on ABB's common drive architecture, the drives share the same user interfaces and options, enabling users to use the knowledge gained with the ACQ580 drives in other all-compatible drives motors.



Technical data

Power range	ACQ580-01: 0.75 to 250 kW (frame sizes R0 to R9) ACQ580-04: 250 to 500 kW (frame sizes R10 to R11) ACQ580-07: 75 to 500 kW (frame sizes R6 to R11)
Voltage range	3-phase, $U_{N2} = 380$ to 480 V, +10%/-15%
Frequency	50/60 Hz $\pm 5\%$
Mains choke	Built-in swinging choke as standard
Degree of protection	ACQ580-01: IP21 as standard and IP55 as an option ACQ580-04: IP00 as standard and IP20 as an option ACQ580-07: IP21 as standard, IP42 and IP54 as an option
Ambient conditions	ACQ580-01: -15°C to 50°C. No frost allowed. From +40°C to +50°C with derating 1% per 1 °C ACQ580-04: -15°C to 55°C. No frost allowed. From +40 °C to +55°C with derating 1% per 1 °C ACQ580-07: 0°C to +50°C. No frost allowed. From +40 °C to +50 °C with derating 1% per 1 °C.
Compliance	CE, UL, cUL, EAC, RCM
Safety functions (TÜV Nord certified)	Safe torque off (STO) according to EN/IEC 61800-5-2, SIL 3, PL e
EMC	According to EMC directive 2014/30/EU, EN 61800-3:2004 + A1 2012 ACQ580-01: Class C2 as standard ACQ580-04: Class C3, as standard ACQ580-07: Class C2 as standard for frames R6 to R9 and Class C3 as standard for frames R10 to R11
Harmonic mitigation	According to IEC 61000-3-12: 2011
Control connections	Two analog inputs, two analog outputs, six digital inputs including thermistor input, three relay outputs, EIA-485 Modbus RTU, safe torque off (STO), external 24 V DC supply input, USB via control panel
Optional I/O extension modules	CMOD-01: External 24 V DC/AC and digital I/O extension (2 x relay output and 1 x digital output) CMOD-02: External 24 V and isolated PTC interface CHDI-01: six 115/230V AC digital inputs and two relay outputs
PC tools	Drive composer tool entry, available for free via ABB website Drive composer tool pro
Control panel options	Hand-Off-Auto control panel (ACH-AP-H) as standard delivery Hand-Off-Auto control panel with bluetooth (ACH-AP-W) Assistant control panel (ACS-AP-I)



For more information contact your local ABB representative or visit:

www.abb.com/drives
www.abb.com/drivespartners

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Suitable for many applications like:

For all water industry applications

For pumps, fans, blowers and mixers

For various installation needs

From wall-mounted (-01) and drive modules (-04) to cabinet-built (-07) variants

Ensures high protection class

up to IP55

Connects virtually to any kind of motor

From induction and permanent magnet motors to synchronous reluctance motors

Offers built-in pump functionalities

- Intelligent multi-pump control
- Sensorless flow calculation
- Level control
- Soft pipe fill
- Quick ramps
- Pump cleaning
- Dry pump protection

There is more to this drive

Programmable

The Drive composer PC tool offers extensive drive monitoring and process tuning.

Adaptive programming provides extra flexibility by offering an easy alternative for simple programming needs.

Learn it once, use it everywhere

Enables a smooth transition to other all-compatible drives in the ABB portfolio, such as the ACS880 industrial drives and ACS480 general purpose drives.



See the ACQ580 product video

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