

ABB Drives for Water and Wastewater



A reliable system is critical to supplying, treating and recycling water. Our citizens trust you to make good decisions and you take that responsibility seriously. We'll help optimize your system to run efficiently and provide the value and dependability you demand.

Who you choose matters.



Overview

ACQ550-U1*



ACQ550-PC*



ACQ550-PD*



ACQ550-CC*



ACS310*



Main attributes

Wall-mount; PID control	Wall-mount or floor-standing enclosure; circuit breaker disconnect; PID control	Wall-mount; main input disconnect switch; PID control	Wall-mount or floor-standing enclosure; two contactor bypass; circuit breaker disconnect; PID control	Compact drive for basic pump and fan applications. Features simplistic dedicated pump programming functions.
-------------------------	---	---	---	--

HP range

1 - 100 HP at 230 VAC 1.5 - 200 HP at 480 VAC 2 - 150 HP at 575 VAC	1 - 100 HP at 230 VAC 1.5 - 550 HP at 480 VAC 2 - 150 HP at 575 VAC	1 - 100 HP at 230 VAC 1.5 - 200 HP at 480 VAC 2 - 150 HP at 575 VAC	1 - 100 HP at 230 VAC 1.5 - 400 HP at 480 VAC	0.5 - 5 HP at 230 VAC 0.5 - 15 HP at 230 VAC 0.5 - 30 HP at 460 VAC
---	---	---	--	---

Voltage range

208 - 230 VAC 3-phase 380 - 480 VAC 3-phase 500 - 600 VAC 3-phase	208 - 230 VAC 3-phase 380 - 480 VAC 3-phase 500 - 600 VAC 3-phase	208 - 230 VAC 3-phase 380 - 480 VAC 3-phase 500 - 600 VAC 3-phase	208 - 230 VAC 3-phase 380 - 480 VAC 3-phase	200 - 240 VAC 1-phase 200 - 240 VAC 3-phase 380 - 480 VAC 3-phase
---	---	---	--	---

Enclosure type

UL type 1 (IP21) UL type 12 (IP54)	UL type 1 (IP21) UL type 3R UL type 12 (IP54)	UL type 1 (IP21) UL type 3R UL type 12 (IP54)	UL type 1 (IP21) UL type 3R UL type 12 (IP54)	UL type 0 (IP20) NEMA 1 Enclosure Kit
---------------------------------------	---	---	---	--

Control mode

Scalar (V/Hz); Vector	Scalar (V/Hz); Vector	Scalar (V/Hz); Vector	Scalar (V/Hz); Vector	Scalar (V/Hz) - Linear (CT), squared (VT), or user defined curve
-----------------------	-----------------------	-----------------------	-----------------------	--

Communications options

BACnet, CANopen, ControlNet, DeviceNet, EtherCat adapter, Ethernet (EIP, MB/TCP, PROFINET), PROFIBUS-DP, PROFINET IO, Modbus RTU	BACnet, CANopen, ControlNet, DeviceNet, EtherCat adapter, Ethernet (EIP, MB/TCP, PROFINET), PROFIBUS-DP, PROFINET IO, Modbus RTU	BACnet, CANopen, ControlNet, DeviceNet, EtherCat adapter, Ethernet (EIP, MB/TCP, PROFINET), PROFIBUS-DP, PROFINET IO, Modbus RTU	BACnet, CANopen, ControlNet, DeviceNet, EtherCat adapter, Ethernet (EIP, MB/TCP, PROFINET), PROFIBUS-DP, PROFINET IO, Modbus RTU	Embedded Modbus-RTU FlashDrop programming tool
--	--	--	--	---

Operator interface

Hand/Off/Auto keypad	Hand/Off/Auto keypad, optional start/stop switch and pilot lights	Hand/Off/Auto keypad optional start/stop switch and pilot lights	Hand/Off/Auto keypad, optional start/stop switch and pilot lights	Removable Basic or Advanced Control Panel for mounting on the drive or remote
----------------------	---	--	---	---

* All ABB drives are made available with job-specific, custom-engineered configurations. For custom configurations, please contact your local ABB Drives Sales Representative.

ACQ800-U31*

ACQ800-U37*



Pump control features Active Front End Ultra Low Harmonic wall mount drive	Pump control features Active Front End Ultra Low Harmonic cabinet drive
7.5 - 60 HP at 230 VAC 15 - 125 HP at 480 VAC 40 - 750 HP at 575 VAC	60 - 550 HP at 480 VAC
208 - 240 VAC 3-phase 380 - 500 VAC 3-phase 525 - 690 VAC 3-phase	380 - 500 VAC 3-phase
UL type 1 (IP21)	UL type 1 (IP22) UL type 1 filtered (IP42) UL type 12 (IP54)
DTC, Scalar (V/Hz)	DTC, Scalar (V/Hz)
CANopen, ControlNet, DeviceNet, EtherCat, Ethernet IP, EtherPOWERLINK, Modbus TCP, Profibus DP	CANopen, ControlNet, DeviceNet, EtherCat, Ethernet IP, EtherPOWERLINK, Modbus TCP, Profibus DP
Local or remote mounted LCD display and keypad	Local or remote mounted LCD display and keypad

ACQ800 Ultra Low Harmonic Drive

The ACQ800-U31 and ACQ800-37 create less harmonics compared to drives that offer standard diode supply solutions. Available as a wall-mount or cabinet-built product, it produces exceptionally low harmonic content in the drives input. This is achieved without external filters or multi-pulse transformers. By managing and controlling harmonics, the drive reaches unity power factor. The active supply unit in the drive is able to boost output voltage, which guarantees full motor voltage even when the supply voltage is below nominal.

Designed with the water/wastewater industry in mind, common features of the application firmware include: Anti-jam, Level control, Multi-pump control, Process PI control with sleep function, and Pump protections.

ACQ550 Drive

The ACQ550, which ranges from 1 to 550 HP, is well-suited to meet your needs, from the simplest pumping applications, through the most demanding. These devices are available, as standard, for panel-mounting or factory direct as NEMA 1, drip-proof NEMA 12 or outdoor-rated NEMA 3R enclosures.

A water industry start-up assistant resides within the intuitive, full graphic display panel to aid in commissioning submersible, centrifugal or positive displacement pumps. This control panel can also be mounted remotely or on the cover of the drive, and used to upload, store and download parameters in multiple drive setups.

ACS310 Drive

A drive dedicated to optimize your variable torque applications, such as booster and grinder pumps. Designed with a powerful set of features that vary the drive's performance in response to changes in pressure, flow or other external data. Helping you to save on operating costs, increase energy efficiency and reduce CO₂ emissions

AC500-Q PLC



AC500-Q is specifically configured for application needs in the water market. Whether your needs include pumping control and protection, RTU features for water or wastewater station control, or interface to a SCADA control station, we have a solution for you.

Automation Builder - Water Library



Configure your pump control, pump protection, or RTU using ABB's Automation Builder Engineering Productivity suite. Easily design your control using this 100% IEC 61131-3 compatible tool that has five built-in programming languages including a graphical function chart for easy program design. It includes pre-engineered function blocks for easy connectivity to the ACQ550 water drive!

Contact us

ABB Inc.

Discrete Automation & Motion
Drives and Controls
New Berlin, WI 53151
Ph: (800) 752-0696

www.abb.com/drives

www.abb.com/water

© Copyright 2016 ABB. All rights reserved. Specifications subject to change without notice

LVD-PPB20U-EN REVA Effective: 9/15/2016