Secure the flow
The ACQ580 variable frequency drive (VFD) delivers innovative pumping features for the water and wastewater industry. A Primary Setting menu and assistants simplify commissioning, setup and daily control. Embedded water and wastewater application features create an intuitive environment for users and dedicated pumping features enhance the performance of the pumping system.

Speak the language
Leveraging clear, water industry terminology, the control panel enables operators to efficiently interface with the drives in terms they use every day. The optional Bluetooth control panel allows for wireless commissioning and monitoring.

Feel the power
ACQ580 drives are designed for customers who value reliability, high quality, and robustness. With embedded pump functionality, the ACQ580 keeps the pump system operating optimally and efficiently.

All ACQ580 drives are current-rated devices. The HP ratings provided are for reference only and are based on typical 4-pole motors at nominal voltages (NEC Table 430.250). If full motor torque is required, ensure the drive has a continuous current rating equal to, or greater than the full load amp rating of the motor.

The ACQ580-C01 is the latest addition to the ABB drives for water and wastewater portfolio.
This enclosed package features an ACQ580 variable frequency drive (VFD) integrated into a robust UL Type (NEMA) 1/12 enclosure. It has a wide selection of configurable and optional features designed specifically for the water and wastewater applications.

The ACQ580 is available in both normal and heavy-duty ratings. Normal duty ratings provide a 110% short term overload rating for one minute every ten minutes. Heavy duty ratings provide a 150% short term overload rating for one minute every ten minutes. All ACQ580 drives and their protective functions are thoroughly tested for optimal performance.

Designed to meet your requirements
Type 1/12 enclosed ACQ580 VFD for indoor use
- Designed to exceed both UL Type 1 and Type 12 requirements in the same enclosure
- Flange mount disconnect
- Zero clearance required side-side & back-back
- Fans and filters are standard
- Bottom entry/bottom exit for convenient cable connections

WWW industry options available including
- 30mm push to test LED pilot devices & packages
- Flange mount circuit breaker
- dv/dt filter
- Input reactor
- Output reactor
- Common mode filter
- Surge protection
Technical data

Power range
- 50-100hp, 230V
- 100-350hp, 460V

Voltage range
- 208-240 V
- 440-480 V

Power factor (cosφ) at nominal load
- 0.98

Efficiency at rated power
- 98%

Power loss
- Approximately 2-3% of rated power

Short Circuit Current Rating
- Fused Disconnect 100kA SCCR
- Circuit Breaker with fuses 65kA SCCR

Frequency
- 0 to 500 Hz

Supported motor control
- Scalar and vector

Motor types
- Induction, Permanent magnet, Synchronous reluctance

Supported motor types
- Asynchronous motor, permanent magnet motor (vector), SynRM (vector)

Degree of protection
- UL (NEMA) Type 1/12

Ambient conditions
- -15 to +40°C (5 to 104°F)

Compliance
- UL508A

Construction features
- Wire markers as standard
- Bottom entry/bottom exit connections
- Hand-Off-Auto control panel

Available options

Construction features
- Flanged mounted, fused disconnect
- Flange mounted circuit breaker with fuses

Control panel
- Hand-Off-Auto control panel with blutooth

Power filters and reactors
- 3% input line reactor
- 5% input line reactor
- dv/dt filter
- Common mode filter
- 1.5% output load reactor

Additional
- TVSS surge arrester
- 115 VAC control transformer
- GE 369 Multilin motor protection relay (200Hp - 350hp only)
- Output for Motor Heater

Pilot device package option WW1
- 30 MM Pilot Devices included (all pilot lights Push to Test)
- Power (Power On) White LED
- Fault (VFD Faulted) Amber LED
- Run (VFD Running) Red LED
- Emergency Stop (E-Stop Mushroom Head)
- (Includes 115V Control Power Transformer and optional IO module)

Pilot device package option WW2
- Power (Power On) White LED
- Fault (VFD Faulted) Amber LED
- Run (VFD Running) Red LED
- Hand/Off/Auto (H/O/A) Selector Switch
- Speed Potentiometer
- Elapse Time Meter (ETM) Measures VFD Running
- Emergency Stop (E-Stop Mushroom Head)
- (Includes 115V Control Power Transformer and optional IO module)

Optional Pilot Devices available with Pilot device packages
- Green ready pilot light
- Fault reset pushbutton
- Start/Stop pushbuttons (green/red)

Optional communication extension modules
- EtherNet/IP
- Modbus TCP
- Profinet
- DeviceNet

PC tools and programmability
- Drive composer tool entry, available for free via ABB website
- Drive composer tool pro

Typical applications
- Pumps
- Blowers
- Mixers

Built-in pump functionality
- Primary settings for ease of use
- Start-up assistants
- Diagnostic assistant
- Intelligent multi-pump control
- Quick ramps
- Sleep boost
- Auto change
- Level control
- Soft pipe fill
- Sensorless flow calculations
- Pump cleaning
- Two independent adjustable accel/decel ramp
- Motor preheating
- PID control
  - PID sleep / wake-up
  - Dry pump protection
  - Dry run protection
  - Pressure protection
    - Inlet pressure protection
    - Maximum pressure protection
    - Minimum pressure protection
- Flow protection
- Energy optimizer and calculator
- Load profile
- Adaptive programming

Standard Hand/Off/Auto Control Panel:
- Primary Settings menu to ease drive startup
- Real Time Clock
- Diagnostic and Maintenance functions
- Full Graphic Display, including Chart, Graph, Meter options
- 21 editable home views
- USB interface for PC and tool connection
- Parameters are Alpha-numeric
- Back-up and Restore function built into panel
- Automatic back-up after parameter change

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